

EX10.6 7 o18603exv10w6.htm PRODUCTION SHARING AGREEMENT BETWEEN GEOGLOBAL
AND GOVT. OF INDIA ET AL Exhibit 10.6 PRODUCTION SHARING CONTRACT BETWEEN THE
GOVERNMENT OF INDIA AND GUJARAT STATE PETROLEUM CORPORATION
LIMITED AND GAIL INDIA LIMITED AND JUBILANT CAPITAL PTV. LIMITED AND GEOGLOBAL
RESOURCES BARBADOS INC. WITH RESPECT TO CONTRACT AREA IDENTIFIED AS BLOCK
CBONN20032i ARTICLE

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NO.949596125126127128129130131132135136138139147 This Contract made this 23rd day of September 2005 between
PRODUCTION SHARING CONTRACT1. The President of India acting through the Joint Secretary Ministry of Petroleum and Natural Gas hereinafter referred to as the Government of
the FIRST PART; Gujarat State Petroleum Company a Company incorporated under the Companies Act 1956 hereinafter referred to as GSPC having its registered office at GSPC Bhavan behind Udyog Bhavan Sector11 Gandhinagar 382011 Gujarat India which expression shall include its successors and such assigns as are permitted under Article 28 hereof of the SECOND PART;AND Gail India Limited a Company incorporated under the Companies Act 1956 hereinafter referred to as GAIL having its registered office at 16 Bhikaji Cama Place New Delhi 110065 which expression shall include its successors and such assigns as are permitted under Article 28 hereof of the THIRD PART;AND Jubilant Capital Pvt. Limited a Company incorporated under the Companies Act 1956 hereinafter referred to as JCPL having its registered office at 2 Western Avenue Maharani Bagh New Delhi 110065 which expression shall include its successors and such assigns as are permitted under Article 28 hereof of the FOURTH PART;AND GeoGlobal Resources Barbados Inc. a Company incorporated under the laws of Barbados West Indies hereinafter referred to as GGR having its registered office at Chancery House High Street Bridgetown Barbados West Indies which expression shall include its successors and such assigns as are permitted under Article 28 hereof of the FIFTH PART;AND1 WITNESSETH
WHEREAS1 The Oilfields Regulation and Development Act 1948 53 of 1948 hereinafter referred to as the Act and the Petroleum and Natural Gas Rules 1959 made thereunder hereinafter referred to as the Rules make provisions inter alia for the regulation of Petroleum Operations and grant of Licenses and Leases for exploration development and production of Petroleum in India;2 The rules provide for the grant of Licenses and Leases in respect of land vested in a State Government by that State Government with the

prior approval of the Central Government;³ Rule 5 of the Rules provides for an agreement between the Government and the Licensee or Lessee containing additional terms and conditions with respect to the License or Lease;⁴ The Government desires that the Petroleum resources which may exist in India be discovered and exploited with the utmost expedition in the overall interest of India and in accordance with modern oilfield and petroleum industry practices;⁵ Companies have committed that they have or will acquire and make available the necessary financial and technical resources and the technical and industrial competence and experience necessary for proper discharge and performance of all obligations required to be performed under this Contract in accordance with modern oilfield and petroleum industry practices and will provide guarantees as required in Article 29 for the due performance of its obligations hereunder; and⁶ As a result of discussions between representatives of the Government and GSPCGAILJCPLGGR on the proposal of GSPCGAILJCPLGGR the Government has agreed to enter into this Contract with GSPCGAILJCPLGGR with respect to the Contract Area identified as block CBONN20032 and detailed in Appendix A and Appendix B on the terms and conditions herein set forth. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows²

ARTICLE 1 DEFINITIONS In this Contract unless the context requires otherwise the following terms shall have the meaning ascribed to them hereunder

1.1 Accounting Procedure means the principles and procedures of accounting set out in Appendix C.

1.2 Act means Oilfields Regulation and Development Act 1948 as amended from time to time.

1.3 Affiliate means a company or a body;^a ^b which directly or indirectly controls or is controlled by a Company which is a Party to this Contract; or which directly or indirectly controls or is controlled by a company which directly or indirectly controls or is controlled by a Company which is a Party to this Contract. For the purpose of this definition it is understood that control means ownership by one company of more than fifty percent⁵⁰ of the voting securities of the other company; or the power to direct administer and dictate policies of the other company even where the voting securities held by such company exercising such effective control in that other company is less than fifty percent⁵⁰ and

the term controlled shall have a corresponding meaning.1.4 Appendix means an Appendix attached to this Contract and made a part thereof.1.5 Appraisal Programme means a programme carried out following a Discovery in the Contract Area for the purpose of appraising Discovery and delineating the Petroleum Reservoirs to which the Discovery relates in terms of thickness and lateral extent and determining the characteristics thereof and the quantity of recoverable Petroleum therein.1.6 Appraisal Well means a Well drilled pursuant to an Appraisal Programme.1.7 Approved Work Programme and Approved Budget means a Work Programme or a Budget that has been approved by the Management Committee pursuant to the provisions of this Contract.3 1.8 Arms Length Sales means sales made freely in the open market in freely convertible currencies between willing and unrelated sellers and buyers and in which such buyers and sellers have no contractual or other relationship directly or indirectly or any common or joint interest as is reasonably likely to influence selling prices and shall inter alia exclude sales whether direct or indirect through brokers or otherwise involving Affiliates sales between Companies which are Parties to this Contract sales between governments and government owned entities countertrades restricted or distress sales sales involving barter arrangements and generally any transactions motivated in whole or in part by considerations other than normal commercial practices.1.9 Article means an article of this Contract and the term Articles means more than one Article.1.10 Associated Natural Gas or ANG means Natural Gas produced in association with Crude Oil either as free gas or in solution if such Crude Oil can by itself be commercially produced.1.11 Barrel means a quantity or unit equal to 158.9074 litres forty two 42 United States gallons liquid measure at a temperature of sixty 60 degrees Fahrenheit 15.56 degrees Celsius and under one atmosphere pressure 14.70 psia.1.12 Basement means any igneous or metamorphic rock or rocks or any stratum of such nature in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of Petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected in accordance with the knowledge generally accepted in the international petroleum industry.1.13 Budget means a

budget formulated in relation to a Work Programme.1.14 Business Day means any of the Calendar Day excluding holidays.1.15 Calendar Day means any of the seven 7 days of a week.1.16 Calendar Month means any of the twelve 12 months of the Calendar Year.1.17 Calendar Quarter or Quarter means a period of three 3 consecutive Calendar Months commencing on the first day of January April July and October of each Calendar Year.1.18 Calendar Year means a period of twelve 12 consecutive Months according to the Gregorian calendar commencing with the first 1st day of January and ending with the thirtyfirst 31st day of December.4 1.19 Commercial Discovery means a Discovery of Petroleum reserves which has been declared as a Commercial Discovery in accordance with the provisions of Article 10 and/or Article 21.1.20 Commercial Production means production of Crude Oil or Condensate or Natural Gas or any combination of these from the Contract Area excluding production for testing purposes and delivery of the same at the relevant Delivery Point under a programme of regular production and sale.1.21 Company for the purpose of this Contract means a company which is a Party to this Contract and where more than one Company is Party to the Contract the term Companies shall mean all such Companies collectively including their respective successors and permitted assigns under Article 28.1.22 Condensate means those low vapour pressure hydrocarbons obtained from Natural Gas through condensation or extraction and refers solely to those hydrocarbons that are liquid at normal surface temperature and pressure conditions provided that in the event Condensate is produced from a Development Area and is segregated and transported separately to the Delivery Point then the provisions of this Contract shall apply to such Condensate as if it were Crude Oil.1.23 Contract means this agreement and the Appendices mentioned herein and attached hereto and made an integral part hereof and any amendments made thereto pursuant to the terms hereof.1.24 Contract Area means on the Effective Date the area described in Appendix A and delineated on the map attached as Appendix B or any portion of the said area remaining after relinquishment or surrender from time to time pursuant to the terms of this Contract including any additional area as provided under Article 11.3.1.25 Contract Costs means Exploration Costs Development Costs and Production Costs as provided in

Section 2 of the Accounting Procedure and allowed to be cost recoverable in terms of Section 3 of the Accounting Procedure.

1.26 Contract Year means a period of twelve 12 consecutive months counted from the Effective Date or from the anniversary of the Effective Date.

1.27 Contractor means the Companies.

1.28 Cost Petroleum means the portion of the total value of Petroleum Produced and Saved from the Contract Area which the Contractor is entitled to take in a particular period for the recovery of Contract Costs as provided in Article 15.

1.29 Crude Oil or Oil or Crude means all kinds of hydrocarbons and bitumen both in solid and in liquid form in their natural state or obtained from Natural Gas by condensation or extraction including distillate and Condensate when commingled with the heavier hydrocarbons and delivered as a blend at the Delivery Point but excluding Natural Gas.

1.30 Deepwater Area for deepwater blocks areas means area falling beyond four hundred 400 metre isobath provided however that for the purposes of this Contract the Contract Area as on Effective Date as described in the Appendix A and Appendix B shall be deemed to be Deepwater Area falling beyond four hundred 400 metre isobath.

1.31 Delivery Point means except as otherwise herein provided or as may be otherwise agreed between the Parties having regard to international practice the point at which Petroleum reaches the outlet flange of the delivery facility either offshore or onshore and different Delivery Points may be established for purposes of sales. Delivery Points shall be approved by the Management Committee.

1.32 Development Area means part of the Contract Area which encompasses one or more Commercial Discoveries and any additional area that may be required for proper development of such Commercial Discoveries and established as such in accordance with the provisions of the Contract.

1.33 Development Costs means those costs and expenditures incurred in carrying out Development Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.

1.34 Development Operations means operations conducted in accordance with the Development Plan and shall include but not be limited to the purchase shipment or storage of equipment and materials used in developing Petroleum accumulations the drilling completion and testing of Development Wells the drilling and completion of Wells for Gas or water injection the laying

of gathering lines the installation of offshore platforms and installations the installation of separators tankages pumps artificial lift and other producing and injection facilities required to produce process and transport Petroleum into main Oil storage or Gas processing facilities either onshore or offshore including the laying of pipelines within or outside the Contract Area storage at Delivery Points the installation of said storage or Gas processing facilities the installation of export and loading facilities and other facilities required for the development and production of the said Petroleum accumulations and for the delivery of Crude Oil and/or Gas at the Delivery Point and also including incidental operations not specifically referred to herein but required for the most efficient and economic development and production of the said Petroleum accumulations in accordance with modern oilfield and petroleum industry practices.

1.35 Development Plan means a plan submitted by the Contractor for the development of a Commercial Discovery which has been approved by the Management Committee or the Government pursuant to Article 10 or Article 21.6

1.36 Development Well means a Well drilled deepened or completed after the date of approval of the Development Plan pursuant to Development Operations or Production Operations for the purposes of producing Petroleum increasing production sustaining production or accelerating extraction of Petroleum including production Wells injection Wells and dry Wells.

1.37 Directorate General of Hydrocarbons or DGH means an organisation including its successors under the Ministry of Petroleum and Natural Gas.

1.38 Discovery means the finding during Petroleum Operations of a deposit of Petroleum not previously known to have existed which can be recovered at the surface in a flow measurable by conventional petroleum industry testing methods.

1.39 Discovery Area means that part of the Contract Area about which based upon Discovery and the results obtained from a Well or Wells drilled in such part the Contractor is of the opinion that Petroleum exists and is likely to be produced in commercial quantities.

1.40 Effective Date means the later of the date on which this Contract is executed by the Parties or the date of issue of License or date from which License has been made effective by the Central Government or State Governments as the case may be.

1.41 Environmental Damage means soil erosion removal of vegetation destruction of wildlife pollution of

groundwater or surface water landcontamination air pollution noise pollution bush fire disruption to water supplies to natural drainage or natural flow of rivers or streamsdamage to archaeological palaeontological and cultural sites and shall include any damage or injury to or destruction of soil or water in theirphysical aspects together with vegetation associated therewith aquatic or terrestrial mammals fish avifauna or any plant or animal life whetherin the sea or in any other water or on in or under land.

1.42 Exploration Costs means those costs and expenditures incurred in carrying out Exploration Operations as classified and defined in Section 2 ofthe Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.

1.43 Exploration Operations means operations conducted in the Contract Area pursuant to this Contract in searching for Petroleum and in the courseof an Appraisal Programme and shall include but not be limited to aerial geological geophysical geochemical palaeontological palynologicaltopographical and seismic surveys analysis studies and their interpretation investigations relating to the subsurface geology including structuraltest drilling stratigraphic test drilling drilling of Exploration Wells and Appraisal Wells and other related activities such as surveying drill sitepreparation and all work necessarily connected therewith that is conducted in connection with Petroleum exploration.

7 1.44 Exploration Period means the period mentioned in Article 3 during which Exploration Operations may be carried out by the Contractor asprovided in Article 3 hereof.

1.45 Exploration Phase or Phase means any of the periods specified in Article 3 in which the Contractor is required to complete the MinimumWork Programme specified therein.

1.46 Exploration Well means a Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity be it ofstructural stratigraphic facies or pressure nature to at least a depth or stratigraphic level specified in the Work Programme.

1.47 Field means an Oil Field or a Gas Field or combination of both as the case may be.

1.48 Financial Year means the period from the first 1st day of April to the thirtyfirst 31st day of March of the following Calendar Year.

1.49 Foreign Company means a Company within the meaning of Section 591 of the Companies Act 1956.

1.50 Frontier Area means any area identified demarcated and so notified by the Government or its authorised agencyies for the purpose ofexploration and

exploitation of Oil and Gas which is logistically and technically difficult and lacks infrastructural and/or marketing facilities etc.

1.51 Gas means Natural Gas.

1.52 Gas Field means within the Contract Area a Natural Gas Reservoir or a group of Natural Gas Reservoirs within a common geological structure or feature.

1.53 Government or Central Government means Government of India unless otherwise stated.

1.54 Investment shall have the meaning ascribed to that expression in paragraph 3 of Appendix D.

1.55 Investment Multiple means the ratio of accumulated Net Cash Income to accumulated Investment by the Contractor as determined in accordance with Appendix D.

1.56 Lease means a petroleum mining lease referred to in the Rules and shall unless otherwise stated therein exclude right for exploration and exploitation of coal lignite bed methane CBM.

1.57 Lessee means the Contractor to whom a Lease is issued under the Rules for the purpose of carrying out Petroleum Operations in a Development Area or Contract Area.

1.58 LIBOR means the London InterBank Offer Rate for six month maturates of United States Dollars as quoted by the International Swaps and Derivative Association or such other bank being a BBA LIBOR contributor panel bank as the Parties may agree.

1.59 License means a petroleum exploration license referred to in the Rules.

1.60 Licensee means the Contractor to whom a License is issued under the Rules for the purpose of carrying out Petroleum Operations in the Contract Area.

1.61 Minimum Work Programme means with respect to each Exploration Phase the Work Programme specified in Article 5 with respect to such Phase.

1.62 Management Committee means the committee constituted pursuant to Article 6 hereof.

1.63 Month means Calendar Month.

1.64 Natural Gas means wet gas dry gas all other gaseous hydrocarbons and all substances contained therein including sulphur carbon dioxide and nitrogen but excluding extraction of helium which are produced from Oil or Gas Wells excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from gas.

1.65 Net Cash Income shall have the meaning assigned in paragraph 2 of Appendix D.

1.66 Non Associated Natural Gas or NANG means Natural Gas which is produced either without association of Crude Oil or in association with such quantities of Crude Oil which by

itself cannot be commercially produced.1.67 Oil Field means within the Contract Area an Oil Reservoir or a group of Oil Reservoirs within a common geological structure or feature.1.68 Operator means one of the Parties comprising the Contractor appointed as the Operator pursuant to Article 7.1.69 Operating Agreement means the operating agreement entered by the constituents of the Contractor in accordance with Article 7 with respect to conduct of Petroleum Operations.1.70 Operating Committee means the Committee established by that name in the Operating Agreement pursuant to Article 7.9 1.71 Participating Interest means in respect of each Party constituting the Contractor the undivided share expressed as a percentage of such Partys participation in the rights and obligations under this Contract.1.72 Parties means the parties signatory to this Contract including their successors and permitted assigns under this Contract and the term Party means any of the Parties.1.73 Petroleum means Crude Oil and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale.1.74 Petroleum Operations means as the context may require Exploration Operations Development Operations or Production Operations or any combination of two or more of such operations including construction operation and maintenance of all necessary facilities plugging and abandonment of Wells safety environmental protection transportation storage sale or disposition of Petroleum to the Delivery Point Site Restoration and any or all other incidental operations or activities as may be necessary.1.75 Petroleum Produced and Saved means gross Petroleum produced minus impurities such as water or solids produced along with Petroleum Petroleum recycled to the reservoir Petroleum used in Petroleum Operations or flared or otherwise unavoidably lost under the provisions of the Contract.1.76 Production Costs means those costs and expenditures incurred in carrying out Production Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.1.77 Production Operations means all operations conducted for the purpose of producing Petroleum from the Development Area after the commencement of production from the Development Area including the operation and maintenance of all necessary facilities therefor.1.78 Profit Petroleum means the total value of

Petroleum Produced and Saved from the Contract Area in a particular period as reduced by CostPetroleum and calculated as provided in Article 16.1.79 Recompletion means an operation whereby a completion in one zone is abandoned in order to attempt a completion in a different zone within an existing Well bore.1.80 Reservoir means a naturally occurring discrete accumulation of Petroleum.1.81 Rules means the Petroleum and Natural Gas Rules 1959 and any amendments made thereto from time to time.1.82 Section means a section of the Accounting Procedure.10 1.83 Selfsufficiency means in relation to any Year that the volume of Crude Oil and Crude Oil equivalent of Petroleum products exported from India during that Year either equals or exceeds the volume of Crude Oil and Crude Oil equivalent of Petroleum products imported into India during the same Year as determined by Government.1.84 Site Restoration shall mean all activities required to return a site to its state as of the Effective Date pursuant to the Contractors environmental impact study and approved by the Government or to render a site compatible with its intended after use to the extent reasonable after cessation of Petroleum Operations in relation thereto and shall include where appropriate proper abandonment of Wells or other facilities removal of equipment structures and debris establishment of compatible contours and drainage replacement of top soil revegetation slope stabilisation infilling of excavations or any other appropriate actions in the circumstances.1.85 Statement or Statements refers to the statements required to be furnished in accordance with Appendix C of this Contract.1.86 State Government means any government of a state of the Union of India which has control over the Contract Area for the purpose of grant of Licenses Leases. In case the Contract Area covers more than one state the State Government shall include all such governments of those states.1.87 Subcontractor means any company or person contracted by the Contractor or Operator to provide goods or services with respect to Petroleum Operations.1.88 US or USD or US Dollar or United States Dollar means the currency of the United States of America.1.89 Well means a borehole made by drilling in the course of Petroleum Operations but does not include a seismic shot hole.1.90 Work Programme means a work programme formulated for the purpose of carrying out Petroleum Operations.1.91 Year means a Financial Year.11 2.1 The initial Participating

Interest of the Parties comprising the Contractor shall be as follows

ARTICLE 2 PARTICIPATING INTERESTS

Party	Interest
SGSPC	50 Fifty Percent
GAIL	20 Twenty Percent
JCPL	20 Twenty Percent
GGR	10 Ten Percent

2.2 Except as provided in this Article or elsewhere in this Contract the rights and obligations of the Parties comprising the Contractor shall include but not be limited to

- a the right to take Cost Petroleum in accordance with the provisions of Article 15;
- b the right to take its Participating Interest share of Profit Petroleum in accordance with the provisions of Article 16;
- c the right to receive its Participating Interest share of any incidental income and receipts arising from Petroleum Operations;
- and d the obligation to contribute its Participating Interest share of costs and expenses including Contract Costs.

12 ARTICLE 3 LICENSE AND EXPLORATION PERIOD

3.1 The Exploration Period shall begin on the Effective Date and shall consist of three (3) Exploration Phases each phase not exceeding three (3) Contract Years for a total period not exceeding seven (7) consecutive Contract Years unless extended pursuant to the terms of this Contract.

3.2 Except as otherwise provided in this Contract the term of the first Exploration Phase shall not exceed three (3) consecutive Contract Years hereinafter referred to as the first Exploration Phase.

3.3 Except as otherwise provided in this Contract the term of the second Exploration Phase shall not exceed three (3) consecutive Contract Years from the end of the first Exploration Phase hereinafter referred to as the second Exploration Phase.

3.4 Except as otherwise provided in this Contract the term of the third Exploration Phase shall not exceed one (1) consecutive Contract Years from the end of the second Exploration Phase hereinafter referred to as the third Exploration Phase.

3.5 At the expiry of any Exploration Phase of the Exploration Period provided that the Contractor has completed the Minimum Work Programme for that Exploration Phase the Contractor shall have the option exercisable by giving a written notice to the Government at least thirty (30) days prior to the expiry of the relevant Phase either

- a to proceed to the next Exploration Phase on presentation of the requisite guarantees as provided for in Article 29;
- or b to relinquish the entire Contract Area except for any Discovery Area and any Development Area and to conduct Development Operations and Production Operations in relation to any Commercial Discovery in accordance with the terms of this Contract and the Contractor shall have

no further obligation in respect of the Minimum Work Programme under Article 5 for any subsequent Exploration Phases of the Exploration Period. If neither of the options provided for in paragraphs a and b hereof is exercised by the Contractor this Contract shall terminate at the end of the then current Exploration Phase and the License shall be automatically cancelled.

3.6 If at the end of an Exploration Phase the Minimum Work Programme for that phase is not completed the time for completion of the said Minimum Work Programme shall be extended for a period necessary to enable completion thereof but not exceeding six 6 months provided that the Contractor submits his request by giving a written notice to the Government at least thirty 30 days prior to the expiry of the relevant Phase and can show technical or other good reasons for noncompletion of the Minimum Work Programme and the Management Committee gives its consent to the said extension and provided further that the period of such extension shall be subtracted from the next succeeding Exploration Phase if any. In case the Minimum Work Programme of any particular Exploration Phase is completed before stipulated time as provided in the Article 3.2 and 3.3 the time so saved will be added to the next Exploration Phase if so requested by the Contractor giving a notice in writing to the Government thirty 30 days prior to such early completion of the Phase and in that event the provision of the Article 3.5 a shall apply immediately after such early completion of the Phase.

3.7 If at the end of an Exploration Phase execution of any Work Programme is in progress and which is in addition to the Minimum Work Programme such Exploration Phase shall be extended for a period not exceeding six 6 months to enable completion thereof provided that the Minimum Work Programme for such Phase has been completed and the Management Committee gives its consent to the said extension as provided in the Article 3.6. In the event of an extension as provided for herein the notice referred to in Article 3.5 shall be given at least thirty 30 days prior to the expiry of the relevant extension.

3.8 Where sufficient time is not available prior to the expiry of the Exploration Period to complete an Appraisal Programme at the request of the Contractor the Government shall extend the Exploration Period for such period not exceeding eighteen 18 months for onland and shallow water blocks and thirty 30 months for deepwater blocks as may be mutually

agreed between the Parties for the Appraisal Programme to be carried out and for the Contractor and the Management Committee to comply with the provisions of Article 10 and Article 21.3.9 If no Commercial Discovery has been made in the Contract Area by the end of the Exploration Period the Contract shall terminate.3.10 If this Contract is terminated in accordance with its terms the License shall be automatically cancelled.3.11 If at the expiry of the Exploration Period a development plan for development of a Commercial Discovery and an application for Lease is under consideration by the Management Committee or Government as the case may be pursuant to Articles 10 11 and 21 respectively the License shall continue in force with respect to that part of the Contract Area to which the application for the Lease relates pending a decision on the proposed development plan and the application for the Lease but shall cease to be in force and effect with respect to the remainder of the Contract Area.14 ARTICLE 4 RELINQUISHMENT4.1 If at the end of the first Exploration Phase the Contractor elects pursuant to Article 3.5 to continue Exploration Operations in the Contract Area in the second Exploration Phase the Contractor shall retain up to seventy five percent 75 of the original Contract Area including any Development Area and Discovery Area in not more than three 3 areas of simple geometrical shapes and relinquish the balance of the Contract Area prior to the commencement of the second Exploration Phase. Notwithstanding the provision of this Article 4.1 in the event the Development Areas and Discovery Areas exceed seventy five percent 75 of the original Contract Area the Contractor shall be entitled to retain to the extent of Development Areas and Discovery Areas.4.2 If at the end of the second Exploration Phase the Contractor elects pursuant to Article 3.5 to continue Exploration Operations in the Contract Area in the third Exploration Phase the Contractor shall retain up to fifty percent 50 of the original Contract Area including any Development Area and Discovery Area in not more than three 3 areas of simple geometrical shapes and relinquish the balance of the Contract Area prior to the commencement of the third Exploration Phase. Notwithstanding the provision of this Article 4.2 in the event the Development Areas and Discovery Areas exceed fifty percent 50 of the original Contract Area the Contractor shall be entitled to retain to the extent of Development Areas and Discovery Areas.4.3 At

the end of the third Exploration Phase the Contractor shall retain only Development Areas and Discovery Areas.

4.4 If the Contractor exercises the option provided for in paragraph b of Article 3.5 the Contractor shall after any Discovery Areas or Development Areas have been designated relinquish all of the Contract Area not included within the said Discovery Areas or Development Areas.

4.5 As and when the Contract is terminated under the provisions of Article 3 or in accordance with any other provisions of this Contract the entire Contract Area remaining with the Contractor shall be deemed to have been relinquished by the Contractor as on the date on which the Contract is terminated.

4.6 Relinquishment of all or part of the Contract Area or termination of the Contract shall not be construed as absolving the Contractor of any liability undertaken or incurred by the Contractor in respect of the Contract Area during the period between the Effective Date and the date of such relinquishment or termination.

4.7 Subject to Article 14.9 the liability of the Contractor shall be limited to any liability undertaken or incurred in respect of relating to or connected with the Contract and/or any claim arising out of or in relation to the act of negligence misconduct commission or omission in carrying out Petroleum Operations during the period between the Effective Date and the date of relinquishment of the Contract Area or termination or expiry of the Contract as the case may be.

15 ARTICLE 5 WORK PROGRAMME

5.1 The Contractor shall commence Petroleum Operations not later than six 6 months from the Effective Date.

5.2 During the currency of the first Exploration Phase as per Article 3.2 the Contractor shall complete the following Work Programme:

- i A seismic programme consisting of the acquisition processing and interpretation of 448 sq. kms. of 3D seismic data in relation to the exploration objectives; and
- ii iv Reprocessing of 650 LKM of 2 D seismic; Geochemical survey of 500 samples; and Technical Assessment and Geological Modeling

b Fourteen 14 Exploration Wells shall be drilled to at least one of the following depths:

- iiiii Six 6 wells 1500 m. each
- Three 3 wells 2000 m. each
- Five 5 wells 2500 m. each

to Basement; and that point below which further drilling becomes impracticable due to geological conditions encountered and drilling would be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment of drilling under this provision by the Contractor would

require unanimous approval of the Management Committee.5.3 During the currency of the second Exploration Phase as per Article 3.3 the Contractor shall complete the following Work Programmeab Technical Assessment and Geological Modeling Four 4 Exploration Wells shall be drilled to at least one of the following depthsiiiiii Two 2 wells 2500 m. each Two 2 wells 3500 m. eachto Basement; andthat point below which further drilling becomes impracticable due to geological conditions encountered and drillingwould be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment of drillingunder this provision by the Contractor would require unanimous approval of the Management Committee.16 5.4 During the currency of the third Exploration Phase as per Article 3.4 the Contractor shall complete the following Work Programmeab Technical Six 6 Exploration Wells shall be drilled to at least one of the following depths Assessment and Geological Modelingiiiiiii Three 3 wells 2500 m. each Three 3 wells 3500 m. eachto Basement; andthat point below which further drilling becomes impracticable due to geological conditions encountered and drillingwould be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment ofdrilling under this provision by the Contractor would require unanimous approval of the Management Committee.5.5 The actual depth objective for each of the Wells shall be determined by the Contractor in the light of the advice of the Management Committeebefore the commencement of the drilling. Each Well which reaches the geological objective for which the depth objective was determined shallbe deemed to have been drilled to the depth objective or to actual total depth whichever is greater. The Contractor shall ensure that all relevantsubsurface geological geochemical and geophysical information necessary for the attainment of the exploration objectives in accordance withmodern oilfield and petroleum industry practices is obtained during exploratory drilling.5.6 If the depthgeological objective of the Well is not achieved for any reason a substitute Well shall be drilled of the same specifications asstipulated in and subject to Articles 5.2 5.3 and 5.4 as the case may be.5.7 In the event that the Contractor is unable to complete the Minimum Work Programme as provided herein under Articles 5.2 a 5.2 b i 5.3a 5.3 b i and 5.4 a 5.4 b i hereinafter referred to as Bid Commitments or it becomes unnecessary

to complete BidCommitments in view of Articles 5.2 b ii and iii 5.3 b ii and iii and 5.4 b ii and iii as the case may be the Contractor shall berequired to carry out and complete such additional substituted or alternate work programme as may be fixed by the Government on therecommendation of the Management Committee so as to match the Bid Commitments undertaken and committed under the bid or in thealternative the Contractor shall pay to the Government the cost as estimated by the Government on the recommendation of the ManagementCommittee for fulfilling such Bid Commitments of the Contractor. The Management Committee shall give its recommendation on additionalsubstituted or alternate work programme or payment to the Government for unfinished work programme to the Government¹⁷ within sixty 60 days from the date of notice given by the Government of nonfulfillment of the Minimum Work Programme. Failing anyproposal from the Management Committee within the time frame the Government shall make a decision and convey to the Contractor forcompliance.

5.8 If the Minimum Work Programme for the third Exploration Phase has been completed earlier than eighteen months from the end of the Phase theContractor shall meet with the Government to discuss the possibility of early relinquishment unless the Contractor undertakes further work withthe approval of the Management Committee.

5.9 In the event that the Contractor has carried out work in excess of the Minimum Work Programme in any Exploration Phase the excessexploration work done shall be set off against the Minimum Work Programme for the following Exploration Phase.

5.10 As soon as possible after the Effective Date and thereafter within ninety 90 days before commencement of each following Year the Contractorshall submit to the Management Committee the Work Programmes and the Budgets relating to Petroleum Operations to be carried out during therelevant Year. Work Programme and Budgets for the Exploration Period shall include work sufficient to meet the relevant Minimum WorkProgramme with respect to each Exploration Phase specified in this Article 5.

5.11 The Contractor may propose modifications or revisions to the details of a reviewed or an approved Work Programme and Budget as the casemay be in the light of the then existing circumstances and shall submit to the Management Committee modifications or revisions to the WorkProgramme and Budget referred to in

Article 5.10.5.12 Work Programmes and Budgets and any modifications or revisions thereto relating to Exploration Operations shall be submitted to the Management Committee for review and advice as provided in Article 6.5. Work Programmes and Budgets related to Development Operations and Production Operations and any modifications or revisions thereto shall be submitted for approval as provided in Article 10 and Article 21.18

ARTICLE 6 MANAGEMENT COMMITTEE

6.1 There shall be constituted a committee to be called the Management Committee with functions as stated herein below.

6.2 Government shall nominate two 2 members representing Government in the Management Committee whereas each Company constituting the Contractor shall nominate one 1 member each to represent Company in the Management Committee provided that in case the Contractor constitutes only one Company that Company shall have two 2 members. The Parties shall nominate the members to the Management Committee within thirty 30 days of the Effective Date.

6.3 Each Party may nominate alternate members with full authority to act in the absence and on behalf of the members nominated under Article 6.2 and may at any time nominate another member or alternate member to replace any member nominated earlier by notice to other members of the Management Committee.

6.4 One representative of the Government shall be designated as the Chairman of the Management Committee and the second representative of the Government shall be designated as the Deputy Chairman. The member of the Operator or the member designated by the Operator where Operator has two 2 members in the Management Committee shall be designated as the Secretary of the Committee.

6.5 Operator on behalf of the Contractor with the approval of Operating Committee if constituted under the Article 7.4 or in case of a single Party constituting the Contractor then that Party shall submit following matters to the Management Committee for review and it shall have advisory functions:

- a the annual Work Programmes and Budgets in respect of Exploration Operations and any revisions or modifications thereto;
- b annual work progress and costs incurred thereon;
- c proposals for surrender or relinquishment of any part of the Contract Area by the Contractor;
- d proposals for an Appraisal Programme or revisions or additions thereto and the declaration of a Discovery as a Commercial Discovery;
- e any other matter required by the terms of

this Contract to be submitted to it for review or advice; andf any other matter which the Contractor dees to submit for review or advice including matters concerning interParty relationships.19 6.6 The following matters shall be submitted by Operator on behalf of the Contractor with the approval of Operating Committee if constituted underthe Article 7.4 or in case of single Party constituting the Contractor then by that Party to the Management Committee for approvala Annual Work Programmes and Budgets in respect of Development Operations and Production Operations and any modifications or revisionsthereto;b proposals for the approval of development plans as may be required under this Contract or modifications or revisions to a DevelopmentPlan;c determination of a Development Area;d appointment of auditors along with scope of audit approval and adoption of audited report submitted under Article 25.4.3;e collaboration with licensees or contractors of other areas;f claims or settlement of claims for or on behalf of or against the Contractor in excess of limits fixed by the Management Committee fromtime to time;g proposal about abandonment planSite Restoration as required to be submitted under Article 14.10;h any other matter required by the terms of this Contract to be submitted for the approval of the Management Committee;i any other matter which the Contractor dees to submit to it; andj any matter which Government refers to the Management Committee for its consideration and reasoned opinion.6.7 Unless agreed otherwise by all the members of the Management Committee the Management Committee shall meet at least once every six6 months during the Exploration Period and thereafter at least once every three 3 months or more frequently at the request of any member.The Secretary with the approval of the Chairman shall convene each meeting by notifying the members twenty eight 28 days prior to such a meeting or a shorter period of notice if the members unanimously so agree of the time and place of such meeting and the purpose thereof andshall include in such notice a provisional agenda for such meeting. The Chairman shall be responsible for processing the final agenda for suchmeeting and the agenda shall include all items of business requested by the members to be included provided such requests are received by theSecretary at least ten 10 days prior to the date fixed for the meeting. The Secretary shall forward the agenda to the members at least seven7 Business Days

prior to the date fixed for the meeting. Matters not included in the agenda may be taken up at the meeting by any member with the unanimous consent of all the members whether present or not present at the meeting.

6.8 The Chairman or the Deputy Chairman as may be the case shall preside over the meetings of the Management Committee and in their absence any other member representing Government and present shall preside over the meetings.

6.9 Secretary to the Management Committee shall be responsible inter alia for preparation of the minutes of every meeting in the English language and provision to every member of the Management Committee with two copies of the minutes approved by the Chairman within three Business Days of the meeting. Unless agreed otherwise by all the members of the Management Committee the minutes of a meeting shall be finalised by the Management Committee within three Business Days thereafter. Members shall notify the Chairman and the other members of their approval of the minutes by putting their signatures on one copy of the minutes and returning the same to the Chairman. Members may suggest any modification to the minutes while returning the signed copy. Members may also communicate with the Chairman through telex cable or facsimile or any other effective mode of communication agreed by all the members of the Management Committee. If the Chairman or any other member does not agree with the modification to the minutes suggested by any member the matter shall be brought to the attention of the other members and resubmitted to the Management Committee at the next meeting and the minutes shall stand approved as to all other matters. If a member fails to respond within the aforesaid three Business Day period unless agreed otherwise by the Management Committee as herein provided the minutes shall be deemed to be approved by such member.

6.10 Any member shall be entitled if either he or his alternate is unable to attend a meeting to cast his vote by telex cable facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee and received by the Chairman prior to the date on which the vote is taken in the course of the meeting or by giving a prior written notice to all other members appoint a member with his prior consent representing another Party in the Management Committee as its proxy to attend a meeting and to exercise the

appointing members right to vote at the meeting whether as directed by the appointing member or otherwise. A member appointed as a proxy and attending a meeting shall be present in two separate capacities and vote accordingly. All such votes shall have the same effect as if that member had been present and so voted at the meeting.

6.11 In case of urgency where Operating Committee has made a recommendation together with reasons to the Chairman requiring consideration of a matter by the Management Committee without delay Chairman after being satisfied may waive the requirements of notice period for the meeting and circulation of agenda to such extent as would be consistent with the urgency and consideration of the matter by the Management Committee. Alternatively Chairman may approve submission of notice and agenda to members by telex or facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee receipt of which shall be confirmed by telephone by the Chairman requiring the members to confirm their decision by these modes of communication not later than three (3) Business Days from confirmation of receipt of notice and agenda by the member. Any member failing to convey the decision within the time limits of three (3) Business Days shall be deemed to have voted in favour of the proposal. The result of any such vote shall be notified by the Chairman to all the members.

6.12 The meetings of the Management Committee shall be held in India unless otherwise mutually agreed by the members of the Management Committee. All expenses of the members of the Management Committee attending meetings shall be borne by the respective Party and shall in no event be cost recoverable.

6.13 All matters requiring the approval of the Management Committee shall be generally approved by a unanimous vote of the members of the Management Committee present as well as the views of the members received by some other mode of communication. In case unanimity is not achieved in decision making process within a reasonable period as may be required under the circumstances the decision of the Management Committee shall be approved by the majority Participating Interest of seventy percent (70) or more with Government representative having a positive vote in favour of the decision.

6.14 There shall be a quorum of the Management Committee for holding a meeting and making decisions

with each Party to the Contract represented by at least one of its nominated members in the Management Committee either present in person or represented as per Article 6.10. If there is no quorum in a meeting the meeting shall stand postponed to the same day and time in the next week and if quorum is not present or represented even in the next meeting and subject to a Government member being present the members present and represented will constitute the quorum and take decisions and decisions taken by such quorum shall be final and binding to all the absenting Parties or Parties not represented notwithstanding the provisions of Article 6.13.6.15 The Management Committee if it considers necessary may appoint legal financial or technical subcommittees comprised of such representatives as may be agreed by the Management Committee to consider any matter requiring approval or decision of the Management Committee. Such subcommittee expenses shall form part of Contract Cost with relevant cost classification as decided by the Management Committee pursuant to the Section 2 of the Accounting Procedure and will be cost recoverable.6.16 In the event a Party to the Contract is not entitled to vote in the Operating Committee meetings being in default under the Operating Agreement and Operator notifies Chairman of the default by the Party then the issue of exercising voting right by such defaulting Party in the Management Committee meetings shall be discussed by the Management Committee. The Management Committee excluding the defaulting Party after duly hearing the views of the defaulting Party on the matter of their default under Operating Agreement shall take unanimous decision on exclusion or otherwise of the defaulting Party from voting in the Management Committee meetings. For avoidance of any doubt it is clearly understood that unanimous decision by the Management Committee referred to in this Article 6.16 excludes defaulting Party from such decision. Accordingly if the Management Committee decides to exclude the defaulting Party from voting in the Management Committee then the said Party shall not be entitled to vote in the meetings of the Management Committee under Contract. In that event notwithstanding the provisions of Article 6.13 decisions of the Management Committee shall be made by vote of the members of the Management Committee excluding the member appointed by the said Party in default and any vote or purported

vote by such member in the Management Committee shall be ignored. The said Party in default shall be bound by all decisions of the Management Committee. The nondefaulting Parties under the Operating Agreement shall indemnify Government against any claims of whatsoever nature which may arise due to exclusion of defaulting Party from voting in the Management Committee.²³

OPERATORSHIP OPERATING AGREEMENT AND OPERATING COMMITTEE ARTICLE 77.1

GSPC shall be the Operator for the purpose of carrying out Petroleum Operations pursuant to this Contract during the term of the Contract. 7.2 No change in the operatorship shall be effected without

the consent of the Government and such consent shall not be unreasonably withheld. 7.3 The

functions required of the Contractor under this Contract shall be performed by the Operator on

behalf of all constituents of the Contractor subject to and in accordance with the terms and

provisions of this Contract and generally accepted modern oilfield and petroleum industry practices

provided however that this provision shall not be construed as relieving the constituents of the

Contractor from any of its obligations or liability under the Contract. 7.4 Within forty five 45 days of the

Effective Date or such longer period as may be agreed to by Government the Companies

constituting the Contractor shall execute an Operating Agreement. The said agreement shall be

consistent with the provisions of this Contract and shall provide for among other things a the

appointment resignation removal and responsibilities of the Operator; b the establishment of an

Operating Committee comprising of an agreed number of representatives of the Companies chaired

by a representative of the Operator; c functions of the said Operating Committee taking into account

the provisions of the Contract procedures for decision making frequency and place of meetings;

and d contribution to costs default sole risk disposal of Petroleum and assignment as between the

Parties to the Operating Agreement. 7.4.1 Operator shall provide to the Government a copy of the

duly executed Operating Agreement within thirty 30 days of the Effective Date or such longer period

as may be agreed to by the Government. 7.4.2 In case a single Company constitutes the Contractor

the provisions of Article 7.4 and 7.4.1 shall not be applicable. However in case of increase in the

number of constituents of the Contractor the provisions of Article 7.4 and 7.4.1 shall apply from the

date of such increase in the number of the constituents.²⁴ 8.1 Subject to the provisions of this Contract the Contractor shall have the following rights:

ARTICLE 8 GENERAL RIGHTS AND OBLIGATIONS OF THE PARTIES

a) subject to the provisions of Article 12 the exclusive right to carry out Petroleum Operations to recover costs and expenses as provided in this Contract. The right shall exclude exploitation of coalbed methane CBM by the Contractor in the Contract Area;

b) the right to use free of charge such quantities of Petroleum produced as are reasonably required for conducting Petroleum Operations in the Contract Area in accordance with generally accepted modern oilfield and petroleum industry practices;

c) the right to lay pipelines build roads construct bridges ferries aerodromes landing fields radio telephones and related communication and infrastructure facilities and exercise other ancillary rights as may be reasonably necessary for the conduct of Petroleum Operations subject to such approvals as may be required and the applicable laws in force from time to time for the regulation and control thereof;

d) the right to use all available technical data seismic and well information maps samples etc. of the Contract Area as on the Effective Date free of charge subject to nominal copying reproduction costs for further Petroleum Operations. The Contractor shall submit the list of all data required by them to Directorate General of Hydrocarbons DGH based on the list of data provided in the information docket for the block pertaining to the Contract Area as soon as possible but not later than one hundred and eighty 180 days from the execution of the Contract and the same if available and reproducible shall be made available to the Contractor in the office of DGH within ninety 90 days from the submission of such request for data by the Contractor provided the Effective Date of the Contract has commenced and the Contractor has furnished relevant guarantees under Article 29 of the Contract.

e) such other rights as are specified in this Contract.

8.2 The Government reserves the right to itself or to grant to others the right to prospect for and mine minerals or substances other than Petroleum within the Contract Area; provided however that if after the Effective Date others are issued rights or the Government proceeds directly to prospect for and mine in the Contract Area any minerals or substances other than Petroleum the Contractor shall use its best efforts to avoid obstruction to or interference with

such operations within the Contract Area and the third parties and/or the Government²⁵ as the case may be shall use best efforts to ensure that operations carried out do not obstruct or unduly interfere with Petroleum Operations in the Contract Area.

8.3 The Contractor shall having due regard to modern oilfield and petroleum industry practices a except as otherwise expressly provided in this Contract conduct all Petroleum Operations at its sole risk cost and expense and provide all funds necessary for the conduct of Petroleum Operations including funds for the purchase or lease of equipment materials or supplies required for Petroleum Operations as well as for making payments to employees agents and Subcontractors; b conduct all Petroleum Operations within the Contract Area diligently expeditiously efficiently and in a safe and workmanlike manner pursuant to the Work Programme formulated in accordance with Contract; c ensure provision of all information data samples etc. which may be required to be furnished under the applicable laws or under this Contract; d ensure that all equipment materials supplies plant and installations used by the Contractor the Operator and Subcontractors comply with generally accepted standards and are of proper construction and kept in safe and good working order; e in the preparation and implementation of Work Programmes and in the conduct of Petroleum Operations follow modern oilfield and petroleum industry practices with such degree of diligence and prudence reasonably and ordinarily exercised by experienced parties engaged in a similar activity under similar circumstances and conditions; f the procedure for acquisition of goods and services as of the Effective Date shall be as per the Appendix F of this Contract. Based on economic considerations and generally accepted practices in the international petroleum industry with the objective of ensuring cost and operational efficiency in the conduct of Petroleum Operations the Appendix F to this Contract may be modified or changed with the prior approval of the Management Committee when circumstances so justify; g after the designation of a Development Area pursuant to this Contract forthwith proceed to take all necessary action for prompt and orderly development of the Development Area and for the production of Petroleum in accordance with the terms of this Contract; h appoint a technically competent and sufficiently experienced representative and in his absence a suitably qualified

replacement therefor who shall be resident in India and who shall have full authority to take such steps as may be necessary to implement this Contract and whose names shall on appointment within ninety 90 days after commencement of the first Contract Year be made known to the Government;

26 i provide acceptable working conditions living accommodation and access to medical attention and nursing care for all personnel employed in Petroleum Operations;

j carry out such other obligations as are specified in this Contract in particular those specified in Article 14;

and k be always mindful of the rights and interests of India in the conduct of Petroleum Operations.

27 ARTICLE 9 GOVERNMENT ASSISTANCE

9.1 Upon application in the prescribed manner and subject to compliance with applicable laws and relevant procedures the Government or its nominee will use their good offices to provide the right of ingress and egress from the Contract Area and any facilities used in Petroleum Operations wherever located and which may be within their control;

b use their good offices when necessary to assist the Contractor in procurement or commissioning of facilities required for execution of Work Programmes including necessary approvals permits consents authorisations visas work permits Licenses including Licenses and Leases rights of way easement surface rights and security protection at the Contractor's cost required pursuant to this Contract and which may be available from resources within its control; and

c in the event that onshore facilities are required outside the Contract Area for Petroleum Operations including but not limited to storage loading and processing facilities pipelines and offices use their good offices in assisting the Contractor to obtain from the authorities of the state in which such facilities are required such licenses permits authorizations consents security protection at the Contractor's cost surface rights and easements as are required for the construction and operation of the said facilities by the Contractor.

28 ARTICLE 10 DISCOVERY DEVELOPMENT AND PRODUCTION

10.1 If and when a Discovery is made within the Contract Area the Contractor shall forthwith inform the Management Committee and Government of the Discovery;

b promptly thereafter but in no event later than a period of thirty 30 days from the date of the Discovery furnish to the Management Committee and Government particulars in writing of the Discovery; and

c promptly run

tests to determine whether the Discovery is of potential commercial interest and within a period of sixty 60 days after completion of such tests submit a report to the Management Committee containing data obtained from such tests and its analysis and interpretation thereof together with a written notification of whether in the Contractor's opinion such Discovery is of potential commercial interest and merits appraisal.

10.2 If the Contractor determines to conduct a drill stem or production test in open hole or through perforated casing with regard to any Exploration Well it shall notify the Government of the time of such test at least forty eight 48 hours prior to the proposed test and the Government shall have the right to have a representative present during such test.

10.3 If pursuant to Article 10.1 c the Contractor notifies the Management Committee that the Discovery is of potential commercial interest the Contractor shall prepare and submit to the Management Committee within one hundred and twenty 120 days of such notification a proposed Appraisal Programme with a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery designed to achieve both the following objectives i determine without delay and in any event within the period specified in Article 10.5 whether such Discovery is a Commercial Discovery and ii determine with reasonable precision the boundaries of the area to be delineated as the Development Area.

10.4 The proposed Appraisal Programme shall be reviewed by the Management Committee within thirty 30 days after submission thereof pursuant to Article 10.3. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor which may be revised or modified or amended by the Contractor in light of the Management Committee review shall be adopted as the Appraisal Programme and the Contractor shall promptly commence implementation thereof; and the annual Budget for the Exploration Period adopted pursuant to Article 5 shall be revised accordingly.

29 10.5 The Contractor shall in respect of a Discovery of Crude Oil advise the Management Committee by notice in writing within a period of eighteen 18 months for onland and shallow water blocks and thirty 30 months for deepwater blocks from the date on which the notice provided for in Article 10.1 c was delivered whether such Discovery should be declared a Commercial Discovery or not. Such notice shall be accompanied by a report on the Discovery setting

forth all relevant technical and economic data including estimated recoverable reserves sustainable production levels estimated development and production expenditures prevailing and forecasted prices and other pertinent technical and economic factors according to modern oilfield and petroleum industry practices as well as all evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or for the Contractor with respect to the Discovery and any other relevant information. If the Contractor is of the opinion that Crude Oil has been discovered in commercial quantities it shall submit the proposal to the Management Committee for review that the Discovery be declared a Commercial Discovery. In the case of a Discovery of Gas the provisions of Article 21 shall apply.

10.6 The Management Committee shall within forty 40 days of the date of the notice referred to in Article 10.5 review the proposal of the Contractor and request any other additional information it may reasonably require so as to complete the review of the proposal made by the Contractor. The Contractor shall furnish the additional information within thirty 30 days from the date of the request. The review by the Management Committee shall be made and conveyed to the Contractor within the later of a ninety 90 days from the date of notice referred to in Article 10.5 or b forty 40 days of receipt of such other information as may be required under this Article.

10.7 If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred in the Article 10.6 within two hundred 200 days of the declaration of the Discovery as a Commercial Discovery the Contractor shall submit to the Management Committee a comprehensive development plan of the Commercial Discovery which shall relate to the Discovery Area and contain a Reservoir or part thereof and the boundaries of the proposed Development Area; b be designed to ensure the most efficient beneficial and timely use of the Petroleum resources discovered; and c be prepared in accordance with sound engineering economic safety and environmental principles recognised in the generally accepted modern oilfield and petroleum industry practices. Such plan shall contain detailed proposals by the Contractor for the construction establishment and operation of all facilities and services for and incidental to the recovery storage and transportation of the Petroleum from the proposed 30

Development Area to the Delivery Point together with all data and supporting information including but not limited to description of the nature and characteristic of the Reservoir data statistics interpretations and conclusions on all aspects of the geology Reservoir evaluation Petroleum engineering factors Reservoir models estimates of reserve in place possible production magnitude nature and ratio of Petroleum fluids and analysis of producible Petroleum; ii outlines of the development project and/or alternative development projects if any describing the production facilities to be installed and the number of Wells to be drilled under such development project and/or alternative development projects if any; iii estimate of the rate of production to be established and projection of the possible sustained rate of production in accordance with modern oilfield and petroleum industry practices under such development project and/or alternative development projects if any which will ensure that the area does not suffer an excessive rate of decline of production or an excessive loss of Reservoir pressure; iv estimates of Development Costs and Production Costs under such development project and/or alternative development projects if any; v Contractors recommendations as to the particular project that it would prefer; vi Work Programme and Budget for development proposals relating to the proposed Development Area; vii anticipated adverse impact on the environment and measures to be taken for prevention or minimisation thereof and for general protection of the environment in conduct of operations; viii measures to be taken for the health and safety of persons employed in Petroleum Operations; ix the information required in Article 21.10.8

A proposed development plan submitted by the Contractor pursuant to Article 10.7 may be approved by the Management Committee within one hundred and ten 110 days of submission thereof or eighty 80 days of receipt of any additional information requested by the Management Committee. In case the Management Committee requires any reasonable additional information the same shall be requested by it within eighty 80 days from the submission of the development plan. The Contractor shall provide such additional information within thirty 30 days from the request by the Management Committee. If within a period of one hundred and ten 110 days after submission of a proposed development plan or eighty 80 days from the receipt of any additional

information where asked by the Management Committee the Management Committee fails to convey a decision to the Contractor the Contractor shall have option to submit the proposal to the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development³¹ plan for the approval of the Government. The Government shall respond on the proposed development plan submitted by the Contractor within one hundred and ten 110 days. In case Government refuses to approve the proposed development plan it shall convey the reasons for such refusal and the Contractor shall be given opportunity to make appropriate modifications to meet concerns of Government and the provisions of the foregoing Article and resubmit the plan within ninety 90 days from the date of receipt of refusal from the Government.

10.9 A Development Plan approved by the Management Committee or Government as may be the case from time to time shall commit the Contractor to the obligations stipulated in Articles 10.10 to 10.12.

10.10 Work Programmes and Budgets for Development and Production Operations shall be submitted to the Management Committee as soon as possible after the approval of a Development Plan under Article 10.8 and thereafter not later than 31st December each Year in respect of the Year immediately following.

10.11 The Management Committee when considering any Work Programme and Budget may require the Contractor to prepare an estimate of potential production to be achieved through the implementation of the said Work Programme and Budget for each of the three 3 Years following the Year to which the Work Programme and Budget relate. If major changes in yearly estimates of potential production are required these shall be based on evidence necessitating such changes.

10.12 Not later than the fifteenth 15th of January each Year in respect of the Year immediately following commencement of Commercial Production the Contractor shall determine the Programme Quantity with the approval of the Management Committee. The Programme Quantity for any Year shall be the maximum quantity of Petroleum based on Contractor's estimates as approved by the Management Committee which can be produced from a Development Area consistent with modern oilfield and petroleum industry practices and minimising unit production cost taking into account the capacity of the producing Wells gathering

lines separators storage capacity and other production facilities available for use during the relevant Year as well as the transportation facilities up to the Delivery Point.

10.13 Proposed revisions to the details of a Development Plan or an annual Work Programme or Budget in respect of Development and Production Operations shall for good cause and if the circumstances so justify be submitted for approval to the Management Committee.

10.14 In the event the area encompassing the Commercial Discovery extends beyond the Development Area designated in the Development Plan either within the original Contract Area but subsequently relinquished or outside the original Contract Area the Management Committee may make recommendations to the Government³² concerning enlargement of the Development Area provided the same was not awarded to any other company by the Government or is not held by any other party or not on offer by the Government and no application for a License or Lease is pending with the Government. However in case the area is held by any other party or on offer by the Government or application for License or Lease is pending with the Government the Management Committee shall notify the same to the Government for further action on the matter. Government may consider such request for extension at its sole discretion and on terms and conditions which it may consider fit.

33 PETROLEUM EXPLORATION LICENSE AND MINING LEASE

ARTICLE 11

11.1 The Contractor shall submit an application for grant of License in respect of the Contract Area as early as possible but not later than fifteen¹⁵ Business Days from the date of execution of this Contract.

11.2 On submission of a development plan of a Commercial Discovery pursuant to Article 10.7 the Contractor shall submit an application for a Lease in respect of the proposed Development Area to the relevant State Governments.

11.3 Where a part of a Reservoir in respect of which a Commercial Discovery has been declared extends beyond the Contract Area subject to Article 10.14 such area may be included in the proposed Development Area in relation to which application for a Lease is made on terms and conditions as deemed by the Central Government; provided that such area is a not subject to a license or lease granted to any other person; b not the subject of negotiations bidding or contract awarded for a license or lease; and c available for licensing i.e. is not an area over which Petroleum Operations are excluded.

11.4 Where

a Development Plan has been approved pursuant to Article 10 and the Contractor has complied with the terms and conditions of the License and this Contract and is not in breach of any of the terms thereof or the provisions of any law and subject to normal Government clearances approvals being obtained by the Contractor as applicable before grant issue of the Lease the Central Government will assist the Contractor in obtaining the Lease from the relevant State Governments over the Development Area as agreed subject to Article 11.5 to enable the Contractor to carry out Petroleum Operations in the Development Area in accordance with the Development Plan.

11.5 The Lease shall be granted for an initial period of twenty 20 years from the date of grant thereof subject to a cancellation in accordance with its terms or for termination of this Contract in accordance with its terms;

b extension by mutual agreement between the Parties for five 5 years or such period as may be agreed after taking into account the balance recoverable reserve and balance economic life of the Field Development Area from the expiry of the initial period provided that in the event of a Commercial production of Non Associated Natural Gas the extension may³⁴ be for a period of ten 10 years or such period as may be mutually agreed between the Parties after taking into account the balance recoverable reserves and balance economic life of the Field Development Area from the date of expiry of the initial term; and

c the terms of this Contract and other terms and conditions as set forth in such Lease be consistent with this Contract and the relevant legislation.

35 ARTICLE 12 UNIT DEVELOPMENT

12.1 If a Reservoir in a Discovery Area is situated partly within the Contract Area and partly in an area in India over which other parties have a contract to conduct petroleum operations and both parts of the Reservoir can be more efficiently developed together on a commercial basis on receiving information in writing from any party to these contracts or any information on this from any bonafide source the Government may for securing the more effective recovery of Petroleum from such Reservoir by notice in writing to the Contractor require that the Contractor

a collaborate and agree with such other parties on the joint development of the Reservoir

b submit such agreement between the Contractor and such other parties to the Government for approval within one hundred and eighty¹⁸⁰ days; and

c prepare a plan for such joint development of

the said Reservoir within one hundred and eighty 180 days of the approval of the agreement referred to in b above.

12.2 If no plan is submitted within the period specified in Article 12.1 c or such longer period as the Government and the Contractor and the other parties referred to in Article 12.1 may agree or if such plan as submitted is not acceptable to the Government and the Parties cannot agree on amendments to the proposed joint development plan the Government may cause to be prepared at the expense of the Contractor and such other parties a plan for such joint development consistent with generally accepted modern oilfield and petroleum industry practices which shall take into consideration any plans and presentations made by the Contractor and the aforementioned other parties.

12.3 If the parties are unable to agree on the proposed plan for joint development the Government may call for a joint development plan from an independent agency which agency may make such a proposal after taking into account the position of the parties in this regard. Such a development plan if approved by Government shall be binding on the parties notwithstanding their disagreement with the plan. However the Contractor may in case of any disagreement on the issue of joint development or the proposed joint development plan prepared in accordance with Article 12.2 or within forty five 45 Business Days of the plan approval as aforesaid in this Article notify the Government that it elects to surrender its rights in the Reservoir Discovery in lieu of participation in a joint development.

36 12.4 If a proposed joint development plan is agreed and adopted by the parties or adopted following determination by the Government the plan as finally adopted shall be the approved joint development plan and the Contractor shall comply with the terms of the said development plan as if the Commercial Discovery is established.

12.5 The provisions of Articles 12.1 12.2 and Article 12.3 shall apply mutatis mutandis to a Discovery of a Reservoir located partly within the Contract Area which although not equivalent to a Commercial Discovery if developed alone would be a Commercial Discovery if developed together with that part of the Reservoir which extends outside the Contract Area to the areas subject to contract for petroleum operations by other parties.

37 ARTICLE 13 MEASUREMENT OF PETROLEUM

13.1 Petroleum used for internal consumption for Petroleum Operations flared saved and sold from the Contract Area shall be

measured by methods and appliances generally accepted and customarily used in modern oilfield and petroleum industry practices and approved by the Management Committee and the Government.

13.2 The Government may at all reasonable times inspect and test the appliances used for measuring the volume and determining the quality of Petroleum provided that any such inspection or testing shall be carried out in such a manner so as not to unduly interfere with Petroleum Operations.

13.3 Before commencement of production from the Contract Area the Parties shall mutually agree on a methods to be employed for measurement of volumes of Petroleum production;

b the point or points at which Petroleum shall be measured and the respective shares allocated to the Parties in accordance with the terms of this Contract;

c the frequency of inspections and testing of measurement appliances and relevant procedures relating thereto; and

d the consequences of a determination of an error in measurement.

13.4 The Contractor shall undertake to measure the volume and quality of the Petroleum Produced and Saved from the Contract Area at the agreed measurement point consistent with generally accepted modern oilfield and petroleum industry practices with the frequency and according to procedures agreed pursuant to Article 13.3. The Contractor shall not make any alteration in the agreed method or procedures for measurement or to any of the approved appliances used for that purpose without the written consent of the Management Committee and the Government.

13.5 The Contractor shall give the Government timely notice of its intention to conduct measuring operations or any agreed alteration for such operations and the Government shall have the right to be present at and supervise either directly or through authorised representatives such operations.

13.6 The Contractor shall keep all the records of analysis and measurement of hydrocarbons calibrations and proving of measurement system and make available to Government or its authorized agency such records on request.

38 ARTICLE 14 PROTECTION OF THE ENVIRONMENT

14.1 The Government and the Contractor recognise that Petroleum Operations will cause some impact on the environment in the Contract Area. Accordingly in performance of the Contract the Contractor shall conduct its Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation of natural

resources and shall in particular; a employ modern oilfield and petroleum industry practices and standards including advanced techniques practices and methods of operation for the prevention of Environmental Damage in conducting its Petroleum Operations; b take necessary and adequate steps to prevent Environmental Damage and where some adverse impact on the environment is unavoidable to minimise such damage and the consequential effects thereof on property and people; ii ensure adequate compensation for injury to persons or damage to property caused by the effect of Petroleum Operations; and c comply with the requirements of applicable laws and the reasonable requirements of the Government from time to time.

14.2 If the Contractor fails to comply with the provisions of paragraph bi of Article 14.1 or contravenes any relevant law and such failure or contravention results in any Environmental Damage the Contractor shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof.

14.3 If the Government in accordance with the laws has good reason to believe that any works or installations erected by the Contractor or any operations conducted by the Contractor are endangering or may endanger persons or any property of any person or are causing or may cause pollution or are harming or may harm fauna or flora or the environment to a degree which the Government deems unacceptable the Government may require the Contractor to take remedial measures within such reasonable period as may be determined by the Government and to repair any such damage. If the Government deems it necessary it may also require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such remedial measures or has repaired any damage caused.

14.4 The measures and methods to be used by the Contractor for the purpose of complying with the terms of paragraph bi of Article 14.1 shall be determined in timely consultation with the Government upon the commencement of Petroleum Operations or whenever there is a significant change in the scope or method of conducting Petroleum Operations and shall take into account the international standards applicable in similar circumstances and the relevant environmental impact study carried out in accordance with Article 14.5 below. The Contractor shall notify the Government in writing of the measures and methods finally determined by the Contractor

and shall cause such measures and methods to be reviewed from time to time in the light of prevailing circumstances.

14.5 The Contractor shall cause a person or persons with special knowledge on environmental matters to carry out two environmental impact studies in order to determine at the time of the studies the prevailing situation relating to the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or neighbouring areas; and

b to establish the likely effect on the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or neighbouring areas in consequence of the relevant phase of Petroleum Operations to be conducted under this Contract and to submit for consideration by the Parties methods and measures contemplated in Article 14.4 for minimising Environmental Damage and carrying out Site Restoration activities.

14.5.1 The first of the aforementioned studies shall be carried out in two parts namely a preliminary part which must be concluded before commencement of any field work relating to a seismographic or other survey and a final part relating to drilling in the Exploration Period. The part of the study relating to drilling operations in the Exploration Period shall be approved by Government before the commencement of such drilling operations it being understood that such approval shall not be unreasonably withheld.

14.5.2 The second of the aforementioned studies shall be completed before commencement of Development Operations and shall be submitted by the Contractor as part of the Development Plan with specific approval of Government being obtained before commencement of Development Operations it being understood that such approval shall not be unreasonably withheld.

14.5.3 The studies mentioned in Article 14.5 above shall contain proposed environmental guidelines to be followed in order to minimize Environmental Damage and shall include but not be limited to the following to the extent appropriate to the respective study taking into account the phase of operations to which the study relates

40 a proposed access cutting; b clearing and timber salvage; c wildlife and habitat protection; d fuel storage and handling; e use of explosives; f camps and staging; g liquid and solid waste disposal; h cultural and archaeological sites; i selection of drilling sites; j terrain stabilization; k protection of freshwater horizons; l blowout prevention plan; m flaring

during completion and testing of Gas and Oil Wells;n abandonment of Wells;o rig dismantling and site completion;p reclamation for abandonment;q noise control;r debris disposal; ands protection of natural drainage and water flow.14.5.4 Subject to the provision of all applicable laws and notifications on protection of environment any new project or expansion or modernizationprojects for petroleum operations for which a proposal is submitted by the Contractor the Government shall compete the assessment of theproject within a period of ninety 90 days from the receipt of the requisite documents and data from the project authorities and completion ofpublic hearing. The decision of the Government on the proposal of the Contractor for environmental clearance shall be conveyed within thirty30 days thereafter.14.6 The Contractor shall ensure thata Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with modern oilfield and petroleumindustry practices and that such Petroleum Operations are properly monitored;b the pertinent completed environmental impact studies are made available to its employees and to its contractors and Subcontractors todevelop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the PetroleumOperations; andc the contracts entered into between the Contractor and its contractors and Subcontractors relating to its Petroleum Operations shall include theprovisions stipulated herein and any established measures and methods for the implementation of the Contractors obligations in relation tothe environment under this Contract.41 14.7 The Contractor shall prior to conducting any drilling activities prepare and submit for review by the Government contingency plans fordealing with Oil spills fires acents and emergencies designed to achieve rapid and effective emergency response. The plans referred toabove shall be discussed with the Government and concerns expressed shall be taken into account.14.7.1 In the event of an emergency acent Oil spill or fire arising from Petroleum Operations affecting the environment the Contractor shallforthwith notify the Government and shall promptly implement the relevant contingency plan and perform such Site Restoration as may benecessary in accordance with modern oilfield and petroleum industry practices.14.7.2 In the event of any other emergency or acent arising from the Petroleum

Operations affecting the environment the Contractor shall take such action as may be prudent and necessary in accordance with modern oilfield and petroleum industry practices in such circumstances.

14.8 In the event that the Contractor fails to comply with any of the terms contained in Article 14.7 within a period specified by the Government the Government after giving the Contractor reasonable notice in the circumstances may take any action which may be necessary to ensure compliance with such terms and to recover from the Contractor immediately after having taken such action all costs and expenditures incurred in connection with such action together with such interest as may be determined in accordance with Section 1.7 of Appendix C of this Contract.

14.9 On expiry or termination of this Contract or relinquishment of part of the Contract Area the Contractor shall subject to Article 27 remove all equipment and installations from the relinquished area or former Contract Area in a manner agreed with the Government pursuant to an abandonment plan; and b perform all necessary Site Restoration in accordance with modern oilfield and petroleum industry practices and take all other action necessary to prevent hazards to human life or to the property of others or the environment.

14.10 The Contractor shall prepare a proposal for the restoration of site including abandonment plan and requirement of funds for this and the annual contribution. This will be submitted along with the annual Budget for the consideration and approval of the Management Committee. The annual contribution shall be deposited by the Contractor in the Site Restoration fund which will be established in accordance with the scheme notified by the Government.

14.11 Subject to Section 3.2 of Accounting Procedure any Site Restoration fund scheme formulated by Government and subject to provisions of this Contract any and all costs incurred by the Contractor pursuant to this Article shall be cost recoverable including but not limited to sinking funds established for abandonment and restoration of the Contract Area.

14.12 In this Article a reference to Government includes the State Government.

14.13 Where the Contract Area is partly located in areas forming part of certain national parks sanctuaries mangroves wetlands of national importance biosphere reserves and other biologically sensitive areas passage through these areas shall generally not be permitted. However if there is no passage other

than through these areas to reach a particular point beyond these areas permission of the appropriate authorities shall be obtained.

14.14 The obligations and liability of the Contractor for the environment hereunder shall be limited to damage to the environment which occurs after the Effective Date; and results from an act or omission of the Contractor.

43 ARTICLE 15 RECOVERY OF COST PETROLEUM

15.1 The Contractor shall be entitled to recover Contract Costs out of a percentage of the total value of Petroleum Produced and Saved from the Contract Area in the Year in accordance with the provisions of this Article.

15.2 Exploration Costs incurred by the Contractor in the Contract Area up to the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover the aggregate of such Exploration Costs out of the Cost Petroleum at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date of such Commercial Production.

15.3 The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Exploration Costs which it has incurred in any Year after the date of Commercial Production at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date such Exploration Costs are incurred.

15.4 Development Costs incurred by the Contractor in the Contract Area up to the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover out of the Cost Petroleum the aggregate of such Development Costs at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date of such Commercial Production.

15.5 The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Development Costs which it has incurred after the date of first Commercial Production at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date such Development Costs are incurred.

15.6 The Contractor shall be entitled to recover in full during any Year the Production Costs incurred in that Year out of the Cost Petroleum.

15.7 The Contractor shall be entitled to recover in full during any Year the royalty payments to the Government State Governments in that Year out of the Cost Petroleum.

15.8 If during any Year the Cost Petroleum is not sufficient to enable the Contractor to recover in full the Contract Costs due for recovery in that Year in accordance with the provisions of

Articles 15.1 to 15.7 then subject to the provisions of Article 15.1244 a recovery shall first be made of royalty payments; andb recovery shall next be made of the Production Costs; andc recovery shall next be made of the Exploration Costs; andd recovery shall then be made of the Development Costs. The unrecovered portions of Contract Costs shall be carried forward to the following Year and the Contractor shall be entitled to recover suchContract Costs in such Year or the subsequent Years as if such Contract Costs were due for recovery in that Year or the succeeding Years untilthe unrecovered Contract Costs have been fully recovered out of Cost Petroleum from the Contract Area.15.9 The maximum amount of Cost Petroleum to which the Contractor shall be entitled in accordance with the provisions of this Article shall be tobe taken from the accepted bid X percent X of the total value of the Petroleum Produced and Saved from the Contract Area.15.10 For the purposes of this Article as well as Article 16 costs receipts and income shall be converted into production unit equivalents and viceversa viz both in physical and monetary terms using the relevant prices established pursuant to Article 19 for Crude Oil and Article 21 for Natural Gas.15.11 Pending completion of the calculations required to establish definitively the Contractors entitlement to Cost Petroleum from the Contract Area in any Year the Contractor shall take delivery provisionally of volumes of Crude Oil or Natural Gas representing its estimated Cost Petroleum entitlement calculated with reference to estimated production quantities costs and prices as established by the Contractor and approved by the Management Committee. Such provisional determination of Cost Petroleum shall be made every Quarter on an accumulative basis. Within ninety 90 days of the end of each Year a final calculation of the Contractors entitlement to Cost Petroleum based on actual production quantities costs and prices for the entire Year as reflected in audited accounts under Article 25.4.3 shall be undertaken and any necessary adjustments to the Cost Petroleum entitlement shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter.15.12 Where more than one Party constitutes the Contractor the percentage of the total Cost Petroleum from the Contract Area which shall be available to each such Party in any Year for recovery of its share of Contract Costs shall be determined on the basis of the

respective Participating Interest of each such Party. 15.13 The Contractor acknowledges that the cost estimates for Minimum Work Programme are the realistic estimate of expenditure. For the purposes of allowing cost recovery under Article 15 herein read with Section 3 of the Accounting Procedure the cost estimates given by the Contractor in the bid documents towards the Minimum Work Programme in all three Exploration Phases shall be taken as Bench Mark notwithstanding any claims for higher actual cost. Any material increase over the Bench Mark shall not be allowed for cost recovery unless the Government on the recommendation of the Management Committee agrees that the cost increase is due to change in circumstances after the Contract comes into effect. For the above purpose an itemized breakup provided by the Contractor of cost estimates given in the bid documents is placed at Appendix H to this Contract.

46 ARTICLE 16 PRODUCTION SHARING OF PETROLEUM

16.1 The Parties to this Contract shall share in the Profit Petroleum in each Year in accordance with the provisions of this Article. A Party's share of Profit Petroleum in any Year shall be calculated on the basis of the Investment Multiple actually achieved by the Contractor at the end of the preceding Year for the Contract Area as provided in Appendix D.

16.2.1 When the Investment Multiple of the Contractor at the end of any Year is less than one and one half 1.5 the Government shall be entitled to take and receive twenty percent 20 and the Contractor shall be entitled to take and receive eighty percent 80 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.

16.2.2 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than one and one half 1.5 but is less than two 2.0 the Government shall be entitled to take and receive twenty five percent 25 and the Contractor shall be entitled to take and receive seventy five percent 75 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.

16.2.3 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than two 2.0 but is less than two and one half 2.5 the Government shall be entitled to take and receive thirty percent 30 and the Contractor shall be entitled to take and receive seventy percent 70 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.

16.2.4 When the Investment Multiple

of the Contractor at the end of any Year is equal to or more than two and one half 2.5 but is less than three 3.0 the Government shall be entitled to take and receive thirty percent 30 and the Contractor shall be entitled to take and receive seventypercent 70 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.16.2.5 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three 3.0 but is less than three and one half 3.5 the Government shall be entitled to take and receive thirtyfive percent 35 and the Contractor shall be entitled to take and receivesixtyfive percent 65 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.16.2.6 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three and one half 3.5 the Government shallbe entitled to take and receive forty percent 40 and the Contractor shall be entitled to take and receive sixty percent 60 of the total ProfitPetroleum from the Contract Area with effect from the start of the succeeding Year.47 16.3 Any balance left to the credit of the Parties in any Site Restoration account opened pursuant to the provision of Article 14.10 after SiteRestoration has been done by the Contractor in accordance with the provisions of this Contract and the laws in this regard shall be sharedbetween the Government and the Contractor as per the Investment Multiple reached at the time of ceasing of production from the ContractArea.16.4.1 Other than ANG or NANG the Government shall have the option to take its entitlement to Profit Petroleum either in cash or in kind inany Year. In case of ANG or NANG as the case may be the Government shall have the option to take its entitlement to Profit Petroleum incash or in kind and such option shall be exercised at interval of every five 5 Years from the commencement of first Commercial Productionfrom the Contract Area.16.4.2 In accordance with the Article 16.4.1 The Government shall exercise such option by giving a written notice to the Contractor not later thanthirtieth 30th June in the preceding Year in which the entitlement is due. Once the Government has exercised its option the same shallcontinue unless the Government informs the Contractor otherwise.16.4.3 Where the Government has informed the Contractor of its intention to take its share in kind the Parties shall mutually agree on a procedure fordelivery of the Governments share of Profit Petroleum and where

relevant the composition of the Petroleum which is to be delivered.16.5 The value of the Contractors Investment Multiple at the end of any Year in respect of the Contract Area shall be calculated in the manner provided for and on the basis of the net cash flows specified in Appendix D to this Contract. However the amount of Profit Petroleum to be shared between the Government and the Contractor shall be determined for each Quarter on an accumulative basis. Pending finalisation of accounts Profit Petroleum shall be shared between the Government and the Contractor on the basis of provisional estimated figures of Contract Costs production prices receipts income and any other income or allowable deductions and on the basis of the value of the Investment Multiple achieved at the end of the preceding Year. All such provisional estimates shall be approved by the Management Committee. When it is necessary to convert monetary units into physical units of production equivalents or vice versa the price or prices determined pursuant to Articles 19 and 21 for Crude Oil Condensate and Natural Gas respectively shall be used. Within ninety 90 days⁴⁸ of the end of each Year a final calculation of Profit Petroleum based on actual costs quantities prices and income for the entire Year shall be completed and any necessary adjustments to the sharing of Petroleum shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter. Explanation The Profit Petroleum due to the Government shall be deposited with Pay Accounts officer or its successor Ministry of Petroleum Natural Gas Government of India Shastri Bhavan New Delhi by 10th of the Month following each Quarter

16.6 The Profit Petroleum due to the Contractor in any Year from the Contract Area shall be divided amongst the Parties constituting the Contractor in proportion to their respective Participating Interest.⁴⁹

ARTICLE 17 TAXES ROYALTIES RENTALS DUTIES ETC.

17.1 Companies their employees persons providing any materials supplies services or facilities or supplying any ship aircraft machinery equipment or plant whether by way of sale or hire to the Companies for Petroleum Operations or for any other purpose and the employees of such persons shall be subject to all fiscal legislation in India except where pursuant to any authority granted under any applicable law they are exempted wholly or partly from the application of the provisions of a particular law or as

otherwise provided herein.17.2 Pursuant to the provisions of section 42 of the Incometax Act 1961 the allowances specified herein shall apply in computing income taxpayable by a Company on its profits and gains from the business of Petroleum Operations in lieu of and not in addition to corresponding allowances provided for under the heading Profits and Gains of Business or Profession in the Incometax Act 1961. Any other allowance which are not specified herein shall be treated in accordance with the provisions of Incometax Act 1961.17.2.1 Subject to the provisions herein below deductions at the rate of one hundred percent 100 per annum shall be allowed for all expenditures both capital and revenue expenditures incurred in respect of Exploration Operations and drilling operations. The expenditure incurred in respect of Development Operations other than drilling operations and Production Operations will be allowable as per the provisions of the Incometax Act 1961. The expenses so incurred are subject to the following a where any expenditure is not solely incurred on Petroleum Operations or is incurred as part of or in conjunction with any other business only that proportion of the total expenditure which can be proved to the assessing officer to represent a fair proportionate part thereof having regard to all relevant facts and circumstances shall be allowed; b sections 40A and 44C of the Incometax Act 1961 shall apply.17.2.2 A Company shall be entitled for income tax purposes only to deduct all its unsuccessful Exploration Costs in contract areas covered by other contracts from the aggregate value of Petroleum allocable to the Company from any Fields in the Contract Area in the manner as follows a unsuccessful Exploration Costs incurred in contract areas other than the Contract Area where a Commercial Discovery has been made up to the date of commencement of Commercial Production shall be aggregated and 50 the Company shall be entitled to deduct such costs at the rate of one hundred per cent 100 per annum; b unsuccessful Exploration Costs incurred in contract areas other than the Contract Area where a Commercial Discovery has been made after the commencement of Commercial Production shall be deductible at the rate of one hundred per cent 100 per annum of such costs beginning from the Year such costs are incurred.17.2.3 All allowable expenditure incurred prior to the Year in which Commercial Production commences shall be aggregated and the assessed loss for that Year as well

as the assessed loss if any incurred in the assessment year relevant to the Year in which Commercial Production commences or in any subsequent assessment year shall be carried forward to succeeding assessment years and set off as provided in the Income tax Act 1961.

17.2.4 For any or all accumulated expenditures incurred in respect of Exploration Operations and drilling operations prior to the date of commercial production Companies shall have option to amortize such expenditures over a period of ten 10 years from the date of first commercial production.

17.2.5 The profits and gains of the business of the Parties comprising the Contractor consisting of Petroleum Operations shall for the purpose of levy of income tax under the Income tax Act 1961 be computed on the basis of the value determined in accordance with Article 19 of its Participating Interest share of Crude Oil produced and saved and sold or otherwise disposed of from the Contract Area and from any revenue realised on the sale of Associated or Non Associated Natural Gas referred to in Article 21 as well as any other gains or receipts from Petroleum Operations as reduced by the deductions as specified herein and except as herein provided all the provisions of the Income tax Act 1961 shall apply.

17.2.6 Companies shall be eligible for benefits available under section 80 IA of the Income tax Act 1961 as applicable from time to time.

17.3 For the purposes of Article 17.2 and section 42 of the Income tax Act 1961

17.3.1 The following terms used in section 42 of the Income tax Act 1961 shall have the meanings corresponding to the terms used in this Contract and defined in Article 1 as follows

a agreement means this Contract as defined in Article 1;

b commercial production shall have the meaning assigned in Article 1.

17.3.2 The terms assessing officer assessed loss and assessment year shall have the meaning as defined in the Income tax Act 1961.

17.3.3 The other terms used herein and defined in Article 1 shall have the meaning therein ascribed.

17.4 Companies Lessee shall be required to pay royalty to the Government Lessor for offshore areas at the rate of ten percent 10 of the wellhead value of Crude Oil and Natural Gas. In case of an onshore area Companies shall be required to pay to the State Governments Lessor at the rate of twelve point five zero percent 12.5 of the wellhead value of Crude Oil and ten percent 10 of the wellhead value of Natural Gas. In case of an offshore area falling beyond four hundred 400 metre isobath the rate of

royalty payable by Companies Lessee to the Government Lessor shall be at the rate of five percent 5 of the wellhead value of Crude Oil and Natural Gas for the first seven years from the date of commencement of Commercial Production in the Field. The valuation of Crude Oil and Natural Gas shall be as per the Article 19 and Article 21 respectively. The royalty amount due to Government State Governments shall be payable latest by the end of the succeeding Month. 17.5 Machinery plant equipment materials and supplies imported by the Contractor and its Subcontractors solely and exclusively for use in Petroleum Operations under this Contract or similar contracts with the Government where customs duty has been exempted by the Government shall be exempt from customs duties and export duties or other charges on reexportation of the said items in accordance with applicable legislation. 17.6 The Government shall have the right to inspect the records and documents of the physical item or items for which an exemption has been provided pursuant to Article 17.5 to determine that such item or items are being or have been imported solely and exclusively for the purpose for which the exemption was granted. The Government shall also be entitled to inspect such physical items wherever located to ensure that such items are being used for the purpose herein specified and any item not being so used shall immediately become liable to payment of the applicable customs duties. 17.7 Subject to Article 27 the Contractor and its Subcontractors may sell or otherwise transfer in India all imported items which are no longer required for Petroleum Operations subject to applicable laws including rules regulations procedures notifications etc. governing customs duties and sale or disposal of such items. 17.8 Any sales tax or tax of similar nature payable on the sales of Petroleum under this Contract shall be borne and reimbursed by the buyers. 17.9 Subject to the provisions herein above provided the Contractor shall be liable for payment of a annual license charges and rental fees and other charges under the Rules; 52 b charges payable by specified industries or in connection with Petroleum Operations under applicable legislation; c payments for purchase lease or rental of land or land rights in connection with Petroleum Operations; d taxes fees or charges for specific services rendered on request or to the public generally; e customs duties except for those items subject to exemption as provided in

Article 17 applicable at the rates specified from time to time; and stamp duties registration fees license fees taxes such as taxes on property or assets not calculated by reference to income or otherwise exempted or other levies fees or charges of a non-discriminatory nature and generally applicable in India or in the State where Petroleum Operations are being conducted.

17.10 If any change in or to any Indian law rule or regulation dealing with income tax or other corporate tax export-import tax excise customs duty or any other levies duties or taxes imposed on Petroleum or dependent upon the value of Petroleum results in a material change to the expected economic benefits accruing to any of the Parties after the date of execution of the Contract the Parties shall consult promptly in good faith to make necessary revisions and adjustments to the Contract in order to maintain such expected economic benefits to each of the Parties provided however that the expected economic benefits to the Parties shall not be reduced as a result of the operation of this Article.

53 ARTICLE 18 DOMESTIC SUPPLY SALE DISPOSAL AND EXPORT OF CRUDE OIL AND CONDENSATE

18.1 Until such time as the total availability to the Government of Crude Oil and Condensate from all Petroleum production activities in India meets the total national demand each Company comprising the Contractor shall be required to sell in the domestic market in India all of the Company's entitlement to Crude Oil and Condensate from the Contract Area in order to assist in satisfying the national demand.

18.2 If during any Year India attains self-sufficiency the Government shall promptly thereafter but in no event later than the end of the first Quarter of the following Year so advise the Companies by written notice. In such event as from the end of the second Quarter of the following Year or such earlier date as the Parties may mutually agree domestic sale obligation shall be suspended and the Company shall have the right to lift and export its Participating Interest share of Crude Oil and Condensate until such time if any as self-sufficiency shall have ceased to exist. If self-sufficiency ceases to exist during a Year the Government shall recover its position to ask Companies under Article 18.1 in respect of the following Year by giving ninety 90 days notice thereof to the Companies to sell Crude Oil and Condensate in the Indian domestic market.

18.3 Upon India achieving self-sufficiency the Companies shall be entitled to freely lift and export any

Crude Oil and Condensate pursuant to this Article 18 subject to Governments generally applicable destination restrictions to countries with which the Government for policy reasons has severed or restricted trade.

18.4 No later than sixty 60 days prior to the commencement of production in a Field and thereafter no less than sixty 60 days before the commencement of each Year the Contractor shall cause to be prepared and submitted to the Parties a production forecast setting out the total quantity of Crude Oil that it estimates can be produced from a Field during the succeeding Year based on a maximum efficient rate of recovery of Crude Oil from that Field in accordance with modern oilfield and petroleum industry practices. No later than thirty 30 days prior to the commencement of each Quarter the Contractor shall inform its estimate of production for the succeeding Quarter and shall endeavour to produce the forecast quantity for each Quarter.

18.5 Each Company comprising the Contractor shall throughout the term of this Contract have the right to separately take in kind and dispose of all its share of Cost Petroleum and Profit Petroleum and shall have the obligation to lift the said Petroleum on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Companies.

18.6 The Government shall throughout the term of this Contract have the right to separately take in kind and dispose of its share of Crude Oil and shall have the obligation to lift the said Oil on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the Contractor.

18.7 For the purpose of implementing the provisions of this Article a Crude lifting procedure and Crude sales agreement based on generally acceptable international terms shall be agreed upon by the Contractor with buyers no later than six 6 months or such shorter period as may be mutually agreed between the Contractor and buyers with the consent of Government prior to the commencement of production in a Field. Such lifting procedure shall be made available to all the Parties to this Contract.

55 ARTICLE 19 VALUATION OF PETROLEUM

19.1 For the purpose of this Contract the value of Crude Oil Condensate and Natural Gas referred to in Article 21 shall be based on the price determined as provided herein.

19.2 A price for Crude Oil shall be determined for each Month or such other period as the Parties may agree hereinafter referred to as the Delivery Period in terms of

United States Dollars per Barrel on import parity basis with marine freight being determined on the basis of nearest port to the Contract Area for Crude Oil produced and sold or otherwise disposed of from Contract Area for each Delivery Period in accordance with the appropriate basis for that type of sale or disposal specified below. Subject to the provisions of this Article 19 it is clearly understood that the actual prices received by the Companies from the sales will form the basis for the purposes of cost recovery Profit Petroleum sharing and payment of royalty as provided in the Articles 15 16 and 17 respectively. The basis of valuation given in this Article for the purpose of Article 15 16 and 17 shall apply only where Government is of the view that sale prices realised by the Companies are not consistent with the price realisable at Arms Length Sales.

19.3 In the event that some or all of a Company's or Contractor's total sales of Crude Oil during a Delivery Period are made to third parties at Arms Length Sales all sales so made shall be valued at the weighted average of the prices actually received by a Company calculated by dividing the total receipts from all such sales at the Delivery Point by the total number of Barrels of the Crude Oil sold in such sales.

19.3.1 Each Company constituting the Contractor shall separately submit to the designated nominee of the Government within fifteen (15) days of the end of each Delivery Period a report containing the actual prices obtained in their respective Arms Length Sales for any Crude Oil. Such reports shall distinguish between term sales and spot sales and itemize volumes customers prices received and credit terms and a Company shall allow the designated nominees of the Government to examine the relevant sales contracts.

19.4 For the purpose of determining price at Arms Length Sales the price of the Crude Oil at which sale takes place will generally be based on per Barrel of one or more crude oils which at the time of calculation are being freely and actively traded in the international market and are similar in characteristics and quality to the Crude Oil in respect of which the price is being determined. Selling price to be ascertained from Platts Crude Oil Market Wire daily publication Platts or the spot market for the same crude oils ascertained in the same manner whichever price more truly reflects the current value of such crude oils. For any Delivery Period in which sales take place the price shall be the arithmetic average price per Barrel determined by calculating the average for

such Delivery Period of the mean of the high and low FOB prices for each day of the crude oils selected for comparison adjusted for differences in the Crude Oil and the crude oils being compared for quality, transportation costs, delivery time, quantity, payment terms and other contract terms to the extent known and other relevant factors. In the event that Platts ceases to be published or is not published for a period of thirty (30) consecutive days the Parties shall agree on an alternative daily publication. The Contractor shall make available all the data pertaining to pricing of Crude to enable Government to deem that the proposed sale price by the Contractor to each constituent of the Contractor reflects a fair market price for the Crude.

19.4.1 In the event that at the relevant time no crude oils of similar quality to the Crude Oil to be sold are being actively traded in the international markets where prices can be ascertained by international publication or the official FOB selling prices and the international spot market price vary widely between producers the Parties shall meet in good faith to determine an appropriate pricing basis.

19.5 The Contractor shall determine the relevant prices in accordance with this Article and the calculation basis of calculation and the price determined shall be supplied to the Government and shall be subject to agreement by the Government.

19.6 In the event that the Parties fail to reach agreement on any matter concerning selection of the crude oils for comparison, the calculation basis or mechanism for the calculation of the prices, the prices arrived at, the adjustment of any price or generally about the manner in which the prices are determined according to the provisions of this Article within thirty (30) days or such longer period as may be mutually agreed between the Parties from the date of commencement of Commercial Production or the end of each Delivery Period thereafter any Party may refer the matter or matters in issue for final determination by a sole expert or arbitrator appointed as provided in Article 33.

19.6.1 If the matter is referred to the sole expert within ten (10) days of the said appointment the Parties shall provide the expert with all information they deem necessary or as the expert may reasonably require.

19.6.2 Within fifteen (15) days from the date of his appointment the expert shall report to the Parties on the issues referred to him for determination applying the criteria or mechanism set forth herein and indicate his decision thereon to

be applicable for the relevant Delivery Period for CrudeOil and such decision shall be accepted as final and binding by the Parties.19.6.3 Any price or pricing mechanism agreed by the Parties pursuant to the provisions of this Article shall not be changed retroactively.57 19.7 In the event that all sales of Crude Oil in a Delivery Period by a Company constituting the Contractor are to be made to an Affiliate the Parties may agree on an alternative method of valuing the Crude Oil for the purposes of this Contract provided that such alternative method results in an internationally competitive fair market valuation for that Delivery Period. In case of disagreement the decision of the Government on determining a Crude price in case of sales to an Affiliate shall be final and binding.19.8 In the event that in any Delivery Period there is more than one type of sales referred to in Articles 19.3 and 19.7 then for the purpose of calculating Cost Petroleum and Profit Petroleum entitlement and royalty payments pursuant to Articles 15 16 and 17 respectively a single price per Barrel of Crude Oil for all the sales for the relevant Delivery Period shall be used. Such single price shall be the weighted average of the prices determined for each type of sale weighted by the respective volumes of Crude Oil sold in each type of sale in the relevant Delivery Period.19.9 The provisions specified above for the determination of the price of sales of Crude Oil shall apply mutatis mutandis to Condensates.19.10 The price of Natural Gas shall be determined as provided in Article 21.58 ARTICLE 20 CURRENCY AND EXCHANGE CONTROL PROVISIONS20.1 Subject to the provisions herein and to compliance with the relevant provisions of the laws of general application in India governing currency and foreign exchange and related administrative instructions and procedures issued thereunder on a non discriminatory basis each Foreign Company comprising the Contractor shall during the term of this Contract have the right to repatriate abroad in United States Dollars or any other freely convertible currency acceptable to the Government and the Foreign Company the net proceeds of sales of Petroleum in India; b receive retain and use abroad the proceeds of any export sales of Petroleum under the Contract; c open maintain and operate bank accounts with reputable banks both inside and outside India for the purpose of this Contract; d freely import through normal banking channels funds necessary for carrying out the Petroleum

Operations;e convert into foreign exchange and repatriate sums imported pursuant to d above in excess if any of its requirements; andf make payments outside of India for purchases services and loans obtained abroad without the requirement that funds used in makingsuch payments must come from or originate in India.Provided however that repatriation pursuant to subparagraphs a and e and payments pursuant to subparagraph f shall be subject to theprovisions of any treaties and bilateral arrangements between the Government and any country with respect to payments to or from that country.20.2 The rates of exchange for the purchase and sale of currency by the Companies shall be the prevailing rates of general application determined bythe Reserve Bank of India or such other financial body as may be mutually agreed by the Parties and for accounting purposes under thisContract these rates shall apply as provided in Section 1.6 of AppendixC.20.3. A Party other than a Foreign Company comprising the Contractor shall be governed by the relevant currency and foreign exchange laws andrelated administrative instructions and procedures issued thereunder.20.4 Indian Companies shall have right to remit their portion of expenditure in foreign currencyies in accordance with the exchange controlprovisions.59 ARTICLE 21NATURAL GAS21.1 Subject to Article 21.2 the Indian domestic market shall have the first call on the utilisation of Natural Gas discovered and produced from theContract Area. Accordingly any proposal by the Contractor relating to Discovery and production of Natural Gas from the Contract Area shallbe made in the context of the Governments policy for the utilisation of Natural Gas and shall take into account the objectives of theGovernment to develop its resources in the most efficient manner and to promote conservation measures.21.2 The Contractor shall have the right to use Natural Gas produced from the Contract Area for the purpose of Petroleum Operations includingreinjection for pressure maintenance in Oil Fields gas lifting and captive power generation required for Petroleum Operations.21.3 For the purpose of sales in the domestic market pursuant to this Article 21 the Contractor shall have freedom to market the Gas and sell itsentitlement.21.4 Associated Natural Gas ANG21.4.1 In the event that a Discovery of Crude Oil contains ANG the Contractor shall declare in the proposal for the declaration of the said Discoveryas a Commercial Discovery as

specified in Article 10 whether and by what amount the estimated production of ANG is anticipated to exceed the quantities of ANG which will be used in accordance with Article 21.2 such excess being hereinafter referred to as the Excess ANG. In such an event the Contractor shall indicate whether on the basis of the available data and information it has reasonable grounds for believing that the Excess ANG could be commercially exploited in accordance with the terms of this Contract along with the Commercial Production of the Crude Oil from the Contract Area and whether the Contractor intends to so exploit the Excess ANG.

21.4.2 Based on the principle of full utilisation and minimum flaring of ANG a proposed development plan for an Oil Discovery shall to the extent practicable include a plan for utilisation of the ANG including estimated quantities to be flared reinjected and to be used for Petroleum Operations; and if the Contractor proposes to commercially exploit the Excess ANG for sale in the domestic market in accordance with Government's policy or elsewhere the proposed plans for such exploitation.

21.4.3 If the Contractor wishes to exploit the Excess ANG subject to Article 21.1 the Contractor shall be free to explore markets for the commercial exploitation of the said Excess ANG and submit its proposals for such exploitation to the Government in accordance with Article 21.4.2.

21.4.4 Where the Contractor is of the view that the Excess ANG cannot be commercially exploited and chooses not to exploit the said Excess ANG or is unable to find a market for the Excess ANG pursuant to Article 21.4.3 the Government shall be entitled to take and utilise such Excess ANG free of any cost charge.

21.4.5 If the Government elects to take the Excess ANG as provided in Article 21.4.4a the Contractor shall deliver such Excess ANG to the Government or its nominee free of any cost charge at the downstream flange of the Gas Oil separation facilities;

b the Contractor shall based on sound petroleum engineering practices install such facilities as would facilitate insofar as practicable uninterrupted delivery of such Excess ANG to the Government or its nominee;

c the cost of all facilities installed pursuant to paragraph b above shall be borne by the Government or its nominee;

d the Government or its nominee shall bear all costs including gathering treating processing and transporting costs beyond the downstream flange of the Gas Oil separation facilities; and e the delivery of such Excess ANG shall be subject to

procedures to be agreed between the Government or its nominee and the Contractor prior to such delivery such procedures to include matters relating to timing of offtake of such Excess ANG. Parties shall endeavour that such procedures do not restrict Oil production.

21.4.6 The Excess ANG which is not commercially exploited by the Contractor or taken by the Government or its nominee pursuant to this Article 21 shall be returned to the subsurface structure or flared or otherwise disposed off as approved by the Government in the context of the Development Plan provided that flaring will be resorted to only for small quantities and as a last resort.

21.4.7 As soon as practicable after the submission of the proposed development plan the Contractor and the Government or its nominee shall meet to discuss the sale and/or disposal of any ANG discovered with a view to giving effect to the provisions of this Article 21 in a timely manner.

21.5 Non Associated Natural Gas NANG

21.5.1 In the event of a Discovery of NANG in the Contract Area the Contractor shall promptly report such Discovery to the Management Committee and the Government and the provisions of Articles 10.1 and 10.2 shall apply. The remaining provisions of Article 10 would apply to the Discovery and development of NANG only insofar as they are not inconsistent with the provisions of this Article. Notwithstanding the provisions of Article 3 the Contractor shall be entitled to retain the Discovery Area subject to the provisions of this Article 21.

21.5.2 If pursuant to Article 10.1 the Contractor gives notification that the Discovery is of potential commercial interest the Contractor shall submit to the Management Committee within one 1 year from the date of notification of the above said Discovery the proposed Appraisal Programme including a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery to determine i without delay whether such Discovery is a Commercial Discovery and ii with reasonable precision the boundaries of the area to be delineated as the Development Area. Such proposed Appraisal Programme shall be supported by all relevant data such as Well data Contractor's best estimate of reserve range and production potential and shall indicate the date of commencement of the proposed Appraisal Programme.

21.5.3 The proposed Appraisal Programme together with the Work Programme and Budget referred to in Article 21.5.2 shall be reviewed by the Management Committee within sixty 60 days of its submission

by the Contractor. The Management Committee shall offer its comments within the said period. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor as revised or modified or amended in light of the Management Committee review and advice shall be adopted as the Appraisal Programme and the Contractor shall promptly proceed with implementation of the said Programme.

21.5.4 If on the basis of the results of the Appraisal Programme the Contractor is of the opinion that NANG has been discovered in commercial quantities it shall submit to the Management Committee as soon as practicable but not later than three (3) years from the date of notification of the aforementioned Discovery a proposal for the declaration of the Discovery as a Commercial Discovery. Such proposal shall take into account the Government's policies on Gas utilization and propose alternative options if any for use or consumption of the NANG and be accompanied by a report on the Discovery supported by inter alia technical and economic data evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or on behalf of the Contractor and other relevant information. If no proposal is submitted to the Management Committee by the Contractor within three (3) years from the said Discovery the Contractor shall relinquish its rights to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area.

21.5.5 Where the Contractor has submitted a proposal for the declaration of a Discovery as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilization or commercial development of the NANG in the domestic market or elsewhere and in the context of Government's policy on Gas utilization and the chain of activities required to bring the NANG from the Delivery Point to potential consumers in the domestic market or elsewhere. The Management Committee may within eighty five (85) days of the submission of the said proposal request the Contractor to submit any additional information on the Discovery the anticipated markets or any other related matter that may reasonably be required to facilitate a review. The Contractor shall submit the required information within thirty (30) days of the request by the Management Committee. The Management Committee will advise the Contractor of its review within

one hundred and thirty five 135 days from the submission of proposal or within fifty five 55 days from the receipt of additional information as the case may be on the proposal made by the Contractor to declare the Discovery as a Commercial Discovery. 21.5.6 If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred to in the Article 21.5.5 the Contractor shall within one 1 year of the declaration of the Discovery as a Commercial Discovery submit a development plan for the development of the Discovery to the Management Committee for approval. Such plan shall be supported by all relevant information including inter alia the information required in Article 10.7. 21.5.7 Unless otherwise agreed by the Management Committee it shall consider the proposed development plan and give their approval within one hundred and sixty five 165 days of submission thereof or eighty five 85 days from the receipt of the clarification additional information from the Contractor. Any clarification additional information required by the Management Committee shall be asked for within eighty five 85 days of receipt of the proposal from the Contractor. The Contractor shall provide such additional information within thirty 30 days from the receipt of request by the Management Committee. If the Management Committee fails to convey its decision within one hundred and sixty five 165 days from the submission of the development plan or eighty five 85 days from the receipt of the clarification additional information whichever is later the Contractor may submit the development plan for the approval of the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development plan for the approval of the Government. 21.5.8 Where the development plan is submitted to the Government for approval pursuant to Article 21.5.7 the Government shall convey its decision within one hundred and fifteen 115 days from the date of receipt of the proposal from the Contractor. Government where it considers necessary may ask 63 clarification additional information from the Contractor within eighty five 85 days and shall convey its decision within fifty five 55 days from the date of receipt of such clarification additional information. 21.5.9 If the Government has failed to approve or disapproves the Contractor's proposed development plan within one hundred and fifteen 115 days

from receipt or within fifty five 55 days from the receipt of clarifications information from the Contractor as mentioned in the Article 21.5.8 the Government shall advise the Contractor in writing of the reasons for such failure or disapproval and the Government and the Contractor shall meet to discuss the said development plan and the reasons for the said failure to approve or disapproval and use their best efforts to agree on appropriate modifications thereto to meet the Governments concerns or objections. Thereafter the Contractor shall have the right to resubmit within eighty five 85 days of communication from the Government the proposed development plan duly amended to meet the Governments concerns. Such right of resubmission of the proposed development plan shall be exercisable by the Contractor only once. The Government will respond to the resubmitted plan within one hundred and fifteen 115 days. If no such plan is submitted to the Government within the above specified period the Contractor shall relinquish its right to develop such Gas Discovery and such Discovery shall be excluded from the Contract Area.

21.5.10 In the event that the Management Committee or Government as may be the case approves the Contractors development plan for the development of such Commercial Discovery with such modifications and amendments as the Management Committee or Government as may be the case may approve the said Gas Discovery shall be promptly developed by the Contractor in accordance with the approved plan which shall be the Development Plan.

21.5.11 The Contractor will have a two 2 years period from the date of approval of the Development Plan by the Management Committee or Government to tie up the markets for sale of Nonassociated Natural Gas.

21.5.12 In the event the Contractor does not commence development of such Discovery within ten 10 years from the date of the first Discovery Well the Contractor shall relinquish its right to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area.

21.6 Valuation of Natural Gas

21.6.1 The Contractor shall endeavour to sell all Natural Gas produced and saved from the Contract Area at armslength prices to the benefits of Parties to the Contract.

21.6.2 Notwithstanding the provision of Article 21.6.1 Natural Gas produced from the Contract Area shall be valued for the purposes of this Contract as follows

64 a Gas which is used as per Article 21.2 or flared with the approval of the

Government or reinjected or sold to the Government pursuant to Article 21.4.5 shall be ascribed a zero value; b Gas which is sold to the Government or any other Government nominee shall be valued on the terms and conditions actually obtained including pricing formula and delivery; and Explanation However it is clarified that this provision would apply only when the sale is made to the Government or Government nominee under the provisions of the Contract c Gas which is sold or disposed of otherwise than in accordance with paragraph a or b shall be valued on the basis of competitive armslength sales in the region for similar sales under similar conditions. 21.7 The formula or basis on which the prices shall be determined pursuant to Article 21.6 shall be approved by the Government prior to the sale of Natural Gas to the consumers buyers within sixty 60 Business Days from the receipt of proposal or from the date of receipt of clarification additional information where asked for by the Government. For granting this approval Government shall take into account the prevailing policy if any on pricing of Natural Gas including any linkages with traded liquid fuels and it may delegate or assign this function to a regulatory authority as and when such an authority is in existence and in place. 65

EMPLOYMENT TRAINING AND TRANSFER OF TECHNOLOGY

ARTICLE 22 22.1 Without prejudice to the right of the Contractor to select and employ such number of personnel as in the opinion of the Contractor are required for carrying out Petroleum Operations in a safe cost effective and efficient manner the Contractor shall to the maximum extent possible employ and require the Operator and Subcontractors to employ citizens of India having appropriate qualifications and experience taking into account experience required in the level and nature of the Petroleum Operations. 22.2 The Operator shall offer a mutually agreed number of Indian nationals the opportunity for on the job training and practical experience in Petroleum Operations during the Exploration Period. Not later than six 6 months after approval of the Development Plan the Operator shall in consultation with the Government establish and implement training programmes for staff positions in each phase and level of Petroleum Operations including skilled technical executive and management positions with a view to ensuring employment of nationals of India and gradual and progressive reduction of foreign personnel. 22.3 At the request

of the Government the Foreign Companies shall separately endeavour to negotiate in good faith technical assistance agreements with the Government or a company nominated by Government for this purpose setting forth the terms by which each Foreign Company constituting the Contractor may render technical assistance and make available commercially proven technical information of a proprietary nature for use in India by the Government or the company nominated by Government. The issues to be addressed in negotiating such technical assistance agreements shall include but not be limited to licensing issues royalty conditions confidentiality restrictions liabilities costs and method of payment.

66 ARTICLE 23 LOCAL GOODS AND SERVICES

23.1 In the conduct of Petroleum Operations the Contractor shall give preference to the purchase and use of goods manufactured produced or supplied in India provided that such goods are available on terms equal to or better than imported goods with respect to timing of delivery quality and quantity required price and other terms;

b employ Indian Subcontractors having the required skills or expertise to the maximum extent possible insofar as their services are available on comparable standards with those obtained elsewhere and at competitive prices and on competitive terms; provided that where no such Subcontractors are available preference shall be given to non-Indian Subcontractors who utilise Indian goods to the maximum extent possible subject however to the proviso in paragraph a above;

and c ensure that provisions in terms of paragraphs a to b above are contained in contracts between the Operator and its Subcontractors.

23.2 Subject to Article 8.3f the Contractor shall establish appropriate procedures including tender procedures for the acquisition of goods and services which shall ensure that suppliers and Subcontractors in India are given adequate opportunity to compete for the supply of goods and services. The tender procedures shall include inter alia the financial amounts or value of contracts which will be awarded on the basis of selective bidding or open competitive bidding the procedures for such bidding and the exceptions to bidding in cases of emergency and shall be subject to the approval of the Management Committee.

23.3 Within sixty 60 days after the end of each Year the Contractor shall provide the Government with a report outlining its achievements in utilising Indian resources during that Year in accordance with Section 10 of

Appendix C to this Contract.23.4 In this Article goods means equipment materials and supplies.67

ARTICLE 24 INSURANCE AND INDEMNIFICATION24.1 Insurance24.1.1 The Contractor shall

during the term of this Contract maintain and obtain insurance coverage for and in relation to Petroleum Operations for such amounts and against such risks as are customarily or prudently insured in the international petroleum industry in accordance with modern oilfield and petroleum industry practices and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government as additional insured and shall waive subrogation against the Government. The said insurance shall without prejudice to the generality of the foregoing cover a loss or damage to all installations equipment and other assets for so long as they are used in or in connection with Petroleum Operations; provided however that if for any reason the Contractor fails to insure any such installation equipment or assets it shall replace any loss thereof or repair any damage caused thereto; b loss damage or injury caused by pollution in the course of or as a result of Petroleum Operations; c loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor may be liable; d any claim for which the Government may be liable relating to the loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor is liable to indemnify the Government or the State Government; e with respect to Petroleum Operations offshore the cost of removing wrecks and cleaning up operations following any accident in the course of or as a result of Petroleum Operations; and f the Contractor and/or the Operator's liability to its employees engaged in Petroleum Operations.24.1.2 The Contractor shall require its Subcontractors to obtain and maintain insurance against the risks referred to in Article 24.1.1 relating mutatis mutandis to such Subcontractors.24.2 Indemnity Subject to Article 4.7 the Contractor shall indemnify defend and hold the Government and the State Government harmless against all claims losses and damages of any nature whatsoever including without limitation claims for loss or damage to property or injury or death to persons caused by or resulting from any Petroleum Operations conducted by or on behalf of the Contractor.68

ARTICLE 25RECORDS REPORTS ACCOUNTS AND AUDIT25.1 The Contractor shall prepare and maintain in original at an office in India accurate and current books records reports and accounts of itsactivities for and in connection with Petroleum Operations so as to present a fair clear and accurate record of all its activities expenditures andreceipts.25.2 Based on generally accepted and recognised accounting principles and modern petroleum industry practices record books accounts andaccounting procedures in respect of Petroleum Operations shall be maintained on behalf of the Contractor by the Operator at its business officein India in accordance with the Accounting Procedure to this Contract.25.3 The Contractor shall submit to the Government regular Statements and reports relating to Petroleum Operations as provided in AppendixC.25.4.1 The annual audit of accounts shall be carried out on behalf of the Contractor by a qualified independent firm of recognised charteredaccountants registered in India.25.4.2 The appointment of auditor and the scope of audit should have prior approval of the Management Committee.25.4.3 The Contractor shall submit the audited accounts to the Management Committee for approval within sixty 60 days from the end of the Year.The Management Committee shall consider and approve the auditors report within thirty 30 days after the submission of such report.25.4.4 Copy of the auditors report shall be submitted to the Government within thirty 30 days after the approval of the Management Committee.25.5 The Government shall have the right to audit the accounting records of the Contractor in respect of Petroleum Operations as provided in theAccounting Procedure.25.6 The accounting and auditing provisions and procedures specified in this Contract are without prejudice to any other requirements imposed byany statute in India including without limitation any specific requirements of the statutes relating to taxation of Companies.25.7 For the purpose of any audit referred to in Articles 25.5 the Contractor shall make available in original to the auditor all such books recordsaccounts and other documents and information as may be reasonably required by the auditor during normal business hours.69 ARTICLE 26INFORMATION DATA CONFIDENTIALITYINSPECTION AND SECURITY26.1 The Contractor shall promptly after they become available in India provide the Government free of cost with all data obtained as a result

of Petroleum Operations under the Contract including but not limited to geological geophysical geochemical petrophysical engineering Welllogs maps magnetic tapes cores cuttings and production data as well as all interpretative and derivative data including reports analyses interpretations and evaluation prepared in respect of Petroleum Operations hereinafter referred to as Data. Data shall be the property of the Government provided however that the Contractor shall have the right to make use of such Data free of cost for the purpose of Petroleum Operations under this Contract as provided herein.

26.2 The Contractor may for use in Petroleum Operations retain copies or samples of material or information constituting the Data and with the approval of the Government original material except that where such material is capable of reproduction and copies have been supplied to the Government the Contractor may subject to the right of inspection by the Government export subject to any applicable regulations samples or other original Data for processing or laboratory examination or analysis provided that representative samples equivalent in quality size and quantity or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Government.

26.3 The Contractor shall keep the Government currently advised of all developments taking place during the course of Petroleum Operations and shall furnish the Government with full and accurate information and progress reports relating to Petroleum Operations on a daily Monthly Yearly or other periodic basis as Government may reasonably require provided that this obligation shall not extend to proprietary technology. The Contractor shall meet with the Government at a mutually convenient location in India to present the results of all geological and geophysical work carried out as well as the results of all engineering and drilling operations as soon as such Data becomes available to the Contractor.

26.4 All Data information and reports obtained or prepared by for or on behalf of the Contractor pursuant to this Contract shall be treated as confidential and subject to the provisions herein below the Parties shall not disclose the thereof to any third party without the consent in writing of the other Parties.

26.5 The obligation specified in Article 26.4 shall not operate so as to prevent disclosure

70 a to Affiliates contractors or Subcontractors for the purpose of Petroleum Operations; b to employees professional

consultants advisers data processing centres and laboratories where required for the performance of functions in connection with Petroleum Operations for any Party comprising the Contractor; c to banks or other financial institutions in connection with Petroleum Operations; d to bonafide intending assignees or transferees of a Participating Interest of a Party comprising the Contractor or in connection with a sale of the stock or shares of a Party comprising the Contractor; e to the extent required by any applicable law or in connection with any legal proceedings or by the regulations of any stock exchange upon which the shares of a Party comprising the Contractor are quoted; f to Government departments for or in connection with the preparation by or on behalf of the Government of statistical reports with respect to Petroleum Operations or in connection with the administration of this Contract or any relevant law or for any purpose connected with Petroleum Operations; and g by a Party with respect to any Data or information which without disclosure by such Party is generally known to the public.

26.6 Any Data information or reports disclosed by the Parties comprising the Contractor to any other person pursuant to Article 26.5 a to d shall be disclosed on the terms that such Data information or reports shall be treated as confidential by the recipient. Prompt notice of disclosures made by Companies pursuant to Article 26.5 shall be given to the Government.

26.7 Any Data information and reports relating to the Contract Area which in the opinion of the Government might have significance in connection with offers by the Government of acreages may be disclosed by the Government for such purpose. Government may also disclose such Data or information for any exploration programme to be conducted by a third party in adjoining areas with the consent of the Contractor for better understanding of regional geological setup and such consent by the Contractor shall not be unreasonably withheld.

26.8 Where an area ceases to be part of the Contract Area the Contractor shall hand over all the originals and copies of the Data and information with respect to that part to the Government within a period of one 1 year from the date of relinquishment or surrender. The Contractor shall however be allowed to retain one copy of the Data in its possession for its own use where required and shall not use the Data for sale or any other purposes. Subject to the provisions of this Article the Contractor shall keep all

Data information confidential.71 26.9 The Government shall at all reasonable times through duly authorised representatives be entitled to observe Petroleum Operations and to inspect all assets books records reports accounts contracts samples and Data kept by the Contractor or the Operator in respect of Petroleum Operations in the Contract Area provided however that the Contractor shall not be required to disclose any proprietary technology. The duly authorised representatives shall be given reasonable assistance by the Contractor for such functions and the Contractor shall afford such representatives reasonable use of all facilities and privileges afforded to its own personnel in the field including the use of office space and housing for a period not exceeding 30 mandays in a Year and thereafter at the cost of Government. The said representatives shall be entitled to make a reasonable number of surveys measurements drawings tests and copies of documents take samples and make reasonable use of the equipment and instruments of the Contractor provided that such functions shall not unduly interfere with the Contractor's Petroleum Operations.26.10 The Contractor shall give reasonable advance notice to the Government or to any other authority designated by the Government for such purpose of its programme of conducting surveys by aircraft or by ships indicating inter alia the name of the survey to be conducted approximate extent of the area to be covered the duration of the survey the commencement date and the name of the airport or port from which the survey aircraft or ship will commence its voyage.26.11 The Government or the authority designated by the Government for such purpose shall have the right to inspect any aircraft or ship used by the Contractor or a Subcontractor carrying out any survey or other operations in the Contract Area and shall have the right to put on board such aircraft or ship Government officers in such number as may reasonably be necessary to ensure compliance by the Contractor or the Subcontractor with the security requirements of India.72 ARTICLE 27 TITLE TO PETROLEUM DATA AND ASSETS27.1 The Government is the sole owner of Petroleum underlying the Contract Area and shall remain the sole owner of Petroleum produced pursuant to the provisions of this Contract except as regards that part of Crude Oil Condensate or Gas the title whereof has passed to the Contractor or any other person in accordance with the provisions of this Contract.27.2 Title to

Petroleum to which the Contractor is entitled under this Contract and title to Petroleum sold by the Companies shall pass to the relevant buyer party at the Delivery Point. The Contractor shall be responsible for all costs and risks prior to and including at the Delivery Point and each buyer party shall be responsible for all costs and risks associated with such buyer party's share after the Delivery Point.

27.3 Title to all Data specified in Article 26 shall be vested in the Government and the Contractor shall have the right to use thereof as therein provided.

27.4 Assets purchased by the Contractor for use in Petroleum Operations shall be owned by the Parties comprising the Contractor in proportion to their Participating Interest provided that the Government shall have the right to require vesting of full title and ownership in it free of charge and encumbrances of any or all assets whether fixed or movable acquired and owned by the Contractor for use in Petroleum Operations inside or outside the Contract Area such right to be exercisable at the Government's option upon expiry or earlier termination of the Contract.

27.5 The Contractor shall be responsible for proper maintenance insurance and safety of all assets acquired for Petroleum Operations and for keeping them in good repair order and working condition at all times and the costs thereof shall be recoverable as Contract Costs in accordance with Appendix C.

27.6 So long as this Contract remains in force subject to Article 27.5 the Contractor shall free of any charge for the purpose of carrying out Petroleum Operations hereunder have the exclusive use of assets which have become the property of Government.

27.7 Equipment and assets no longer required for Petroleum Operations during the term of the Contract shall be sold exchanged or otherwise disposed of by the Contractor provided however that the proceeds of sale shall be credited to Petroleum Operations as provided in Appendix C provided that prior written consent of the Management Committee shall be obtained for each transaction in excess of US 50000 Fifty thousand United States Dollars or such other value as may be agreed from time to time by the Management Committee. The consent of the Management Committee shall not be unreasonably withheld.

73 ARTICLE 28 ASSIGNMENT OF PARTICIPATING INTEREST

28.1 Subject to the terms of this Article and other terms of this Contract any Party comprising the Contractor may assign or transfer a part or all of its Participating Interest

with the prior written consent of the Government which consent shall not be unreasonably withheld provided that the Government is satisfied that the prospective assignee or transferee is of good standing has the capacity and ability to meet its obligations hereunder and is willing to provide an unconditional undertaking to the Government to assume its Participating Interest share of obligations and to provide guarantees in respect thereof as provided in the Contract; b the prospective assignee or transferee is not a company incorporated in a country with which the Government for policy reasons has restricted trade or business; c the prospective assignor or transferor and assignee or transferee respectively are willing to comply with any reasonable conditions of the Government as may be necessary in the circumstances with a view to ensuring performance under the Contract; and d the assignment or transfer will not adversely affect the performance or obligations under this Contract or be contrary to the interests of India.

28.1.1 Subject to Article 28.7 nothing in this Article 28 shall prevent a Party comprising the Contractor from assigning or transferring a part or all of its Participating Interest to an Affiliate with the approval of the Management Committee provided that; a the assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided at Appendix G; b the assignee provides a parent financial and performance guarantee issued by the guarantor which furnished the guarantee pursuant to Article 29 in respect of the assignor Party's obligations under this Contract in favour of the Government of the performance of such Affiliate assignee of its obligations under this Contract; c the prospective Affiliate is not a company incorporated in a country with which the Government for policy reason has restricted trade or business; and d the assignment will not adversely affect the performance or obligations under this Contract or be contrary to the interest of India.

74 28.2 In case of any change in the status of a Company or its shareholding resulting in a change in a the control of the Company; or b its relationship with the companies providing the guarantee under Article 29.1 a and 29.1 b; the Company shall seek the consent of the Government for assigning the Participating Interest under the changed circumstances and the provisions of this

Article 28 shall apply mutatis mutandis to be obtaining of such consent. For the purpose of this Article 28.2 control has the same meaning as in Article 1.3.28.3 An application for consent to assign or transfer shall be accompanied by all relevant information concerning the proposed assignment or transfer including detailed information on the proposed assignee or transferee and its shareholding and corporate structure as was earlier required from the Companies constituting the Contractor the terms of the proposed assignment or transfer and the unconditional undertaking referred to in Article 28.4 The applicant shall also submit such information relating to the prospective assignee or transferee of the assignment or transfer as the Government may reasonably require to enable proper consideration and disposal of the application.28.5 No assignment or transfer shall be effective until the approval of the Government is received or deemed to have been received. Approval may be given by the Government on such terms and conditions as it may deem fit. Provided that such terms and conditions may not increase the obligations of the Parties comprising the Contractor. Upon assignment or transfer of its interest in this Contract the assignor or transferor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee or transferee with the approval of the Government.28.6 In the event that the Government does not give its consent or does not respond to a request for assignment or transfer by a Party comprising the Contractor within one hundred and twenty 120 days of such request and receipt of all information referred to in Article 28.3 above consent shall be deemed to have been given by the Government.28.7 An assignment or transfer shall not be made where the Participating Interest to be retained by the proposed assignor or the percentage interest of assignee shall be less than ten per cent 10 of the total Participating Interest of all the constituents of the Contractor except where the Government on the recommendations of the Management Committee may in special circumstances so permit.75 28.8 Nothing contained in this Article 28 shall prevent a Party comprising the Contractor from mortgaging pledging charging or otherwise encumbering at its own risk and cost all or part of its Participating Interest for the purposes of security relating to finance to the extent required for performing its obligation under the Contract

provided thati such Party shall remain solely liable for all its obligations relating to its Participating Interest to the exclusion of the other participants thereto;ii the encumbrance shall be expressly subordinated to the rights of the other Parties under this Contract. The obligations occurring from the saidencumbrance shall be the sole responsibility of the original Party and shall in no manner compromise the rights of other Parties to theContract;iii such Party has given reasonable notice of such encumbrance and furnishes to all other Parties including for the avoidance of doubt theGovernment a certified copy of the executed instruments evidencing the encumbrances;iv keeping in view the national interest of India prior consent of the Government shall be required which consent shall not be unreasonablywithheld of the list of potential lenders with whom such Party can consider hypothecation; v the Party creating the charge shall ensure that such charge shall not in any way affect the interest of other Parties or result in interference withjoint operations. In the event of any claims or liabilities imposed on other Parties because of the creation of such charges the Party havingcreated charge on its Participating Interest shall indemnify the other Parties; and vi in case of foreclosure or default by a borrowing Party the mortgagee shall not be deemed to have acquired a right to carry on either by itself orthrough an agent the Petroleum Operation without the written consent of the Government of India.28.8.1 The Parties acknowledge that to obtain financing a Party Borrower will be required to secure for a permitted chargee the right to receive acopy of any notice served on the Borrower and the Parties agree that they shall serve a copy of any such notice on any such permitted chargeein accordance with the provisions of Article 37 at the same time as such notice is served on the Borrower. For the purposes of Article 37 theaddress for service of notices of the permitted chargee shall be that specified in the instrument or instruments referred to in Article 28.8iii.28.8.2 In case lender elects to participate directly or through a company other than the Borrower under the financing arrangement referred to abovethe same shall be subject to the rights of Government as contained in Article 28.1 of Contract and the preemptive rights of the Parties as maybe contained in Operating Agreement. Any Party which wishes to exercise the said preemptive rights will explicitly assume the obligation onthe same terms

and conditions as the Borrower.⁷⁶ ARTICLE 29 GUARANTEES

29.1 Subject to Article 29.1 d each of the Companies constituting the Contractor shall procure and deliver to the Government within thirty 30 days from the Effective Date of this Contract a an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided at Appendix G; b financial and performance guarantee in favour of the Government from a parent company acceptable to the Government in the form and substance set out in Appendix E1 or where there is no such parent company the financial and performance guarantee from the Company itself in the form and substance set out in Appendix E2; c a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the aforesaid guarantees have been duly signed and delivered on behalf of the guarantors with due authority and is legally valid and enforceable and binding upon them; d Government Companies as defined in the Companies Act and Companies having a net worth of US Five Hundred 500 million or more as per the latest audited account shall not be required to furnish bank guarantee towards its Minimum Work Programme as specified in Article 5 of this Contract;

29.2 The amount of the guarantee referred to in Article 29.1 a above shall be an amount equal to thirty five percent 35 of the Company's Participating Interest share of the total estimated annual expenditure in respect of the Minimum Work Programme to be undertaken by the Contractor in the Contract Area during the relevant Year of a Phase subject to Article 29.3.

29.3 The guarantee referred to in Article 29.2 shall provide that; a at the end of each Year it shall be automatically renewed for an amount equal to a Company's Participating Interest share of thirty five percent 35 of the total estimated expenditure in respect of the Minimum Work Programme to be undertaken for the following Year of an Exploration Phase unless the Contractor has terminated the Contract in accordance with the terms thereof. The guarantee shall be renewed at the end of each Year positively thirty 30 days before the expiry of the guarantee period.⁷⁷ b after the completion and due performance of the Minimum Work Programme of a particular Exploration Phase the guarantee will be released in favour of the Company on presentation to the bank of a certificate from the Government that the obligation

of the Contractor has been fulfilled and the guarantee may be released subject to Article 29.4.29.4 If the Contractor elects to proceed to the second and third Exploration Phase respectively of the Exploration Period a bank guarantee for the succeeding Exploration Phase in terms of Articles 29.1 a 29.2 and 29.3 shall be delivered to the Government with the notice of such election and if such guarantee is not so delivered the provisions of Article 29.5 shall apply.29.5 If any of the documents referred to in Article 29.1 is not delivered within the period specified herein this Contract may be terminated by the Government upon ninety 90 days written notice of its intention to do so.29.6 Subject to Article 29.7 notwithstanding any change in the composition or shareholding of the parent company furnishing a performance guarantee as provided herein it shall not under any circumstances be absolved of its obligations contained in the guarantees provided pursuant to Article 29.1b.29.7 If a Party Assignor assigns all or a part of its Participating Interest to a third party Assignee in accordance with Article 28;b the Assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for an amount equal to the assignee's Participating Interest share of the estimated expenditure of the Minimum Work Programme of the Exploration Phase current at the Effective Date of the assignment;c the Assignee provides performance guarantee and legal opinion in terms of this Article; and d the addendum to the Contract giving effect to the assignment of Participating Interest is executed by all Parties; then the Government shall release the guarantee given by the assignor under Article 29.1 a to the extent of the amount of the guarantee provided by the assignee and where relevant the guarantee under Article 29.1 b.78 ARTICLE 30 TERM AND TERMINATION OF THE CONTRACT30.1 The term of this Contract shall be for the period of the License and any Lease granted thereunder unless the Contract is terminated earlier in accordance with its terms and shall be deemed to have been terminated if for any reason the Contractor ceases to hold such License or Lease.30.2 Subject to the provision of Articles 5 14 and 30.6 and without prejudice to the provisions of Article 30.7 or any other provisions of this Contract the Contractor shall have the right to terminate this Contract with respect to any part of the Contract Area other than a Development Area then

producing or that prior thereto had produced Petroleum upon giving ninety 90 days written notice of its intention to do so; andb with respect to any Development Area in which Petroleum is being produced or that prior thereto had produced Petroleum upon giving atleast one hundred and eighty 180 days written notice of its intention to do so.30.3 This Contract may subject to the provisions herein below and Article 31 be terminated by the Government upon giving ninety 90 days writtennotice with reasons to the other Parties of its intention to do so in the following circumstances namely that the Contractor or a Party comprisingthe Contractor the Defaulting Partya has knowingly submitted any false statement to the Government in any manner which was a material consideration in the execution of thisContract; orb has intentionally and knowingly extracted or authorised the extraction of hydrocarbon not authorized to be extracted by the Contract orwithout the authority of the Government except such extractions as may be unavoidable as a result of operations conducted hereunder inaccordance with generally accepted modern oilfield and petroleum industry practices which when so extracted were immediately notified tothe Government orc is adjudged bankrupt by a competent court or enters into or scheme of composition with its creditors or takes advantage of any law for thebenefit of debtors; ord has passed a resolution to apply to a competent court for liquidation of the Company unless the liquidation is for the purpose of amalgamationor reconstruction of which the Government has been given notice and the79 Government is satisfied that the Companys performance under this Contract would not be adversely affected thereby and has given itsapproval thereto; ore has assigned any interest in the Contract without the prior consent of the Government as provided in Article 28; orf has failed to make any monetary payment required by law or under this Contract by the due date or within such further period after the duedate as may thereafter be specified by the Government; org has failed to comply with or has contravened the provisions of this Contract in a material particular; orh has failed to comply with any final determination or award made by a sole expert or arbitrators subject to Article 33; ori has failed to carry out or observe any of the terms and conditions of the License or Lease or the provisions of the Acts or Rules in forcethereunder subject however to Article 31.j on notice of termination as provided

in Article 29.5. PROVIDED THAT where the Contractor comprises two or more Parties the Government shall not exercise its rights of termination pursuant to Article 30.3 on the occurrence in relation to one or more but not all of the Parties comprising the Contractor of an event entitling the Government to terminate the Contract if any other Party or Parties constituting the Contractor the non Defaulting Party or Parties satisfies the Government that it or they is/are willing and would be able to carry out the obligations of the Contractor. b where the non Defaulting Party or Parties with the consent of the Government has/have acquired the Participating Interest of the Defaulting Party pursuant to the provisions of the Operating Agreement and has/have procured and delivered to the Government a guarantee or guarantees as referred to in Article 29.1 in respect of the Participating Interest of the Defaulting Party acquired by the non Defaulting Party or Parties. 30.4 This Contract may also be terminated by the Government on giving the requisite notice specified above if the events specified in Article 30.3 c and d occur with respect to a company which has given a performance guarantee pursuant to Article 29 subject however to Article 30.5. 30.5 If the circumstance or circumstances that give rise to the right of termination under Article 30.3 f or g or i or Article 30.4 are remedied whether by the Defaulting Company or by another Party or Parties in its behalf within the ninety 90 day period or such extended period as may be granted by the Government following the notice of the Government's intention to terminate the Contract as aforesaid such termination shall not become effective. 80 30.6 On termination of this Contract for any reason whatsoever the rights and obligations of the Contractor shall cease but such termination shall not affect any rights of any Party which may have accrued or any obligations undertaken or incurred including obligations under Article 5.7 by the Contractor or any Party comprising the Contractor and not discharged prior to the date of termination. 30.7 In the event of termination pursuant to Articles 30.2 30.3 or 30.4 a the Government may require the Contractor for a period not exceeding one eighty 180 days from the date of termination to continue for the account and at the cost of the Government Crude Oil or Natural Gas production activities until the right to continue such production has been transferred to another entity; b a Foreign Company which is a constituent of the

Contractor shall have to remove and export all its property subject to Article 27 and the provisions hereof provided that in the event that ownership of any property is in doubt or disputed such property shall not be exported unless and until the doubt or dispute has been settled in favour of the Foreign Company.

30.8 Within ninety 90 days after the termination of this Contract pursuant to Article 30.2 30.3 or 30.4 or such longer period as the Government may agree the Contractor shall comply with Article 14.9 and any reasonably necessary action as directed by the Government to avoid Environmental Damage or hazards to human life or to the property of others.

81 ARTICLE 31 FORCE MAJEURE

31.1 Any nonperformance or delay in performance by any Party hereto of any of its obligations under this Contract or in fulfilling any condition of any License or Lease granted to such Party or in meeting any requirement of the Act the Rules or any License or Lease shall except for the payment of monies due under this Contract or under the Act and the Rules or any law be excused if and to the extent that such nonperformance or delay in performance under this Contract is caused by Force Majeure as defined in this Article.

31.2 For the purpose of this Contract the term Force Majeure means any cause or event other than the unavailability of funds whether similar to or different from those enumerated herein lying beyond the reasonable control of and unanticipated or unforeseeable by and not brought about at the instance of the Party claiming to be affected by such event or which if anticipated or foreseeable could not be avoided or provided for and which has caused the nonperformance or delay in performance. Without limitation to the generality of the foregoing the term Force Majeure shall include natural phenomena or calamities earthquakes typhoons fires wars declared or undeclared hostilities invasions blockades riots strikes insurrection and civil disturbances but shall not include the unavailability of funds.

31.3 Where a Party is claiming suspension of its obligations on account of Force Majeure it shall promptly but in no case later than seven 7 days after the occurrence of the event of Force Majeure notify the Management Committee in writing giving full particulars of the Force Majeure the estimated duration thereof the obligations affected and the reasons for its suspension.

31.4 A Party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the

effectsthereof on the performance of its obligations under this Contract. The Party affected shall promptly notify the Management Committee as soon asthe Force Majeure event has been removed and no longer prevents it from complying with the obligations which have been suspended and shallthereafter resume compliance with such obligations as soon as possible.31.5 The Party asserting the claim of Force Majeure shall have the burden of proving that the circumstances constitute valid grounds of Force Majeureunder this Article and that such Party has exercised reasonable diligence and efforts to remedy the cause of any alleged Force Majeure.82 31.6 Where a Party is prevented from exercising any rights or performing any obligations under this Contract due to Force Majeure the time for theperformance of the obligations affected thereby and for performance of any obligation or the exercise of any right dependent thereon and theterm of any Exploration Phase of the Exploration Period or this Contract may be extended to the extent of Force Majeure period or by suchperiod as may be agreed by the Management Committee.31.7 Notwithstanding anything contained herein above if an event of Force Majeure occurs and is likely to continue for a period in excess of thirty30 days the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be taken to mitigate the effectsthereof or to be adopted in the circumstances.83

ARTICLE 32APPLICABLE LAW AND LANGUAGE OF THE CONTRACT

32.1 This Contract shall be governed and interpreted in accordance with the laws of India.32.2 Nothing in this Contract shall entitle the Contractor to exercise the rights privileges and powers conferred upon it by this Contract in a mannerwhich will contravene the laws of India.32.3 The English language shall be the language of this Contract and shall be used in arbitral proceedings. All communications hearing or visualmaterials or documents relating to this Contract shall be written or prepared in English.32.4 The laws will also include amendments revisions modifications etc.84

ARTICLE 33SOLE EXPERT CONCILIATION AND ARBITRATION

33.1 The Parties shall use their best efforts to settle amicably all disputes differences or claims arising out of or in connection with any of the termsand conditions of this Contract or concerning the interpretation or performance thereof.33.2 Matters which by the terms of this Contract the Parties have agreed to

refer to a sole expert and any other matter which the Parties may agree to so refer may be referred to a sole expert who shall be an independent and impartial person of international standing with relevant qualifications and experience appointed by agreement between the Parties and who shall not by virtue of nationality personal connection or commercial interest have a conflict between his own interest and his duty as a sole expert. In the event that the Parties fail or are unable to agree on a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the sole expert shall be appointed by a body or an institution or an agency or a person mutually agreed by Parties. In case there is no agreement on the body or an institution or an agency or a person for appointing sole expert or such institution or agency or body fails to appoint a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the matter shall be referred to arbitration. Any sole expert appointed shall be acting as an expert and not as an arbitrator and the decision of the sole expert on matters referred to him shall be final and binding on the Parties and shall not be subject to arbitration.

33.3 Subject to the provisions of this Contract the Parties hereby agree that any controversy difference disagreement or claim for damages compensation or otherwise hereinafter in this Clause referred to as a dispute arising between the Parties which cannot be settled amicably within ninety 90 days after the dispute arises may except for those referred to in Article 33.2 which may be referred to a sole expert be submitted to conciliation or an arbitral tribunal for final decision as hereinafter provided.

33.4 The arbitral tribunal shall consist of three arbitrators. Each Party to the dispute shall appoint one arbitrator and the Party or Parties shall so advise the other Parties. The two arbitrators appointed by the Parties shall appoint the third arbitrator.

33.5 Any Party may after appointing an arbitrator request the other Parties in writing to appoint the second arbitrator. If such other Party fails to appoint an arbitrator within thirty 30 days of receipt of the written request to do so such arbitrator may at the request of the first Party be appointed in accordance with Arbitration and Conciliation Act 1996.⁸⁵

33.6 If the two arbitrators appointed by or on behalf of the Parties fail to agree on the appointment of the third arbitrator within thirty 30 days of the appointment of the second arbitrator and if the Parties do not otherwise agree at

the request of either Party the third arbitrator shall be appointed in accordance with Arbitration and Conciliation Act 1996.33.7 If any of the arbitrators fails or is unable to act his successor shall be appointed by the Party or person who originally appointed such in the manner set out in this Article as if he was the first appointment.33.8 The decision of the arbitral tribunal shall be pronounced within four 4 months unless otherwise extended by the Parties and in case of difference among the arbitrators the decision of the majority shall be final and binding on the Parties.33.9 The arbitration agreement contained in this Article 33 shall be governed by the Arbitration and Conciliation Act 1996 Arbitration Act. Arbitration proceedings shall be conducted in accordance with the rules for arbitration provided in Arbitration Act.33.10 The right to arbitrate disputes under this Contract shall survive expiry or the termination of this Contract.33.11 Prior to submitting a dispute to arbitration the Parties may by mutual agreement submit the matter for conciliation in accordance with Part III of the Arbitration and Conciliation Act 1996. No arbitration proceedings shall be instituted while conciliation proceedings are pending provided that a Party may initiate arbitration proceedings in the event that dispute has not been resolved by conciliation within sixty 60 days of the date of agreement by the Parties to submit such dispute to conciliation.33.12 The venue of the sole expert conciliation or arbitration proceedings pursuant to this Article unless the Parties agree otherwise shall be New Delhi India and shall be conducted in the English language. Insofar as practicable the Parties shall continue to implement the terms of this Contract notwithstanding the initiation of proceedings before a sole expert conciliator or arbitral tribunal and any pending claim or dispute.33.13 The fees and expenses of a sole expert or conciliator appointed by the Parties shall be borne equally by the Parties. The cost and expenses of arbitrator appointed by a Party in accordance with the provision of this Article shall be borne by the respective Party and the cost and expenses of third arbitrator and other incidental expenditure in relation to arbitration and liability thereof shall be at the discretion of the arbitrators.33.14 Notwithstanding anything contrary contained herein above in the event of dispute among Government Companies and with the Government such disputes shall be settled in accordance with guidelines issued on the subject by Government from time to time.86 ARTICLE

34CHANGE OF STATUS OF COMPANIES34.1 The Parties comprising the Contractor shall notify the Government of any change in the management or control of a Companies or therelationship with any guarantor of the Companies.87 ENTIRE AGREEMENT AMENDMENTS WAIVER AND MISCELLANEOUSARTICLE 3535.1 This Contract supersedes and replaces any previous agreement or understanding between the Parties whether oral or written on the subjectmatter hereof prior to the execution date of this Contract.35.2 This Contract shall not be amended modified varied or supplemented in any respect except by an instrument in writing signed by all the Partieswhich shall state the date upon which the amendment or modification shall become effective.35.3 No waiver by any Party of any one or more obligations or defaults by any other Party in the performance of this Contract shall operate or beconstrued as a waiver of any other obligations or defaults whether of a like or of a different character.35.4 The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest.35.5 In the event of any conflict between any provisions in the main body of this Contract and any provision in the Appendices the provision in themain body shall prevail.35.6 The headings of this Contract are for convenience of reference only and shall not be taken into account in interpreting the terms of this Contract.35.7 Reference to any law or regulation having the force of law includes a reference to that law or regulation as from time to time may be amendedextended or reenacted.35.8 A reference in this Contract to the word including shall also mean including but not limited to.88 ARTICLE 36CERTIFICATES36.1 A Company shall furnish prior to execution of this Contract a duly authorised copy of a resolution properly and legally passed by the Board ofDirectors of the Company authorising its President or any VicePresident or any other representative to execute this Contract along with acertificate duly signed by the Secretary or an Assistant Secretary of the Company under its seal in this regard and to the effect that the Companyhas the power and authority to enter into this Contract and to perform its obligations thereunder and has taken all necessary action to authorise theexecution delivery and performance of the Contract.89 37.1 All notices statements and other communications to be given submitted or made hereunder by any

Party to another shall be sufficiently given if given in writing in English language and sent by registered post postage paid or by telegram telex facsimile radio or cable to the address or addresses of the other Party or Parties as follows

ARTICLE 37 NOTICES

a If to the Government Secretary to the Government of India Ministry of Petroleum and Natural Gas Shastri Bhavan Dr. Rajendra Prasad Marg New Delhi 110001 INDIA Facsimile No. 91 11 3383585 b Dy. General Manager Projects Gujarat State Petroleum Corporation Ltd. GSPC Bhavan behind Udyog Bhavan Sector 11 Gandhinagar 382001 Gujarat Facsimile No. 07923236375 55701399 Telephone No. 07923238651 55701309 c General Manager EPGAIL India Limited 16 Bhikaji Cama Place New Delhi 110066 Facsimile No. 01126185941 Extn. 2037 Telephone No. 01126190944 d Authorised Representative Jubilant Capital Pvt. Limited Plot No. 1A Sector 16A Institutional Area Noida 201301 Facsimile No. 0120 2511004 Telephone No. 0120 2511001 e President CEO Co 200 630 4th Avenue SW Calgary Alberta Canada T2P 0J9 Facsimile No. 1 403 7779199 Telephone No. 1 403 7779251 Canada 9825319456 India

90 37.2 Notices when given in terms of Article 37.1 shall be effective when delivered if offered at the address of the other Parties as under Article 37.1 during business hours on working days and if received outside business hours on the next following working day.

37.3 Any Party may by reasonable notice as provided hereunder to the other Parties change its address and other particulars for notice purpose.

91 IN WITNESS WHEREOF the representatives of the Parties to this Contract being duly authorised have hereunto set their hands and have executed these presents this 23rd day of September 2005.

Signed for and on behalf of the President of India In presence of Signed for and on behalf of GSPC In presence of Signed for and on behalf of GAIL In presence of

Signature s Name Designation Signature s Name Signature s M.Y. Farooqui Name M.Y. Farooqui Designation DGM POD Signature s Mohapatra B. Name B. Mohapatra Signature s B.S. Negi Name B.S. Negi Designation Director Bus Dev Signature s Prabhat Singh Name Prabhat Singh

92 Signed for and on behalf of JCPL In presence of Signed for and on behalf of GGR In presence of

Signature s Dr. R.K. Mallick Name Dr. R.K. Mallick Designation DY Signature s A.N. Singh Name A.N. Singh Signature s Jean Roy Name Jean Roy Designation

President and CEO Signature s Allan Kent Name Allan Kent93 APPENDIX ADESCRIPTION OF THE CONTRACT AREAThe area comprising approximately 448 Sq. Km. Onshore India identified as Block CBONN20032 herein and shown on the map attached asAppendix B.Longitude and Latitude measurements commencing at points ABCDEFGHIJK and L Excluded part A B C D are given below

Pt.ABCDEFGHIJKLAABCDADeg. 73 73 73 73 73 72 72 72 72 72 72 73 73 73 73 73 73 73

LongitudeCoordinatesMin. 11 15 12 01 00 53 50 48 48 59 59 05 11 02 01 01 02 02 Sec. 50.93 0.00

12.05 0.800 39.00 15.00 18.00 0.500 05.00 34.17 30.00 16.00 50.93 30 15 15 30 30 94Deg. 21 21

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46 38 38 39 39 38 Sec. 52.80 0.00 48.00 48.00 04.00 54.00 07.00 15.00 16.98 54.78 06.00 45.00

52.80 40 40 54 54 40 Excluded Part APPENDIX BMAP OF THE CONTRACT AREA95 APPENDIX CACCOUNTING PROCEDURE TOTHE CONTRACTBETWEENTHE GOVERNMENT OF INDIAANDGUJARAT STATE PETROLEUM CORPORATION LIMITEDANDGAIL INDIA LIMITEDANDJUBILANT CAPITAL PTV. LIMITEDANDGEOGLOBAL RESOURCES BARBADOS INC.WITH RESPECT TO CONTRACT AREAIDENTIFIED ASBLOCK CBONN2003296 Sections

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1GENERAL PROVISIONS1.1 Purpose Generally the purpose of this Accounting Procedure is to set out principles and procedures of accounting which will enable the Government of India to monitor effectively the Contractors costs expenditures production and income so that the Governments entitlement to Profit Petroleumcan be accurately determined pursuant to the terms of the Contract. More specifically the purpose of the Accounting Procedure is to classify costs and expenditures and to define which costs and expenditures shall be allowable for cost recovery and profit sharing and participation purposes; specify the manner in which the Contractors accounts shall be prepared and approved; and address numerous other accounting related matters. This Accounting Procedure is intended to apply to the provisions of the Contract and is without prejudice to the computation of income taxunder applicable provisions of the IncomeTax Act 1961 as amended.1.2 Definitions For purposes of this Accounting Procedure the terms used herein which are defined in the Contract shall have the same meaning when used inthis Accounting Procedure.1.3 Inconsistency In the event of any inconsistency or conflict between the provisions of this Accounting Procedure and the other provisions of the Contract theother provisions of the Contract shall prevail.1.4 Documentation and Statements to be submitted by the Contractor1.4.1 Within ninety 90 days of the Effective Date of the Contract the Contractor shall submit to and discuss with the Government a proposed outlineof charts of accounts operating records and reports which outline shall reflect each of the99 categories

and subcategories of costs and income specified in Sections 2 and 3 and shall be in accordance with generally accepted standards and recognized accounting systems and consistent with normal petroleum industry practice and procedures for joint venture operations. Within ninety 90 days of receiving the above submission the Government shall either provide written notification of its approval of the proposal or request in writing revisions to the proposal. Within one hundred and eighty 180 days from the Effective Date of the Contract the Contractor and the Government shall agree on the outline of charts of accounts records and reports which shall also describe the basis of the accounting system and procedures to be developed and used under this Contract. Following such agreement the Contractor shall expeditiously prepare and provide the Government with formal copies of the comprehensive charts of accounts records and reports and allow the Government to examine the manuals and to review procedures which are and shall be observed under the Contract.

1.4.2 Notwithstanding the generality of the foregoing the Contractor shall make regular Statements relating to the Petroleum Operations as follows:

- i Production Statement see Section 5 of this Accounting Procedure.
- ii Value of Production and Pricing Statement see Section 6 of this Accounting Procedure.
- iii Statement of Costs Expenditures and Receipts see Section 7 of this Accounting Procedure.
- iv Cost Recovery Statement see Section 8 of this Accounting Procedure.
- v Profit Sharing Statement see Section 9 of this Accounting Procedure.
- vi Local Procurement Statement see Section 10 of this Accounting Procedure.
- vii End of Year Statement see Section 11 of this Accounting Procedure.
- viii Budget Statement see Section 12 of this Accounting Procedure.

1.4.3 All reports and Statements shall be prepared in accordance with the Contract and the laws of India and where there are no relevant provisions in either of these in accordance with generally accepted practices in the international petroleum industry.

1.4.4 Each of the entities constituting the Contractor shall be responsible for maintaining its own accounting records in order to comply with all legal requirements and to support all returns or any other accounting reports required by any Government authority in relation to the Petroleum Operations. However for the purposes of giving effect to this Accounting Procedure the Party constituting the Contractor who is the Operator shall be

responsible for maintaining at its business office in India on behalf of the Contractor all the 100 accounts of the Petroleum Operations in accordance with the provisions of the Accounting Procedure and the Contract.

1.5 Language and Units of Account All accounts records books reports and Statements shall be maintained and prepared in the English language using mercantile basis of accounting. The accounts shall be maintained in United States Dollars which shall be the controlling currency of account for cost recovery and profit sharing purposes. Metric units and Barrels shall be employed for measurements required under the Contract. Where necessary for clarification the Contractor may also maintain accounts and records in other languages currencies and units.

1.6 Currency Exchange Rates

1.6.1 For conversion purposes between United States Dollars and Indian Rupees or any other currency the monthly average of the daily mean of the buying and selling rates of exchange as quoted by the State Bank of India or any other financial body as may be mutually agreed by the Parties for the Month in which the revenues costs expenditures receipts or income are recorded shall be used. However in the case of any single non-US Dollar transaction in excess of the equivalent of fifty thousand 50000 US Dollars the conversion into US Dollars shall be performed on the basis of the average of the applicable exchange rates for the day on which the transaction occurred.

1.6.2 Any realized or unrealized gains or losses from the exchange of currency in respect of Petroleum Operations shall be credited or charged to the accounts. A record of the exchange rates used in converting Indian Rupees or any other currencies into United States Dollars as specified in Section 1.6.1 shall be maintained by the Contractor and shall be identified in the relevant Statements required to be submitted by the Contractor in accordance with Section 1.4.2.

1.7 Payments

1.7.1 Subject to Article 20.3 of the Contract and the foreign exchange laws and regulations prevailing from time to time all payments between the Parties shall unless otherwise agreed be in United States Dollars and shall be made through a bank designated by each receiving Party.

1.7.2 Unless otherwise specified all sums due under the Contract shall be paid within forty five 45 days from the date on which the obligation to pay was incurred.

1.7.3 All sums due by one Party to the other under the Contract during any Month shall for each day such sums are overdue during

such Month bear interest compounded daily at the applicable LIBOR plus two percentage points.¹⁰¹

1.8 Arms Length Transactions Unless otherwise specifically provided for in the Contract all transactions giving rise to revenues costs or expenditures which will be credited or charged to the accounts prepared maintained or submitted hereunder shall be conducted at arms length or on such a basis as will assure that all such revenues costs or expenditures will not be lower or higher as the case may be than would result from a transaction conducted at arms length on a competitive basis with third parties.

1.9 Audit and Inspection Rights of the Government

1.9.1 Without prejudice to statutory rights the Government upon at least twenty (20) Business Days advance written notice to the Contractor shall have the right to inspect and audit during normal business hours all records and documents supporting costs expenditures expenses receipts and income such as the Contractor's accounts books records invoices cash vouchers debit notes price lists or similar documentation with respect to the Petroleum Operations conducted hereunder in each Year within two (2) years or such longer period as may be required in exceptional circumstances from the end of such Year.

1.9.2 The Government may undertake the conduct of the audit either through its own representatives or through a qualified firm of recognised chartered accountants registered in India or a reputed consulting firm appointed for the purpose by the Government and the costs of audit in case of Government auditors shall be borne by the Government where as for outside auditors this shall be borne by the Contractor as a General and Administrative Cost.

1.9.3 In conducting the audit the Government or its auditors shall be entitled to examine and verify at reasonable times all charges and credits relating to the Contractor's activities under the Contract and all books of account accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records considered necessary by the Government to audit and verify the charges and credits. The auditors shall also have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the Contractor directly or indirectly serving the Petroleum Operations and to physically examine other property facilities and stocks used in Petroleum Operations wherever located and to question

personnel associated with those operations. Where the Government requires verification of charges made by an Affiliate the Government shall have the right to obtain an audit certificate from an internationally recognized firm of public accountants acceptable to both the Government and the Contractor which may be the Contractor's statutory auditor. Submission of the audit certificate shall in no way relieve or diminish the responsibility of the Contractor for the compliance with the obligations under the Contract.

1.9.4 Any audit exceptions shall be made by the Government in writing and notified to the Contractor within one hundred and twenty (120) days following completion of the audit in question.

1.9.5 The Contractor shall answer any notice of exception under Section 1.9.4 within one hundred and twenty (120) days of the receipt of such notice. Where the Contractor has after the said one hundred and twenty (120) days failed to answer a notice of exception the exception shall prevail and be deemed to have been agreed to by the Contractor.

1.9.6 All agreed adjustments resulting from an audit and all adjustments required by prevailing exceptions under Section 1.9.5 shall be promptly made in the Contractor's accounts and any consequential adjustments to the Government's entitlement to Petroleum shall be made within thirty (30) days therefrom.

1.9.7 Notwithstanding any reference to a Sole Expert or Arbitration in accordance with the provisions of the Contract in case any amount is claimed as due to the Government resulting from the audit exception but not accepted or settled by the Contractor then the Contractor shall deposit such claimed amount in an escrow account to be opened with a financial institution failing mutually agreed agreement with State Bank of India within thirty (30) days from the date when the amount is disputed by the Contractor. The amount in escrow account shall be appropriated or adjusted in accordance with the decision or award of the Sole Expert or Arbitral Tribunal as may be or otherwise as mutually agreed to between the Parties.

1.9.8 If the Contractor and the Government are unable to reach final agreement on proposed audit adjustments either Party may refer any dispute thereon to a sole expert as provided for in the Contract. So long as any issues are outstanding with respect to an audit the Contractor shall maintain the relevant documents and permit inspection thereof until the issue is resolved.

1.10 Revision of the Accounting Procedure By mutual

agreement between the Government and the Contractor this Accounting Procedure may be revised from time to time in writingsigned by the Parties stating the date upon which the amendments shall become effective.¹⁰³

SECTION 2 CLASSIFICATION DEFINITION AND ALLOCATION OF COSTS AND EXPENDITURES

2.1 Segregation of Costs

Costs shall be segregated in accordance with the purposes for which such expenditures are made. All costs and expenditures allowable underSection 3 relating to Petroleum Operations shall be classified defined and allocated as set out below in this Section.

2.2 Exploration Costs

Exploration Costs are all direct and allocated indirect expenditures incurred in the search for Petroleum in an area which is or was at the timewhen such costs were incurred part of the Contract Area including expenditures incurred in respect of

2.2.1 Aerial geophysical geochemical palaeontological geological topographical and seismic surveys analysis and studies and their interpretation.

2.2.2 Core hole drilling and water Well drilling.

2.2.3 Labour materials supplies and services used in drilling Wells with the object of finding Petroleum or in drilling Appraisal Wells provided that ifsuch Wells are completed as producing Wells or injection Well for enhancing Oil recovery the costs of completion thereof shall be classified asDevelopment Costs.

2.2.4 Facilities used solely in support of the purposes described in Sections 2.2.1 2.2.2 and 2.2.3 above including access roads all separatelyidentified.

2.2.5 Any Service Costs and General and Administrative Costs directly incurred on exploration activities and identifiable as such and a portion of theremaining Service Costs and General and Administrative Costs allocated to Exploration Operations determined by the proportionate share oftotal Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Exploration Costs.

2.2.6 Geological and geophysical information purchased or acquired in connection with Exploration Operations.

2.2.7 Any other expenditures incurred in the search for Petroleum not covered under Sections 2.3 or 2.4.¹⁰⁴2.3 Development Costs Development Costs are all direct and allocated indirect expenditures incurred with respect to the development of discoveries within the ContractArea including expenditures incurred on account of 2.3.1 Geological and Geophysical information acquired in connection with Development Operations.2.3.2 Drilling Development Wells

whether these Wells are dry or producing and drilling Wells for the injection of water or Gas to enhance recovery of Petroleum.

2.3.3 Completing of Exploration Wells by way of installation of casing or equipment or otherwise or for the purpose of bringing a Well into use as a producing Well or as a Well for the injection of water or Gas to enhance recovery of Petroleum.

2.3.4 Purchase installation or construction of production transport and storage facilities for production of Petroleum such as pipelines flow lines production and treatment units wellhead equipment subsurface equipment enhanced recovery systems offshore and onshore platforms export terminals and piers harbours and related facilities and access roads for production activities.

2.3.5 Engineering and design studies for facilities referred to in Section 2.3.3.

2.3.6 Any Service Costs and General and Administrative Costs directly incurred in Development Operations and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to development activities determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Development Costs.

2.4 Production Costs Production Costs are expenditures incurred on Production Operations after the start of production from the Field which are other than Exploration and Development Costs. The balance of General and Administrative Costs and Service Costs not allocated to Exploration Costs or Development Costs shall be allocated to Production Costs.

2.5 Service Costs Service Costs are direct and indirect expenditures incurred in support of Petroleum Operations in the Contract Area including expenditures on warehouses piers marine vessels vehicles motorized rolling equipment aircraft fire and security stations workshops water and sewerage plants power plants housing community and recreational facilities and furniture and tools and equipment used in these activities. Service Costs in any Year shall include the costs incurred in such Year to purchase and/or construct the said facilities as well as the annual costs of maintaining and operating the same each to be identified separately. All Service Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.5 and 2.4 to Exploration Costs Development Costs and Production Costs and shall be separately shown under each of these categories. Where Service Costs are made in respect of shared facilities the basis of allocation of costs to

Petroleum Operations hereunder shall be specified.

2.6 General and Administrative Costs General and Administrative Costs are expenditures incurred on general administration and management primarily and principally related to Petroleum Operations in or in connection with the Contract Area and shall include:

2.6.1 main office field office and general administrative expenditures in India including supervisory accounting and employee relations services;

2.6.2 an annual overhead charge for services rendered by the parent company or an Affiliate to support and manage Petroleum Operations under the Contract and for staff advice and assistance including financial legal accounting and employee relations services but excluding any remuneration for services charged separately under this Accounting Procedure provided that:

i for the period from the Effective Date until the date on which the first Development Plan under the Contract is approved by the Government this annual charge shall be the Contractor's verifiable expenditure but shall in no event be greater than the following percentages of the total Contract Costs incurred during the Contract Year in or in connection with the Contract Area and qualifying for recovery pursuant to Section 3:

Contract costs in any Contract year in million US\$	Over 25	Over 5
Annual overhead charge	3%	2%

ii from the date on which the first Development Plan is approved the charge shall be at an amount or rate to be agreed on between the Parties and stated in the Development Plan.

2.6.3 All General and Administrative Costs shall be regularly allocated as specified in Sections 2.2, 2.3, 2.5 and 2.4 to Exploration Costs, Development Costs and Production Costs respectively and shall be separately shown under each of these cost categories.

106 SECTION 3 COSTS, EXPENSES, EXPENDITURES AND INCIDENTAL INCOME OF THE CONTRACTOR

3.1 Costs Recoverable and Allowable Without Further Approval of the Government: Costs incurred by the Contractor on Petroleum Operations as per reviewed or approved Work Programme and Budget by the Management Committee as the case may be pursuant to the Contract as classified under the headings referred to in Section 2 shall be allowable for the purposes of the Contract except to the extent provided in Section 3.2 or elsewhere in this Accounting Procedure and subject to audit as

referred to in Articles 25.4.1 to 25.4.4 and Article 25.5 as provided for herein. Further in case of variation in costs over the reviewed approved Work Programme and Budget as the case may be or reappropriation of costs shall be submitted to the Management Committee for review approval as the case may be within thirty 30 days from end of the relevant Financial Year and subject to the audit and other provisions of the Contract such costs shall be allowable for the purposes of the Contract.

3.1.1 Surface Rights All direct costs necessary for the acquisition renewal or relinquishment of surface rights acquired and maintained in force for the purposes of the Contract except as provided in Section 3.1.9.

3.1.2 Labour and Associated Labour Costs

a Contractors locally recruited employees based in India Costs of all the Contractors locally recruited employees who are directly engaged in the conduct of Petroleum Operations under the Contract in India. Such costs shall include the costs of employee benefits and Government benefits for employees and levies imposed on the Contractor as an employer transportation and relocation costs within India of the employee and such members of the employees family as per the personnel policy of the employer as required by law or customary practice in India. If such employees are engaged in other activities in India in addition to Petroleum Operations the cost of such employees shall be apportioned on a time sheet basis according to sound and acceptable accounting principles.

b Assigned Personnel 107 Costs of salaries and wages including bonuses of the Contractors employees directly and necessarily engaged in the conduct of the Petroleum Operations under the Contract whether temporarily or permanently assigned irrespective of the location of such employees it being understood that in the case of those personnel only a portion of whose time is wholly dedicated to Petroleum Operations under the Contract only that pro rata portion of applicable salaries wages and other costs as specified in Sections 3.1.2c d e f and g shall be charged and the basis of such pro rata allocation shall be specified.

c The Contractors costs regarding holiday vacation sickness and disability benefits and living and housing and other customary allowances applicable to the salaries and wages chargeable under Section 3.1.2b above.

d Expenses or contributions made pursuant to assessments or obligations imposed under the laws of India which are applicable to the Contractors

cost of salaries and wages chargeable under Section 3.1.2b above.e The Contractors cost of established plans for employees group life insurance hospitalization pension retirement and other benefit plans of a like nature customarily granted to the Contractors employees provided however that such costs are in accordance with generally accepted standards in the international petroleum industry applicable to salaries and wages chargeable to Petroleum Operations under Section 3.1.2b above.f Personal income taxes where and when they are paid by the Contractor to the Government of India for the employee in accordance with the Contractors standard personnel policies.g Reasonable transportation and travel expenses of employees of the Contractor including those made for travel and relocation of the expatriate employees including their dependent family and personal effects assigned to India whose salaries and wages are chargeable to Petroleum Operations under Section 3.1.2b above. Transportation cost as used in this Section shall mean the cost of freight and passenger service and any accountable inland expenditures related to transfer travel and authorized under the Contractors standard personnel policies. The Contractor shall ensure that all expenditures related to transportation costs are equitably allocated to the activities which have benefited from the personnel concerned.

3.1.3 Transportation Costs The reasonable cost of transportation of equipment materials and supplies within India and from outside India to India necessary for the conduct of Petroleum Operations under the Contract including directly related costs such as unloading charges dock fees and inland and ocean freight charges.108

3.1.4 Charges for Servicesi Third Parties The actual costs of contract services services of professional consultants utilities and other services necessary for the conduct of Petroleum Operations under the Contract performed by third parties other than an Affiliate of the Contractor provided that the transactions resulting in such costs are undertaken pursuant to Section 1.8 of this Accounting Procedure.ii

Affiliates of Contractor a Professional and Administrative Services and Expenses Cost of professional and administrative services provided by any Affiliate for the direct benefit of Petroleum Operations including but not limited to services provided by the production exploration legal financial insurance accounting and computer services divisions other than those covered by Section 3.1.4 iib

which the Contractor may use in lieu of having its own employees. Charges shall be equal to the actual cost of providing their services shall not include any element of profit and shall not be any higher than the most favourable prices charged by the Affiliate to third parties for comparable services under similar terms and conditions elsewhere and will be fair and reasonable in the light of prevailing modern oilfield and petroleum industry practices.

b Scientific or Technical Personnel Cost of scientific or technical personnel services provided by any Affiliate of the Contractor for the direct benefit of Petroleum Operations which cost shall be charged on a cost of service basis. Charges therefor shall not exceed charges for comparable services currently provided by outside technical service organizations of comparable qualifications. Unless the work to be done by such personnel is covered by an Approved Budget and Work Programme the Contractor shall not authorize work by such personnel without approval of the Management Committee.

c Equipment facilities and property owned and furnished by the Contractors Affiliates at rates commensurate with the cost of ownership and operation provided however that such rates shall not exceed those currently prevailing for the supply of like equipment facilities and property on comparable terms in the area where the Petroleum Operations are being conducted. The equipment and facilities referred to herein shall exclude major investment items such as but not limited to drilling rigs producing platforms oil treating facilities oil and gas loading and transportation systems storage and terminal facilities and other major facilities rates for which shall be subject to separate agreement with the Government.

3.1.5 Communications Cost of acquiring leasing installing operating repairing and maintaining communication systems including radio satellite link and microwave facilities between the Contract Area and the Contractors nearest base facility.

3.1.6 Office Shore Bases and Miscellaneous Facilities Net cost to the Contractor of establishing maintaining and operating any office suboffice shore base facility warehouse housing or other facility directly serving the Petroleum Operations. If any such facility services contract areas other than the Contract Area or any business other than Petroleum Operations the net costs thereof shall be allocated on an equitable and consistent basis.

3.1.7 Environmental Studies and Protection Costs incurred in conducting the

environmental impact assessment studies for the Contract Area and in taking environmental protection measures including abandonment cost or contribution to abandonment funds as may be created for abandonment and Site Restoration pursuant to the terms of the Contract.

3.1.8 Materials and equipment

General So far as is practicable and consistent with efficient and economical operation only such material shall be purchased or furnished by the Contractor for use in the Petroleum Operations as may be required for use in the reasonably foreseeable future and the accumulation of surplus stocks shall be avoided. Material and equipment held in inventory shall only be charged to the accounts when such material is removed from inventory and used in Petroleum Operations. Costs shall be charged to the accounting records and books based on the First in First out method.

ii Warranty In the case of defective material or equipment any adjustment received by the Contractor from the suppliers or manufacturers or their agents in respect of any warranty on material or equipment shall be credited to the accounts under the Contract.

iii Value of materials charged to the accounts under the Contract

110 a Except as otherwise provided in subparagraph b below materials purchased by the Contractor for use in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts if any purchase and procurement fees plus freight and forwarding charges between point of supply and point of shipment freight to port of destination insurance taxes custom duties consular fees other items chargeable against imported material and where applicable handling and transportation costs from point of importation to warehouse or operating site and these costs shall not exceed those currently prevailing in normal arms length transactions on the open market.

b Material purchased from or sold to Affiliates or transferred to or from activities of the Contractor other than Petroleum Operations under the Contract

aa new material hereinafter referred to as condition A shall be valued at the current international price which shall not exceed the price prevailing in normal arms length transactions on the open market;

bb used material which is in sound and serviceable condition and is suitable for reuse without reconditioning hereinafter referred to as condition B shall be priced at not more than seventy five per cent 75 of the current price of the above mentioned new materials;

cc used material

which cannot be classified as condition B but which after reconditioning will be further serviceable for original function as good secondhand condition B material or is serviceable for original function but substantially not suitable for reconditioning hereinafter referred to as condition C shall be priced at not more than fifty per cent 50 of the current price of the new material referred to above as condition A. The cost of reconditioning shall be charged to the reconditioned material provided that the condition C material value plus the cost of reconditioning does not exceed the value of condition B material. Material which cannot be classified as condition B or condition C shall be priced at a value commensurate with its use. Material involving erection expenditure shall be charged at the applicable condition percentage referred to above of the current knocked down price of new material referred to above as condition A. When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price in relation to materials referred to above as conditions B and C such material shall be priced on a basis that will result in a net charge to the accounts under the Contract consistent with the value of the service rendered.

3.1.9 Duties Fees and Other Charges Any duties levies fees charges and any other assessments levied by any governmental or taxing authority in connection with the Contractor's activities under the Contract and paid directly by the Contractor except corporate income tax payable by the constituents of the Contractor.

3.1.10 Insurance and Losses Insurance premia and costs incurred for insurance pursuant to Article 24 of the Contract provided that such insurance is customary affords prudent protection against risk and is at a premium no higher than that charged on a competitive basis by insurance companies which are not Affiliates. Except as provided in Sections 3.2 ix Section 3.2x and Section 3.2xi actual costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs may include but are not limited to repair and replacement of property in the Contract Area resulting from damages or losses incurred by fire flood storm theft accident or such other cause.

3.1.11 Legal Expenses All reasonable costs and expenses except Section 3.2 xi resulting from the handling investigating asserting defending or settling of any claim or legal action necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in

defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of Petroleum Operations under the Contract or sums paid in respect of legal services necessary for the protection of the joint interest of Government and the Contractor shall be allowable. Such expenditures shall include attorneys fees court costs costs of investigation and procurement of evidence and amounts paid in settlement or satisfaction of any such litigation and claims provided such costs are not covered elsewhere in the Accounting Procedure. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliate such compensation shall be included instead under Section 3.1.2 or 3.1.4 ii above as applicable.

3.1.12 Training Costs All costs and expenses incurred by the Contractor in training as is required under Article 22 of the Contract.

3.1.13 General and Administrative Costs The costs described in Section 2.6.1 and the charge described in Section 2.6.2 of this Accounting Procedure.

3.1.14 Royalty License fee surface rentals etc.

112 Royalty License fee surface rentals dead rents and other levies and taxes paid to the Government of India or State Government or local Government bodies or authority or agency except income tax paid to the Government.

3.2 Costs not recoverable and not allowable under the Contract The following costs and expenses shall not be recoverable or allowable whether directly as such or indirectly as part of any other charges or expense for cost recovery and profit sharing purposes under the Contract i costs and charges incurred before the Effective Date including costs in respect of preparation signature or ratification of this Contract; Explanatory Note It is clarified that costs and expenditures incurred prior to the Effective Date but after the execution of the Contract for making statutory payments in connection with the Petroleum Operations such as Petroleum Exploration License PEL fee and application fee shall be allowed as Contract Cost and shall be cost recoverable. ii expenditures in respect of any financial transaction to negotiate float or otherwise obtain or secure funds for Petroleum Operations including but not limited to interest commission brokerage and fees related to such transactions as well as exchange losses on loans or other financing whether between Affiliates or otherwise; iii costs of marketing or transportation of Petroleum beyond the Delivery Point; iv

expenditures incurred in obtaining furnishing and maintaining the guarantees required under the Contract and any other amounts spent on indemnities with regard to nonfulfillment of contractual obligations;v attorneys fees and other costs and charges in connection with arbitration proceedings and sole expert determination pursuant to the Contract;vi fines interest and penalties imposed by Courts of law of the Republic of India;vii donations and contributions;viii expenditures on creation of any partnership or joint venture arrangement;ix amounts paid with respect to nonfulfillment of contractual obligations;x costs incurred as a result of failure to insure where insurance is required pursuant to the Contract or of failure to follow procedures laid down by an insurance policy or where the Contractor has elected to self insure or has underinsured;xi costs and expenditures incurred as a result of misconduct or negligence of the Contractor; andxii expenses of the members of the Management Committee as per Article 6.12.113

3.3 Other costs recoverable and allowable only with Management Committee approval Any other costs and expenditures not included in Section 3.1 or 3.2 of this Accounting Procedure but which have been incurred by the Contractor for the necessary and proper conduct of Petroleum Operations shall be allowed to be recovered only with the express prior approval in writing of the Management Committee.

3.4 Intental Income and Credits All intental income and proceeds received from Petroleum Operations under the Contract including but not limited to the items listed below shall be credited to the accounts under the Contract and shall be taken into account for cost recovery and Profit Petroleum sharing purposes in the manner described in Articles 15 and 16 of the Contract

i The proceeds of any insurance or claim or judicial awards in connection with Petroleum Operations under the Contract or any assets charged to the accounts under the Contract where such operations or assets have been insured and the premia charged to the accounts under the Contract;ii Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Contract;iii Any adjustment received by the Contractor from the suppliers manufacturers or their agents in connection with defective material the cost of which was previously charged by the Contractor to the accounts under the Contract;iv Rentals refunds or other credits received by the Contractor which apply to any

charge which has been made to the accounts under the Contract;v Prices originally charged to the accounts under the Contract for materials subsequently exported from the Republic of India without being used in Petroleum Operations under the Contract;vi Proceeds from the sale or exchange by the Contractor of assets plant or facilities the acquisition costs of which have been charged to the accounts under the Contract;vii Legal costs charged to the accounts under Section 3.1.11 of this Accounting Procedure and subsequently recovered by the Contractor.

3.5 NonDuplication of Charges and Credits Notwithstanding any provision to the contrary in this Accounting Procedure it is the objective of the Parties that there shall be no duplication of charges or credits to the accounts under the Contract.

114 SECTION 4 RECORDS AND INVENTORIES OF ASSETS

4.1 Records
4.1.1 The Contractor shall keep and maintain detailed records of property and assets in use for or in connection with Petroleum Operations under the Contract in accordance with normal practices in exploration and production activities of the international petroleum industry. Such records shall include information on quantities location and condition of such property and assets and whether such property or assets are leased or owned.

4.2 Inventories
4.2.1 The Contractor shall not less than once every twelve 12 Months with respect to movable assets; and not less than once every three 3 Years with respect to immovable assets take an inventory of the assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Government together with a written statement of the principles upon which valuation of the assets mentioned in such inventory has been based.

4.2.2 The Contractor shall give the Government at least thirty 30 days notice in writing in the manner provided for in the Contract of its intention to take the inventory referred to in Section 4.2.1 and the Government shall have the right to be represented when such inventory is taken.

4.2.3 When an assignment of rights under the Contract takes place a special inventory shall be taken by the Contractor at the request of the assignee provided that the cost of such inventory is borne by the assignee and paid to the Contractor.

4.2.4 In order to give effect to Article 27 of the Contract the Contractor shall provide the Government with a comprehensive list of all relevant assets when requested by the Government to

do so.115 SECTION 5 PRODUCTION STATEMENT 5.1 From the date of first production of Petroleum from the Contract Area the Contractor shall submit a monthly Production Statement to Government showing the following information separately of each producing Field and in aggregate for the Contract Area 5.1.1 The quantity of Crude Oil and Condensate produced and saved. 5.1.2 The quality and characteristics of such Crude Oil and Condensate produced and saved. 5.1.3 The quantity of Associated Natural Gas and Non Associated Natural Gas produced and saved. 5.1.4 The quality characteristics and composition of such Natural Gas produced and saved separately. 5.1.5 The quantities of Crude Oil Condensate and Natural Gas used for the purposes of carrying on drilling and production operations and pumping to field storage as well as quantities reinjected. 5.1.6 The quantities of Crude Oil Condensate and Natural Gas unavoidably lost. 5.1.7 The quantities of Natural Gas flared and vented. 5.1.8 The size of Petroleum stocks held on the first day of the Month in question. 5.1.9 The size of Petroleum stocks held on the last day of the Month in question. 5.1.10 The quantities of Natural Gas reinjected into the Petroleum Reservoir. 5.1.11 The number of days in the Month during which Petroleum was produced from each Field. 5.1.12 The Gas/Oil ratio for each Reservoir and Field for the relevant Month. 5.1.13 Water production water injection and Reservoir pressure data for each Reservoir and Field. 116 5.2 All quantities shown in this Statement shall be expressed in both volumetric terms barrels of Oil and cubic metres of Gas and in the case of Oil in weight metric tonnes. 5.3 For the purpose of reporting Field production quantities pursuant to this Section the Contractor shall agree with the Management Committee on the exact area to be designated as Development Area. 5.4 The Government may direct in writing that the Contractor include other reasonable particulars relating to the production of Petroleum in its monthly Production Statement and the Contractor shall comply with such direction. 5.5 The Production Statement for each Month shall be submitted to Government no later than fifteen 15 days after the end of such Month. 117 SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT 6.1 The Contractor shall for the purposes of Article 19 of the Contract prepare a Statement providing calculations of the value of Crude Oil and Condensate produced and saved

during each Month. This Statement shall contain the following information:

6.1.1 The quantities, prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate to third parties made during the Month in question.

6.1.2 The quantities, prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate made during the Month in question other than to third parties if any.

6.1.3 The quantities of Crude Oil and Condensate appropriated by the Contractor to refining or other processing without otherwise being disposed of in the form of Crude Oil or Condensate.

6.1.4 The value of stocks of Crude Oil and Condensate on the first day of the Month in question.

6.1.5 The value of stocks of Crude Oil and Condensate on the last day of the Month in question.

6.1.6 The percentage volume of total sales of Crude Oil and Condensate made by the Contractor during the Month that are Arms Length Sales to third parties.

6.1.7 Information available to the Contractor insofar as required for the purposes of Article 19 of the Contract concerning the prices of competitive crude oils produced by the main petroleum producing and exporting countries including contract prices, discounts and premia and prices obtained on the spot markets.

6.2 The Contractor shall for the purpose of Article 21 of the Contract prepare a Statement providing calculations of the value of Associated Natural Gas and Non Associated Natural Gas produced, flared internally, used, saved and sold during each Month. This Statement shall contain all information of the type specified in Section 6.1 for Crude Oil as is applicable to Gas and such other relevant information as may be required by Government.

6.3 The Statements required pursuant to Sections 6.1 and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil, Condensate, Associated Natural Gas and Non Associated Natural Gas pursuant to the provisions of Articles 19 and 21.

6.4 The Value of Production and Pricing Statement for each Month shall be submitted to Government not later than thirty (30) days after the end of such Month.

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6.3 The Statements required pursuant to Sections 6.1 and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil, Condensate, Associated Natural Gas and Non Associated Natural Gas pursuant to the provisions of Articles 19 and 21.

6.4 The Value of Production and Pricing Statement for each Month shall be submitted to Government not later than thirty (30) days after the end of such Month.

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SECTION 7 STATEMENT OF COSTS, EXPENDITURES AND RECEIPTS

7.1 The Contractor shall prepare with respect to each Quarter a Statement of Costs, Expenditures and Receipts under the Contract using mercantile basis of accounting. The Statement shall distinguish between Exploration Costs, Development Costs and Production Costs and shall

separately identify all significant items of costs and expenditure as itemised in Section 3 of this Accounting Procedure within these categories. The Statement of receipts shall distinguish between income from the sale of Petroleum and internal income of the sort itemised in Section 3.4 of this Accounting Procedure. If the Government is not satisfied with the degree of disaggregation within the categories it shall be entitled to request a more detailed breakdown. The Statement shall show the following:

- 7.1.1 Actual costs expenditures and receipts for the Quarter in question.
- 7.1.2 Cumulative costs expenditures and receipts for the Year in question.
- 7.1.3 Latest forecast of cumulative costs expenditures and receipts at the Year end.
- 7.1.4 Variations between budget forecast and latest forecast and explanations thereof.

7.2 The Statement of Costs Expenditures and Receipts of each Quarter shall be submitted to Government not later than thirty 30 days after the end of such Quarter.

120 8.1 The Contractor shall prepare with respect to each Calendar Quarter a Cost Recovery Statement containing the following information:

SECTION 8 COST RECOVERY STATEMENT

- 8.1.1 Unrecovered Contract Costs carried forward from the previous Quarter if any.
- 8.1.2 Contract Costs for the Quarter in question.
- 8.1.3 Total Contract Costs for the Quarter in question: Section 8.1.1 plus Section 8.1.2.
- 8.1.4 Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Quarter in question.
- 8.1.5 Contract Costs recovered during the Quarter in question as per Article 15.
- 8.1.6 Total cumulative amount of Contract Costs recovered up to the end of the Quarter in question.
- 8.1.7 Amount of Contract Costs to be carried forward into the next Quarter.

8.2 The Cost Recovery Statement for each Quarter shall be submitted to Government not later than thirty 30 days after the end of such Quarter.

121 **SECTION 9 PROFIT SHARING STATEMENT**

9.1 The Contractor shall prepare with respect to each Quarter a Profit Sharing Statement containing the following information:

- 9.1.1 The calculation of the applicable net cash flows as defined in Appendix D for the Quarter in question.
- 9.1.2 The value of the Investment Multiple applicable in the Quarter in question.
- 9.1.3 Based on Section 9.1.2 and Article 16 the appropriate percentages of Profit Petroleum for the Government and the Contractor in the Quarter in question.
- 9.1.4 The total amount of Profit Petroleum to be shared between the Government and the

Contractor in the Quarter in question.9.1.5 Based on Sections 9.1.3 and 9.1.4 the amount of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor in the Quarter in question.9.1.6 The actual amounts of Petroleum taken or payment received by Government and the Contractor as well as by each constituent of the Contractor during the Quarter in question to satisfy their entitlements pursuant to Section 9.1.5.9.1.7 Adjustments to be made if any in future Quarters in the respective amounts of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor on account of any differences between the amounts specified in Sections 9.1.5 and 9.1.6 as well as any cumulative adjustments outstanding from previous Quarters.9.2 The Profit Sharing Statement shall be submitted to Government not later than thirty 30 days after the end of such Quarter. Any amount due or adjustment required in profit sharing among the Parties shall be made within thirty 30 days from the submission of the Statement to the Government.122 SECTION 10 LOCAL PROCUREMENT STATEMENT10.1 In furtherance of the obligation in Article 23 of the Contract for the Contractor to give preference to the procurement of Indian goods and services the Contractor shall prepare in respect of each Year a local procurement statement containing the following information: a The amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on goods supplied produced or manufactured in India; b the amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on services provided by Indian entities; c the respective percentages that the expenditures recorded under items a and b above represent of the Contractor's total expenditures; d a detailed description of the procedures adopted during the Year to identify and purchase goods and services from Indian suppliers; and e a detailed exposition of how the local purchases for the Year as recorded under items a and b above compared with the projected purchases included in the budget statement for that Year pursuant to Section 12.1.3 with explanations for any significant variations;10.2 The local procurement statement shall be submitted to the Government within sixty 60 days after the end of each Year.123 SECTION 11 END OF YEAR STATEMENT11.1 The Contractor shall prepare a definitive End of Year Statement. The Statement

shall contain aggregated information in the same format as required in the Production Statement Value of Production and Pricing Statement Statement of Costs Expenditures and Receipts Cost Recovery Statement and Profit Sharing Statement but shall be based on actual quantities of Petroleum produced income received and costs and expenditures incurred. Based upon this Statement any adjustments that are necessary shall be made to the transactions concerned under the Contract. [Explanation End of year Statement shall further contain the item wise justification for the variation between the actual costs and expenditure incurred and included in the statement of costs expenditure and receipts visvis the Budgets for corresponding line items.]

11.2 The End of Year Statement for each Year shall be submitted to Government within ninety 90 days of the end of such Year.

124 SECTION 12 BUDGET STATEMENT

12.1 The Contractor shall prepare a Budget Statement for each Year. This Statement shall distinguish between budgeted Exploration Costs Development Costs and Production Costs and shall show the following

12.1.1 Forecast costs expenditures and receipts for the Year in question.

12.1.2 A schedule showing the most important individual items of total costs expenditures and receipts for the said Year.

12.1.3 Estimated amounts to be spent in the Year on procuring goods and services in India.

12.2 The Budget Statement shall be submitted to Government with respect to each Year not less than ninety 90 days before the start

of the said Year provided that in the case of the Year in which the Effective Date falls the Budget

Statement shall be submitted within ninety 90 days of the Effective Date.

125 APPENDIX D CALCULATION OF THE INVESTMENT MULTIPLE FOR PRODUCTION SHARING PURPOSES

1. In accordance with the provisions of Article 16 the share of the Government and the Contractor respectively of Profit Petroleum from the Contract Area in any Year shall be determined

by the Investment Multiple earned by the Contractor from the then Petroleum Operations at the end of the preceding Year. These measures of profitability shall be calculated on the basis of the

appropriate net cash flows as specified in this Appendix D.2. The Net Cash Income of the Contractor from their Petroleum Operations in any particular Year is the aggregate value for the Year of

the following i Cost Petroleum entitlement of the Contractor as provided in Article 15; plus ii Profit

Petroleum entitlement of the Contractor as provided in Article 16; plusiii the Contractors all inental income of the type specified in section 3.4 of the Accounting Procedure arising from Petroleum Operations; lessiv the Contractors Production Costs and royalty payments Article 17 incurred on or in the Contract Area;3. The Investment made by the Contractor in the Contract Area in any particular Year is the aggregate value for the Year ofi the Contractors Exploration Costs incurred on or in the Contract Area pursuant to Article 15 plusii the Contractors Development Costs incurred on or in the Contract Area.4. For the purposes of the calculation of the Investment Multiple costs or expenditures which are not allowable as provided in the AccountingProcedure shall be excluded from Contract Costs and be disregarded.126 5. The Investment Multiple ratio earned by the Contractor as at the end of any Year shall be calculated by dividing the aggregate value of theaddition of each of the annual Net Cash Incomes accumulated without interest up to and including that Year starting from the Year in whichProduction Costs were first incurred or Production first arose by the aggregate value of the addition of each of the annual Investmentsaccumulated without interest up to and including that Year starting from the Year in which Exploration and Development Costs were firstincurred.6. Profit Petroleum from the Contract Area in any Year shall be shared between the Government and the Contractor in accordance with the value ofthe Investment Multiple earned by the Contractor as at the end of the previous Year pursuant to Articles 16.2 to 16.5.127

APPENDIXE1FORM OF PARENT COMPANY FINANCIAL AND PERFORMANCE GUARANTEEto be furnished pursuant to Article 29.1 b of the Contract WHEREAS a company duly organised and existing under the laws of having itsregistered office at hereinafter referred to as the Guarantor which expression shall include its successors and assignsis [the indirect owner of one hundred percent 100 of the capital stock of XYZ Company and direct owner of its parent company;] and WHEREAS XYZ Company is signatory to a Production Sharing Contract in respect of an offshore onshore area identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to asthe Government and XYZ Company hereinafter referred to as XYZ which expression shall include its successors and permitted assigns; and

WHEREAS the Guarantor wishes to guarantee the performance of XYZ Company or its Affiliate Assignee under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows:

1. The Guarantor hereby unconditionally and irrevocably guarantees to the Government that it will make available or cause to be made available to XYZ Company or any other directly or indirectly owned Affiliate of XYZ Company to which any part or all of XYZ Company's rights or interest under the Contract may subsequently be assigned Affiliate Assignee financial technical and other resources required to ensure that XYZ Company or any Affiliate Assignee can carry out its obligations as set forth in the Contract.
2. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by XYZ Company or any Affiliate Assignee of any obligations of XYZ Company or any Affiliate Assignee under the Contract.
3. The Guarantor hereby undertakes to the Government that if XYZ Company or any Affiliate Assignee shall in any respect fail to perform its obligations under the Contract or commit any breach of such obligations then the Guarantor shall fulfil or cause to be fulfilled the said obligations in place of XYZ Company or any Affiliate Assignee and will indemnify the Government against all losses, damages, costs, expenses or otherwise which may result directly from such failure to perform or breach on the part of XYZ Company.
4. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company or its Affiliate Assignee under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder.
5. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or the Guarantor or in any instrument establishing the Company or Guarantor.
6. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence, waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity; or d the dissolution, amalgamation, reconstruction or reorganisation of XYZ Company.
7. This guarantee shall

be governed by and construed in accordance with the laws of India. IN WITNESS WHEREOF the Guarantor through its duly authorised representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200.129 APPENDIXE2FORM OF COMPANY FINANCIAL AND PERFORMANCE GUARANTEE to be furnished pursuant to Article 29.1 b of the Contract WHEREAS XYZ Company duly organised and existing under the laws of having its registered office at hereinafter referred to as the Guarantor which expression shall include its successors and assigns is signatory to a Production Sharing Contract in respect of an offshore onshore area identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as XYZ which expression shall include its successors and permitted assigns; and WHEREAS the Guarantor wishes to guarantee its performance under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows

1. The Guarantor hereby unconditionally and irrevocably guarantees to the Government that it will make available or cause to be made available financial technical and other resources required to ensure that XYZ Company can carry out its obligations as set forth in the Contract.
2. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by it of any obligations under the Contract.
3. The Guarantor hereby undertakes to the Government that it shall fulfill or cause to be fulfilled all its obligations under the Contract and if it fails to perform its obligations under the Contract or commits any breach of such obligations then it shall indemnify the Government against all losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on its part.
4. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder.
5. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or in any instrument establishing the Company.
6. The liabilities of the Guarantor shall not be discharged or affected by a

any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity. 7.

This guarantee shall be governed by and construed in accordance with the laws of India. IN WITNESS WHEREOF the Guarantor through its duly authorised representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200.

131 PROCEDURE FOR ACQUISITION OF GOODS AND SERVICES APPENDIX F I OBJECTIVES The objectives of these procedures are to a ensure that the goods and services acquired by the Operator for carrying out the Petroleum Operations are acquired at the optimum cost taking into consideration all relevant factors including price quality delivery time and the reliability of potential suppliers. b ensure that goods and services are delivered in a timely manner taking into consideration the consequences of delays in the acquisition of these goods and services on the project as a whole. c ensure that the provisions of Article 23 of the Contract are implemented.

II PRINCIPLES The principles upon which these procedures are based are a The Parties must be satisfied that the Operator is working to an agreed procedure for acquiring goods and services which is auditable and in accordance with the provisions of the Contract. b The Operator must have the ability to acquire goods and services expeditiously so that the project schedules in respect of Approved Work Programmes are maintained.

III PROCEDURES The procedures to be adopted by the Operator for the acquisition of goods and services shall be as follows

Applicable to	Procedure
Exploration	A
Appraisal	B
Development and Production operations	C

Procedure A 50000 to less than 200000 Procedure B 200000 to less than 500000 Procedure C Equal to or more than 500000

132 For contracts valued at less than US 5000 The Operator will be at liberty to determine the procurement procedures and methods to procure goods and services valued at less than US Dollars five thousand US 5000. For Contracts valued at US 5000 and above but less than US 50000 The Operator will be at liberty to determine the preferred method of acquiring goods and services valued at US Dollars five thousand US 5000 and above but less than US Dollars fifty thousand US 50000 provided that at least three 3 quotations from selected

suppliers including at least one Indian supplier will be obtained. For items valued at greater than US Dollars twenty thousand US 20000 Operator is required to report to the Operating Committee if the quote accepted exceeds the lowest quote by more than twenty 20 percent. Operator will promptly report to the Operating Committee the Operator's reasons for not selecting the lowest quote.

Procedure A Operator shall

- 1 provide the constituents of the Contractor with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender;
- 2 add to such list the entities whom other Party requests for adding within five 5 Business Days on receipt of such lists;
- 3 if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix F IV to perform under the contract;
- 4 complete the tendering process within a reasonable period of time;
- 5 circulate to all constituents of the Contractor a comparative bid analysis stating Operator's choice of the entity for award of contract. Provide also reasons for such choice in case entity chosen is not the lowest bidder;
- 6 inform all the constituents of the Contractor of the entities to whom the contract has been awarded; and
- 7 upon the request of a Party provide such Party with a copy of the final version of the contract awarded.

Procedure B Operator shall

- 1 provide the Parties with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender;
- 2 add to such list the entities whom a Party requests for adding within five 5 Business Days on receipt of such list;
- 3 if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix F IV to perform under the contract;
- 4 complete the tendering procedure within a reasonable period of time;
- 5 circulate to all constituents of the Contractor a comparative bid analysis stating Operator's choice of the entity for award of contract. Provide also reasons for such choice in case the entity chosen is not the lowest bidder. If the bid selected is not the lowest bid obtain prior approval of the Operating Committee for award of

contract;6 award the contract accordingly and inform all the members of the Management Committee of the entities to whom the contract has been awarded; and7 upon the request of a Party provide such Party with a copy of the final version of the contract awarded.Procedure COperator shall1 publish invitations for parties to prequalify for the proposed contract in at least three 3 daily national Indian newspaper. Provide to NonOperating Companies a list of responding parties and an analysis of their qualifications for the contract being contemplated to be awarded.Include those who qualify as per the prequalification criteria approved as per AppendixF IV in the list of entities from whom Operatorproposes to invite tender for the said contract;2 provide the members of the Management Committee with a total list of all the entities selected as 1 above and all the entities approved by theOperating Committee as per AppendixFV for the applicable category of the contract along with other entities if any from whom theOperator proposes to invite tender;3 add to such entities whom a Party requests for adding within five 5 Business Days on receipt of such list;4 if and when any Party so requests Operator shall evaluate any entity listed in 2 and 3 above to assure that entity is qualified as based on thequalification criteria agreed in accordance with AppendixFIV to perform under the contract;5 prepare and dispatch the tender documents to the entities as finally listed and to Parties;6 after the expiration of the period allowed for tendering consider and analyse the details of all bids received;7 prepare and circulate to the constituents of the Contractor a comparative bid analysis stating Operators recommendation as to the entity towhom the contract134 should be awarded the reasons therefor and the technical commercial and contractual terms to be agreed upon;8 obtain the approval of the Operating Committee to the recommended bid. However failing Operating Committee approval any Company mayrefer the issue to the Management Committee for decision; and9 award the contract accordingly and upon the request of a Party provide such Party with a copy of the final version of the contract;IV. A set of vendor qualifications criteria for each major category contractsupply shall be proposed by the Operator and approved by the OperatingCommittee within thirty 30 days of its submission. In the event the Operating Committee fails to approve vendor qualification criteria withinthirty 30 days of the date the same is

first submitted by the Operator the matter shall be referred to the Management Committee for decision. The Operating Committee may revise the qualification criteria. V. It is anticipated that in order to expedite joint operations contracts will be awarded to qualified vendors/contractors who are identified as approved vendors for the specified activities. A list of such approved vendors shall first be established as follows: Operator shall 1 provide the constituents of the Contractor with a list of the entities from whom Operator proposes to invite tender for contracts; and 2 add to such list entities whom a Company requests for adding within fourteen (14) days on receipt of such list; and 3 obtain approval of the Operating Committee. Such list shall thereafter be maintained by the Operator. The Operating Committee may add to or delete vendors from such list.

135 APPENDIX G PERFORMA OF BANK GUARANTEE TO BE PROVIDED PURSUANT TO ARTICLE 291. In consideration of Government of India hereinafter referred to as Government having entered into a Production Sharing Contract for the block dated hereinafter referred to as Contract which expression shall include all the amendments agreed to between the Government and the Contractor thereto with Ms having its registered office at hereinafter referred to as which expression unless repugnant to the context or meaning thereof include all its successors administrators executors and assigns which is a constituent of the Contractor and the Government have agreed that the Company shall furnish to Government a bank guarantee hereinafter referred to as Guarantee towards its obligations as provided in the Contract for US\$ for Foreign Companies US\$ equivalent in Indian Rupees for Indian Companies for the performance of its obligations under the Contract.

2. We name of the Bank registered under the Law of and having its registered office at hereinafter referred to as the Bank which expression shall unless repugnant to the context or meaning thereof includes all its successors administrators executors and assigns do hereby guarantee and undertake to pay immediately on the first demand in writing and any all moneys to the extent of Indian Rupees US\$ in figures and Indian Rupees US\$ in words without any demur reservation contest or protest and or without any reference to the Company. Any such demand made by Government on the Bank by serving a written notice shall be conclusive and binding without any proof on the Bank as regards the

amount due and payable notwithstanding any disputes pending before any court tribunal arbitrator sole expert conciliator or any other authority and or any other matter or thing whatsoever as liability under these presents being absolute and unequivocal. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable until it is discharged by Government in writing. This Guarantee shall not be determined discharged or affected by the liquidation winding up dissolution or insolvency of the Contractor and shall remain valid binding and operative against the Bank.³ The Bank also agree that Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor in the first instance without proceeding against the Company and notwithstanding any security or other guarantee that Government may have in relation to the Company's liabilities.¹³⁶ 4. The Bank further agree that Government shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Company from time to time or to postpone for any time or from time to time exercise of any of the powers vested in Government against the said Company and to forebear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Company or for any forbearance act or omission on the part of Government or any indulgence by Government to the said Company or any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.⁵ 5. The Bank further agree that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the Contract and all dues of Government under or by virtue of this Contract have been fully paid and its claim satisfied or discharged or till Government discharges this Guarantee in writing whichever is earlier.^{6.7.8.9.} This Guarantee shall not be discharged by any change in our constitution in the constitution of Company or that of the Contractor. The Bank confirm that this Guarantee has been issued with observance of appropriate laws of the country of issue. The Bank also agree that this Guarantee shall be governed and construed in accordance with Indian Laws and subject to the

exclusive jurisdiction of Indian courts at India. Notwithstanding anything contained herein above our liabilities under this Guarantee is limited to Indian Rupees US in figures Indian Rupees US in words and our Guarantee shall remain in force upto and including sixty 60 days after the expiry date extended date. Any claim under this Guarantee must be received before the expiry of sixty 60 days or before the expiry of sixty 60 days from the extended date if any. If no such claim has been received by us within sixty 60 days after the said date extended date the Government's right under this will cease. However if such a claim has been received by us within and upto sixty 60 days after the said date extended date all the Government's rights under this Guarantee shall be valid and shall not cease until we have satisfied that claim.¹³⁷ In witness whereof the Bank through its authorised officers has set its hand and stamp on this day of 200 at . The seal of was hereto duly affixed by this day of 200 in accordance with its byelaws and this Guarantee was duly signed by and as required by the said byelaws. Secretary President Director Witness¹³⁸

APPENDIX H ITEMIZED COST BREAKUP OF BID COST ESTIMATES GIVEN BY THE CONTRACTOR¹³⁹

Block	CBO	NN	2003	2	Cost
Estimates for 2D API 3D API	2D Acquisition	Processing	Interpretation	Reprocessing	US US650 Lkm.
Spl. Processing	Acquisition	US448	Sq.kms.	Processing	US448 Sq.kms.
3D Interpretation	US448	Sq.kms.	Appendix II	US Reprocessing	Spl. Processing
Quantum	1kms	sq.km.	Technical Specification in	Brief Basic	Rate for Lkm Sq.KM
Mob Demob	Standby	day rates	Infill	Rates Others	like interblock movement
Fishermen Compensation	Total	Cost US	Total	Costs	of 3D API US
Reprocessing	Of 2D	Seismic Data	US513	per Lkm.	3D Seismic Data
Acquisition	3D	Seismic Data	Processing	3D	Seismic Data
Interpretation	US7850	per Sq.Km.	US500	per sq.km.	US150
per sq.km.	333450.00	3516800.00	224000.00	67200.00	3808000
140	Appendix H	Unit Rate	In	MM	US
Total Cost	Block CBO	NN	2003	2	Cost Estimates for Drilling Wells
Phase I	Block	Well No.	Well	Depth	Water Depth
Rig Type	No. of Days	S. NO.	Description	1	Location
Site Survey	Civil Works	Cost	Inter	Location	Movement
Charges	2	Rig Mobilisation	3	4	Rig Hire Rate
5	Rig Demobilisation	6	Manpower	Drilling	Geology etc.
7	Cementing Services	Includes various personnel	Materials	8	Logging
9	Mud Engineering	Drilling Fluid Services	Includes various personnel	Materials	10
Mud Logging	Personnel				

and Unit11 Air Logistics12 OSV Logistics13 Land Logistics14 MWDLWD Services15 Directional Drilling Services16 Coring Services17 Well Head Services18 Casing Running Services19 BitsCasing Costs20 Well HeadXmas Tree21 Water22 HSDLube Oil23 DSTTesting ServicesCBONN20032Total 6 Wells1500 MetersN.A.Mobile Truck Mounled Rotary Drilling Rig20 DaysUnitPer WellLumpsum Lumpsum DayLumpsum DayMonthPer WellPer WellMonthPer WellDayMonthDayboatMonthDayDayDayDayDayDayPer WellPer WellDayDayDay24 MiscellaneousOther Drilling ExpensesPer Well Day Total Not Considered in the Well Cost Estimates.NotesQty 1 1 1 20 1 20 10000 10000 10000 700 0.67 20000 0.67 40000 20 350 N.A. N.A. N.C.N.C.N.C.N.C.0.01 0.01 0.20 0.01 0.01 0.01 0.01 0.01 0.02 0.03 0.01 0.01 0.01 0.04 0.01 0.01 0.01 0.01 0.40 1 The above Well Cost Estimates are prepared based on Dry Trouble Free Hole Costs Basis and includes Drilling Logging and Abandonment DLA Costs. 2 It includes the Costs till 9 58 Casing Lowering. The Costs after this stage is dependent upon the progress of Drilling Operations 3 The Costs of MWDLWD Services Directional Drilling Services Advanced Logging Coring Services and DSTTesting Services are notconsidered in the above Well Cost Estimates because they are Contingent upon the progress and results of Drilling Operations.141

AppendixHUnit RateIn MM USTotal CostBlock CBONN20032Cost Estimates for Drilling WellsPhasel Block Well No Well Depth Water Depth Rig Type No. of DaysSr. No. Description1 LocationSite SurveyCivil Works CostInter Location Movement Charges2 Rig Mobilisation3 4 Rig Hire Rate5 Rig Demobilisation6 Manpower Drilling Geology etc.7 Cementing Services Includes various personnel Materials8 Logging9 Mud Engineering Drilling Fluid Services Includes various personnel Materials10 Mud Logging Personnel and Unit11 Air Logistics12 OSV Logistics13 Land Logistics14 MWDLWD Services15 Directional Drilling Services16 Coring Services17 Well Head Services18 Casing Running Services19 BitsCasing Costs20 Well HeadXMas Tree21 Water22 HSDLube Oil23 DSTTesting ServicesCBONN20032Total 3 Wells2000 MetersN.A.Mobile Truck Mounted Rotary Drilling Rig25 DaysUnitPer WellLumpsum Lumpsum DayLumpsum DayMonthPer WellPer WellMonthPer WellDayMonthDayboatMonthDayDayDayDayDayDayPer WellPer

WellDayDayDayQty 1 1 1 25 1 25 10000 10000 10000 700 0.83 20000 0.83 25 40000 350 N.A.

N.A. N.C.N.C.N.C. N.C.24 MiscellaneousOther Drilling ExpensesPer Well Day Total Not Considered

in the Well Cost Estimates.Notes 1 The above Well Cost Estimates are prepared based on Dry

Trouble Free Hole Costs Basis and includes Drilling Logging and0.01 0.25 0.01 0.02 0.02 0.01 0.02

0.03 0.01 0.01 0.03 0.01 0.01 0.01 0.43 AbandonmentDLA Costs. 2 It includes the Costs till 9 58

Casing Lowering. The Costs after this stage is dependent upon the progress of Drilling Operations.

3 The Costs of MWDLWD Services Directional Drilling Services Advanced Logging Coring Services

and DSTTesting Services are notconsidered in the above Well Cost Estimates because they are

Contingent upon the progress and results of Drilling Operations.142 Block CBONN20032Cost

Estimates for Drilling WellsPhasel Block Well No. Well Depth Water Depth Rig Type No. of DaysSr.

No. Description1 LocationSite SurveyCivil Works CostInter Location Movement Charges2 Rig

Mobilisation3 4 Rig Hire Rate5 Rig Demobilisation6 Manpower Drilling Geology etc.7 Cementing

Services Includes various personnel Materials8 Logging9 Mud Engineering Drilling Fluid Services

Includes various personnel MaterialsCBONN20032Total 5 Wells2500 MetersN.A.Mobile Truck

Mounted Rotary Drilling Rig30 DaysUnitPer WellLumpsumLumpsumDayLumpsumDayMonthPer

WellPer WellMonthPer WellQty 1 1 1 30 1 30 Unit Rate10000 10000 10000 700 1 20000 1 40000

10 Mud Logging Personnel and UnitDay 30 11 Air Logistics12 OSV Logistics13 Land Logistics14

MWDLWD Services15 Directional Drilling Services16 Coring Services17 Well Head Services18

Casing Running Services19 BitsCasing Costs20 Well HeadXmas Tree21 Water22 HSDLube Oil23

DSTTesting ServicesMonthDayboatMonthDayDayDayDayDayDayPer WellPer WellDayDayDay24

MiscellaneousOther Drilling ExpensesPer WellDay Total Not Considered in the Well Cost

Estimates.Notes350 N.A. N.A. N.C.N.C.N.C. N.C.AppendixHin MM US Total Cost 0.01 0.30 0.01

0.02 0.02 0.01 0.02 0.04 0.01 0.01 0.03 0.01 0.01 0.01 0.01 0.50 1 The above Well Cost Estimates

are prepared based on Dry Trouble Free Hole Costs Basis and includes Drilling Logging and

Abandonment DLA Costs. 2 It includes the Costs till 9 58 Casing Lowering. The costs after this

stage is dependent upon the progress of Drilling Operations. 3 The Costs of MWDLWD Services

Directional Drilling Services Advanced Logging. Coring Services and DST Testing Services are not considered in the above Well Cost Estimates because they are Contingent upon the progress and results of Drilling Operations.

143 Block CBONN20032 Cost Estimates for Drilling Wells Phase I

Block	Well No.	Well Depth	Water Depth	Rig Type	No. of Days	Sr. No.	Description	1 Location	Site Survey	Civil Works	Cost	Inter Location Movement Charges	2 Rig Mobilisation	3 4 Rig Hire Rate	5 Rig Demobilisation
CBONN20032	Total 2 Wells	2500 Meters	N.A.	Mobile Truck Mounted Rotary Drilling Rig	30 Days	Unit	Per Well	Lumpsum	Lumpsum	Day	Lumpsum	Qty 1	1 1 1 30	1	Appendix H
MM US	Total Cost	10000	10000	10000	6	Manpower	Drilling	Geology etc.	Day	30	700	7	Cementing	Services	Includes various personnel Materials
	8 Logging	9 Mud Engineering	Drilling Fluid	Services	Includes various personnel Materials	Month	Per Well	Per Well	Month	Per Well	1	20000	1	40000	10
	Mud Logging	Personnel and Unit	Day	30	350	11	Air Logistics	12 OSV Logistics	13 Land Logistics	14 MWD	LWD Services	15 Directional Drilling Services	16 Coring Services	17 Well Head Services	18
	Casing Running	Services	19 Bits	Casing Costs	20 Well Head	Xmas Tree	21 Water	22 HSD	Lube Oil	23 DST	Testing	Services	Month	Day	boat
	Month	Day	boat	Month	Day	Day	Day	Day	Day	Day	Day	Per Well	Per Well	Day	Day
	N.A.	N.A.	N.C.	N.C.	N.C.	N.C.	N.C.	24 Miscellaneous	Other Drilling Expenses	Per Well	Day	Total	Not Considered	in the Well Cost Estimates.	Notes
	1	The above Well Cost Estimates are prepared based on Dry Trouble Free Hole Costs Basis and includes Drilling Logging and Abandonment	0.01	0.30	0.01	0.02	0.02	0.01	0.02	0.04	0.01	0.01	0.03	0.01	0.01
	0.01	0.01	0.01	0.01	0.01	0.50	DLA Costs.	2	It includes the Costs till 9	58	Casing Lowering. The costs after this stage is dependent upon the progress of Drilling Operations.	3	The Costs of MWD LWD Services Directional Drilling Services Advanced Logging Coring Services and DST Testing Services are not considered in the above Well Cost Estimates because they are Contingent upon the progress and results of Drilling Operations.	144	Block
	CBONN20032	Cost Estimates for Drilling Wells Phase I	Block	Well No.	Well Depth	Water Depth	Rig Type	No. of Days	CBONN20032	Total 2 Wells	3000 Meters	N.A.	Mobile Truck Mounted Rotary Drilling Rig	35 Days	Sr. No.
	Description	1 Location	Site Survey	Civil Works	Cost	Unit	Per Well	Qty 1	Unit Rate	Inter Location Movement Charges	2 Rig Mobilisation	3 4 Rig Hire Rate	5 Rig Demobilisation	6	

Manpower Drilling Geology etc.7 Sermenting Services Includes various personnel Materials8 Logging9 Mud Engineering Drilling Fluid Services Includes various personnel MaterialsLumpsum Lumpsum DayLumpsum DayMonthPer WellPer WellMonthPer Well1 1 35 1 35 10000 10000 10000 700 1.17 20000 1.17 40000 10 Mud Logging Personnel and UnitDay35 11 Air Logistics12 OSV Logistics13 Land Logistic14 MWDLWD Services15 Directional Drilling Services16 Coring Services17 Well Head Services18 Casing Running Services19 BitsCasing Costs20 Well HeadXmas Tree21 Water22 HSDTube Oil23 DSTTesting ServicesMonthDayboatMonthDayDayDayDayDayDayPer WellPer WellDayDayDayDay350 N.A. N.A. N.C.N.C.N.C.N.C.24 MiscellaneousOther Drilling ExpensesPer WellDay Total Not Considered in the Well Cost Estimates.

Notes 1 The above Well Cost Estimates are prepared based on Dry Trouble Free Hole Costs Basis and includes Drilling Logging andAppendixHin MM US Total Cost 0.01 0.35 0.01 0.02 0.02 0.01 0.02 0.05 0.01 0.01 0.02 0.01 0.01 0.01 0.55 AbandonmentDLA Costs. 2 It includes the Costs at 9 58 Casing Lowering. The costs after this stage is dependent upon the progress of Drilling Operations. 3 The Costs of MWDLWD Services Directional Drilling Services Advanced Logging Coring Services and DSTTesting Services are notconsidered in the above Well Cost Estimates because they are Contingent upon the progress and results of Drilling Operations.145 AppendixHUnit Ratein MM US Total Cost Block CBONN20032Cost Estimates for Drilling WellsPhaseIII Block Well No. Well Depth Water Depth Rig Type No. of DaysSr. No. Description1 LocationSite SurveyCivil Works CostInter Location Movement Charges2 Rig Mobilisation3 4 Rig Hire Rate5 Rig Demobilisation6 ManpowerDrilling Geology etc.7 Cementing Servicesincludes various personnel Materials8 Logging9 Mud Engineering Drilling Fluid Servicesincludes various personnel MaterialsCBONN20032Total 3 Wells2500 MetersN.A.Mobile Truck Mounted Rotary Drilling Rig30 DaysUnitPer WellLumpsum Lumpsum DayLumpsum DayMonthPer WellPer WellMonthPer WellQty 1 1 1 30 1 30 10000 10000 10000 700 1 20000 1 40000 10 Mud LoggingPersonnel and UnitDay 30 11 Air Logistics12 OSV Logistics13 Land Logistics14 MWDLWD Services15 Directional Drilling Services16 Coring Services17 Well Head Services18 Casing Running Services19 BiltsCasing

Costs	20	Well	Head	Xmas	Tree	21	Water	22	HSD	Lube	Oil	23	DST	Testing					
Services	Month	Day	boat	Month	Day	Day	Day	Day	Day	Per	Well	Per	Well	Day	Day	Day	350	N.A.	N.A.
N.C.	N.C.	N.C.	N.C.	N.C.	24	Miscellaneous	Other	Drilling	Expenses	Per	Well	Day	Total	Not	Considered	in			
the Well Cost Estimates.																			
Notes 1 The above Well Cost Estimates are prepared based on Dry																			
Trouble Free Hole Cost Basis and includes Drilling Logging and																			
0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.50	Abandonment	DLA	Costs.	2	It	includes	the	Costs	9	58	
Casing Lowering. The costs after this stage is dependent upon the progress of Drilling Operations.																			
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and DSTTesting Services are notconsidered in the above Well Cost Estimates because they are																			
Contingent upon the progress and results of Drilling Operations.																			
146 EX10.5117PRODUCTION																			
SHARING CONTRACT PANNA MUKTA EXHIBIT 10.51 PRODUCTION SHARING CONTRACT																			
AMONG THE GOVERNMENT OF INDIA AND OIL NATURAL GAS CORPORATION LIMITED AND																			
RELIANCE INDUSTRIES LIMITED AND ENRON OIL GAS INDIA LTD. WITH RESPECT TO																			
CONTRACT AREA IDENTIFIED AS PANNA AND MUKTA FIELDS ARTICLE . Definitions 2.																			
Duration 3. Relinquishment 4. Work Programme 5. Management Committee 6. Operatorship and																			
Operating Agreement 7. General Rights and Obligations of the Parties 8. Government Assistance 9.																			
Discovery Development and Production10. Unit Development11. Measurement of Petroleum12.																			
Protection of the Environment13. Recovery of Costs14. Production Sharing of Petroleum between																			
Contractor and Government15. Taxes Royalties Rentals etc.16. Payment17. Customs Duties18.																			
Domestic Supply Sale Disposal and Export of Crude Oil19. Valuation of Oil20. Currency and																			
Exchange Control Provisions21. Natural Gas22. Employment Training and Transfer of																			
Technology23. Local Goods and Services24. Insurance and Indemnification25. Records Reports																			
Accounts and Audit26. Information Data Confidentiality Inspection and Security27. Title to																			
Petroleum Data and Assets28. Assignment of Interest29. Guarantee30. Termination of Contract31.																			
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Arbitration34. Entire Agreement Amendments Waiver and Miscellaneous35. Certificates36.																			

NoticesAPPENDICESAppendix A Description of Contract AreaAppendix B Map of Contract AreaAppendix C Accounting Procedure to Production Sharing ContractAppendix D Calculation of the Investment Multiple for Production Sharing PurposesAppendix E Form of Financial and Performance GuaranteeAppendix F EquipmentAppendix G Development Commitment Specified by the CompaniesAppendix H Production Profile of the Panna and Mukta FieldsThis Contract made and entered into as of the 22nd day of December 1994by and amongTHE PRESIDENT OF INDIA acting through the Joint SecretaryExploration Ministry of Petroleum and Natural Gas hereinafterreferred as Government; ANDOIL NATURAL GAS CORPORATION LIMITED ONGC a body corporate established underthe provisions of the Companies Act 1956 which expression shall include its successors and such assigns as are permitted under Article 28 hereof actingthrough its duly authorized Chairman Managing Director; ANDRELIANCE INDUSTRIES LTD. RIL a body corporate established under the laws ofIndia which expression shall include its 35 successors and such assigns as arepermitted under Article 28 hereof acting through its duly authorized ChiefExecutive Officer Oil Gas; ANDENRON OIL GAS INDIA LTD. EOGIL a body corporate established under thelaws of the Cayman Islands which expression shall include its successors andsuch assigns as are permitted under Article 28 hereof acting through its dulyauthorized Vice President;WITNESSETHWHEREAS1. By virtue of Article 297 of the Constitution of India Petroleum in its natural state in the Territorial Waters and the Continental Shelf of India is vested in the Union of India;2. The Territorial Waters Continental Shelf Exclusive Economic Zone And Other Maritime Zones Act 1976 No. 80 of 1976 provides for the grant of a Lease or letter of authority by the Government to explore and exploit the resources of the Continental Shelf;3. The Oil Fields Regulation and Development Act 1948 53 of 1948 hereinafter referred to as the Act and the Petroleum and Natural Gas Rules 1959 made thereunder hereinafter referred to as the Rules make provision inter alia for the regulation of Petroleum Operations and the grant of petroleum exploration licenses and mining leases for exploration and development of Petroleum in India;4. The Act and the Rules provide for the grant by the Government of mining leases in respect of the Territorial

Waters and the Continental Shelf and the Contractor is being duly granted a mining lease to carry out Petroleum Operations in that area offshore identified as Panna and Mukta Fields more particularly described in Appendices A and B;5. The Government desires that the Petroleum resources which may exist in the Contract Area be discovered and exploited with the utmost expedition in the overall interest of India in accordance with sound international petroleum industry practices;6. The Government is satisfied that it is in the public interest to enter into this Contract on terms different from those specified in Section 12 of the Oil Fields Regulations and Development Act 1948 and the Government is entering into this Agreement on the terms and conditions specified herein.7. EOGIL and RIL have represented that they have or will acquire and make available the necessary financial and technical resources and the technical and industrial competence and experience necessary for proper discharge andor performance of all obligations required to be performed under this Contract in accordance with good international petroleum industry practices and will provide guarantees as required in Article 29 for the due performance of their undertakings hereunder;8. The Parties desire to enter into this Contract with respect to the Contract Area referred to in Appendices A and B on the terms and conditions herein set forth.NOW THEREFORE in consideration of the premises and covenants and conditionsherein contained IT IS HEREBY AGREED between the Parties as follows

2 ARTICLE 1 D E F I N I T I O N S In this Contract unless the context requires otherwise the following terms shall have the meaning ascribed to them hereunder

1.1 Accounting Procedure means the principles and procedures of accounting set out in Appendix C.

1.2 Affiliate means a company that directly or indirectly controls or is controlled by a Party to this Contract or a company which directly or indirectly controls or is controlled by a company which controls a Party to this Contract it being understood that control means ownership by one company of more than fifty percent 50 of the voting securities of the other company or the power to direct administer and dictate policies of the other company even where the voting securities held by such company exercising such effective control in that other company is less than fifty percent 50 and the term controlled shall have a corresponding meaning.

1.3 Appendix means an Appendix

attached to this Contract and made a part hereof.

1.4 Appraisal Programme means a programme approved by the Management Committee for the appraisal of an Existing or New Discovery of Petroleum in the Contract Area for the purpose of delineating the Petroleum Reservoirs to which the Discovery relates in terms of thickness and lateral extent and determining the characteristics thereof and the quantity and quality of recoverable Petroleum therein.

1.5 Appraisal Well means a Well drilled within the Contract Area pursuant to an approved Appraisal Programme.

1.6 Arms Length Sales means sales of Petroleum made freely on the open international market in freely convertible currencies between willing and unrelated sellers and buyers and in which such buyers and sellers have no contractual or other relationship directly or indirectly or any common or joint interest as is reasonably likely to influence selling prices and shall inter alia exclude sales whether direct or indirect through brokers or otherwise involving Affiliates sales between entities comprising the Contractor sales between governments and governmentowned entities counter trades restricted or distress sales sales involving barter arrangements and generally any transactions motivated in whole or in part by considerations other than normal commercial practices.

1.7 Article means an article of this Contract and the term Articles means more than one Article.

31.8 Associated Natural Gas or ANG means Natural Gas occurring in association with Crude Oil either as free Gas or in solution if such Crude Oil can by itself be commercially produced.

1.9 Barrel means a quantity or unit equal to 158.9074 litres fortytwo 42 United States gallons liquid measure at a temperature of sixty 60 degrees Fahrenheit 15.56 degrees Centigrade under one atmosphere of pressure 14.7 psia.

1.10 Basement means any igneous or metamorphic rock or rock or any stratum of such nature in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of Petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected in accordance with the knowledge generally accepted in the international petroleum industry.

1.11 Calendar Month means any of the twelve 12 months of the Calendar Year unless specified otherwise.

1.12 Calendar Quarter means a period of three consecutive Calendar Months

commencing on the first day of January April July and October of each Calendar Year.1.13 Calendar Year means a period of twelve consecutive months according to the Gregorian calendar commencing with the first day of January and ending with the thirtyfirst day of December.1.14 Commercial Discovery means a Discovery which when produced is likely to yield a reasonable profit on the funds invested in Petroleum Operations after deduction of Contract Costs and which has been declared a Commercial Discovery in accordance with the provisions of Article 9 andor Article 21 after consideration of all pertinent operating and financial data such as recoverable reserves sustainable production levels estimated development and production expenditures prevailing prices and other relevant technical and economic factors according to generally accepted practices in the international petroleum industry.1.15 Commercial Production means production of Crude Oil or Natural Gas or both from a Field within the Contract Area and delivery of the same at the relevant Delivery Point under a programme of regular production and sale.1.16 Company means either EOGIL or RIL.1.17 Companies means EOGIL and RIL.1.18 Condensate means those low vapour pressure hydrocarbons obtained from Natural Gas through condensation or extraction 4 and refers solely to those hydrocarbons that are liquid at normal surface temperature and pressure conditions provided that in the event Condensate is produced from an Oil Field and is segregated and transported separately to the Delivery Point then the provisions of this Contract shall apply to such Condensate as if it were Crude Oil.1.19 Contract means this agreement and the Appendices attached hereto and made a part hereof and any amendments made thereto pursuant to the terms hereof.1.20 Contract Area means the area described in Appendix A and delineated on the map attached as Appendix B or any portion of the area remaining after relinquishment or surrender from time to time pursuant to the terms of this Contract.1.21 Contract Costs means Exploration Costs Development Costs Production costs and all other costs related to Petroleum Operations as set forth in Section 3 of the Accounting Procedure.1.22 Contract Year means a period of twelve consecutive months counted from the Effective Date or from the anniversary of the Effective Date.1.23 Contractor means EOGIL RIL and ONGC.1.24 Cost Petroleum means the portion of the

total volume of Petroleum produced and saved from the Contract Area which the Contractor is entitled to take from the Contract Area in a particular period for the recovery of Contract Costs as provided in Article 13.1.25 Cost Recovery Limit shall have the meaning given in Article 13.1.2.1.26

Crude Oil means crude mineral oil asphalt ozokerite and all kinds of hydrocarbons and bitumens both in solid and in liquid form in their natural state or obtained from Natural Gas by condensation or extraction including distillate and Condensate when commingled with the heavier hydrocarbons and delivered as a blend at the Delivery Point but excluding verified Natural Gas.1.27 Delivery Point means except as otherwise herein provided or as may be otherwise agreed between the Government and the Contractor the point at which Petroleum reaches the upstream weld of the outlet flange of the delivery facility either offshore or onshore and different Delivery Points may be established for purposes of sales to the Government export or domestic sales.1.28 Development Area means that part of the Contract Area corresponding to the area of an Oil Field or Gas Field delineated in simple geometric shape together with a 5 reasonable margin of additional area surrounding the Field consistent with international petroleum industry practice and approved by the Management Committee or the Government as the case may be.1.29 Development Costs means those costs and expenditures incurred in carrying out Development Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.1.30 Development Operations means operations conducted in accordance with the Development Plan and shall include but not be limited to the purchase shipment or storage of equipment and materials used in developing Petroleum accumulations the drilling completion Recompletion and testing of Development Wells the drilling completion and Recompletion of Wells for Gas or water injection the laying of gathering lines the installation of offshore platforms and installations the installation hook up and commissioning of separators tankage pumps artificial lifting and other producing and injection facilities required to produce process and transport Petroleum into main oil storage or Gas processing facilities either onshore or offshore including the laying of pipelines within or outside the Contract Area storage and Delivery Point or Points the installation of

storage or Gas processing facilities the installation of export and loading facilities and other facilities required for development and production of the Petroleum accumulations and for the delivery of Crude Oil and Gas at the Delivery Points and also including incidental operations not specifically referred to herein as required for the most efficient and economic development and production of the Petroleum accumulations in accordance with good international petroleum industry practices.

1.31 Development Plan means a plan containing proposals required under Article 9 or Article 21.

1.32 Development Well means a Well drilled deepened completed or Recompleted after the date of approval of the Development Plan pursuant to Development Operations or Production Operations for the purposes of producing Petroleum increasing production sustaining production or accelerating extraction of Petroleum including production Wells injection Wells and dry Wells.

1.33 Discovery means the finding during Exploration Operations of a deposit of Petroleum not previously known to have existed which can be recovered at the surface in a flow measurable by conventional petroleum industry testing methods including an Existing Discovery and a New Discovery.

61.34 Discovery Area means that part of the Contract Area about which based upon Discovery and the results obtained from a Well or Wells drilled in such part both the Government and the Contractor are of the opinion that Petroleum exists and is likely to be produced in commercial quantities.

1.35 Effective Date means the date on which this Contract is executed.

1.36 Environmental Clearance means permission granted in writing by the Government to the Contractor to perform all activities necessary and appropriate to conduct Petroleum Operations subject to conditions specified with regard to protection of the environment and minimizing Environmental Damage.

1.37 Environmental Damage means soil erosion removal of vegetation destruction of wildlife pollution of groundwater or surface water land contamination air pollution noise pollution bush fire disruption to water supplies to natural drainage or natural flow of rivers or streams damage to archaeological palaeontological and cultural sites and shall include any damage or injury to or destruction of soil or water in their physical aspects together with vegetation associated therewith aquatic or terrestrial mammals fish avifauna or any plant or animal life whether in the sea or in any other water or on in or under land provided

such damage is in violation of legislation relating to the protection of the environment.1.38 Excess ANG shall have the meaning given in Article 21.4.1.39 Existing Discovery means a Discovery made by ONGC before the Effective Date and accepted by the Parties as a Commercial Discovery.1.40 Exploration Costs means those costs and expenditures incurred in carrying out Exploration Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.1.41 Exploration Operations means operations conducted in the Contract Area pursuant to this Contract in searching for Petroleum or in the course of an Appraisal Programme and shall include but not be limited to aerial geological geophysical geochemical palaeontological palynological topographical and seismic surveys analysis studies and their interpretation investigations relating to the subsurface geology including structure test drilling stratigraphic test drilling drilling of Exploration Wells or Appraisal Wells and other related activities such as testing surveying drill site preparation and all work necessarily connected therewith that is conducted in connection with Petroleum exploration. 71.42 Exploration Well means a Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity be it of structural stratigraphic facies or pressure nature to at least a depth or stratigraphic level specified in the Work Programme.1.43 Field means an Oil Field or a Gas Field in the Contract Area in respect of which a Development Plan has been duly approved in accordance with Article 9 or Article 21 hereof.1.44 Financial Year means the period from the first day of April through the thirtyfirst day of March of the following Calendar Year.1.45 Foreign Company means a Company within the meaning of Section 591 of the Companies Act 1956 as amended from time to time.1.46 Gas means Natural Gas.1.47 Gas Field means an area within the Contract Area consisting of a single Gas Reservoir or multiple Gas Reservoirs all grouped on or related to the same individual geological structure or stratigraphic conditions designated by the Contractor and approved by the Government or Management Committee as the case may be to include the maximum area of potential productivity in the Contract Area in a simple geometric shape in respect of which a Commercial Discovery has been declared or a Development Plan has been approved in accordance with Article 9 or Article 21

hereof.1.48 Investment shall have the meaning assigned in paragraph 3 of Appendix D.1.49 Investment Multiple means the ratio of accumulated Net Cash Income to accumulated Investment in the Contract Area earned by the Companies as determined in accordance with Appendix D.1.50 LIBOR means the London InterBank Offering Rate for sixmonth deposits of United States Dollars as quoted by the London office of the Bank of America or such other Bank as the Parties may agree for the day or days in question.1.51 Lessee means any person or body corporate including the Contractor which holds a mining lease under the Petroleum and Natural Gas Rules 1959 for the purpose of carrying out Petroleum Operations in the Contract Area and their successors and permitted assigns.1.52 Management Committee means the committee constituted pursuant to Article 5 hereof.1.53 Minimum Work Obligation means the Work Programme related 8 to those items specified in Appendix G as approved by the Management Committee.1.54 Natural Gas means wet Gas dry Gas all other gaseous hydrocarbons and all substances contained therein including sulphur and helium which are produced from Oil or Gas Wells excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions and including the residue Gas remaining after the condensation or extraction of liquid hydrocarbons from Gas.1.55 Net Cash Income shall have the meaning assigned in paragraph 2 of Appendix D.1.56 New Discovery means a Discovery made after the Effective Date.1.57 Non Associated Natural Gas or NANG means Natural Gas which is produced either without association with Crude Oil or in association with Crude Oil which by itself cannot be commercially produced.1.58 Oil means Crude Oil.1.59 Oil Field means an area within the Contract Area consisting of a single Oil Reservoir or multiple Oil Reservoirs all grouped on or related to the same individual geological structure or stratigraphic conditions designated by the Contractor and approved by the Government or the Management Committee as the case may be to include the maximum area of potential productivity in the Contract Area in a simple geometric shape in respect of which a Commercial Discovery has been declared and a Development Plan has been approved in accordance with Article 9 hereof and a reference to an Oil Field shall include a reference to the production of Associated Natural Gas

from that Oil Field.1.60 Operating Agreement means the Joint Operating Agreement entered into by the Parties constituting Contractor in accordance with Article 6 with respect to the conduct of Petroleum Operations.1.61 Operating Committee means the committee established by that name in the Operating Agreement.1.62 Operator means the Party so designated in Article 6.1.63 Participating Interest means the percentage of participation of the constituents of the Contractor at any given time in the rights and obligations under this Contract. Initially the Participating Interest of the constituents of Contractor are as follows 9 1. ONGC 40 2. RIL 30 3. EOGIL 30.1.64 Parties means the Parties signatory to this Contract including their successors and permitted assigns under this Contract and the term Party means any of the Parties.1.65 Petroleum means Crude Oil and/or Natural Gas existing in their natural condition.1.66 Petroleum Operations means as the context may require Exploration Operations Development Operations or Production Operations or any combination of such operations including but not limited to collection of seismic information drilling and completion and Recompletion of Wells construction operation and maintenance of all necessary facilities plugging and abandonment of Wells environmental protection transportation storage sale or disposition of Petroleum to the Delivery Point Site Restoration and all other incidental operations or activities as may be necessary.1.67 Production Costs means those costs and expenditures incurred in carrying out Production Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof.1.68 Production Operations means all operations conducted for the purpose of producing Petroleum from the Contract Area after the commencement of production from the Contract Area including the operation and maintenance of all necessary facilities therefor.1.69 Profit Petroleum means all Petroleum produced and saved from the Contract Area in a particular period as reduced by Cost Petroleum and calculated as provided in Article 14.1.70 Recompletion means an operation whereby a completion in one zone is abandoned in order to attempt a completion in a different zone within the existing wellbore.1.71 Reservoir means a naturally occurring discrete accumulation of Petroleum.1.72 Section means a section of the Accounting Procedure.1.73 SelfSufficiency means in relation to any

Financial Year that the volume of Crude Oil and Crude Oil equivalent of Petroleum products exported from India during that Financial Year either equals or exceeds the volume of Crude Oil and Crude Oil equivalent of Petroleum products imported into India during the same Financial Year.1.74

Site Restoration shall mean all activities required to 10 return a site to its state as of the Effective Date pursuant to the Contractors environmental impact study or to render a site compatible with its intended afteruse to the extent reasonable after cessation of Petroleum Operations in relation thereto and shall include where appropriate proper abandonment of Wells or other facilities removal of equipment and structures whether installed before or after the Effective Date and debris establishment of compatible contours and drainage replacement of top soil revegetation slope stabilization infilling of excavations or any other appropriate actions in the circumstances.1.75

Subcontractor means any company or person contracted by the Operator to provide services with respect to the Petroleum Operations.1.76 Well means a borehole made by drilling in the course of Petroleum Operations but does not include a seismic shot hole.1.77 Work Programme means all the plans formulated for the performance of the Petroleum Operations.1.78 Year means Financial Year.

11 ARTICLE 2 DURATION2.1 The term of this Contract shall be for a period of twenty five 25 years from the Effective Date unless the Contract is terminated earlier in accordance with its terms but may be extended on such terms and conditions as may be mutually agreed by the Parties hereto.

12 ARTICLE 3 RELINQUISHMENT3.1 The Contractor may with the approval of the Management Committee voluntarily relinquish a portion of the Contract Area other than an area for which a Development Plan has been approved. Contractor shall give the Government written notice of relinquishments thirty 30 days prior to the end of any Calendar Year.3.2 Relinquishment of less than all of the Contract Area shall be in blocks of not less than one hundred square kilometres 100 sq. kms. and be of such shape and location as the Government may deem appropriate for enabling effective exploration and exploitation of such area.3.3 Relinquishment of all or a part of the Contract Area or termination of the Contract shall not be construed as absolving the Contractor of any liability undertaken or incurred by the Contractor in respect of the Contract Area prior to the date of such

relinquishment or termination. 13 ARTICLE 4 WORK PROGRAMME4.1 The Contractor shall commence Petroleum Operations not later than six 6 months from the Effective Date.4.2 As soon as possible after the Effective Date in respect of the period ending with the last day of the Financial Year in which the Effective Date falls and thereafter ninety 90 days before commencement of each following Financial Year the Contractor shall submit to the Management Committee through the Operating Committee the Work Programmes and budgets relating to Petroleum Operations including the Minimum Work Obligations to be carried out during the ensuing Financial Year.4.3 The Contractor may propose amendments to the details of an approved Work Programme and budget in the light of the then existing circumstances and shall submit to the Management Committee through the Operating Committee modifications or revisions to the Work Programme and budgets. 14

ARTICLE 5 MANAGEMENT COMMITTEE5.1 For the purpose of proper and expeditious performance of Petroleum Operations under the provisions of this Contract there shall be constituted a committee to be called the Management Committee.5.2 The Management Committee shall consist of four 4 members one 1 member nominated by and representing Government and one 1 member nominated by and representing each constituent of the Contractor. The member nominated by ONGC shall act as chairman.5.3 A representative of the Operator acting as the convenor shall call the meetings of the Management Committee.5.4 Government and the Contractor may nominate alternate members with full authority to act in the absence and on behalf of the members nominated under Article 5.2 and may at any time nominate another member or alternate member to replace any member nominated earlier by notice to other members of the Management Committee.5.5 A quorum of the Management Committee shall consist of three 3 members.5.6 The following matters shall be submitted to the Management Committee for approval a annual Work Programmes and budgets and any modifications or revisions thereto as proposed by the Operating Committee for Exploration Operations Development Operations and/or Production Operations; b proposals for an Appraisal Programme the declaration of a New Discovery as a Commercial Discovery and the approval of Development Plans as may be required under this Contract or revisions or additions to an Appraisal

Programme or a Development Plan; c delineation of a Field and a Development Area; d appointment of auditors; e collaboration with lessees or contractors of other areas; f claims or settlement of claims for or on behalf of or against the Contractor in excess of limits specified in the Operating Agreement or fixed by the Management Committee from time to time; g any proposed mortgage charge or encumbrance on petroleum assets petroleum reserves or production of 15 Petroleum; h any other matter required by the terms of this Contract to be submitted for the approval of the Management Committee; i any other matter which the Contractor or the Operating Committee dees to submit to it.

5.7 The Management Committee shall not take any decision without obtaining prior approval of the Government where such approval is required under this Contract.

5.8 The Management Committee shall meet at least once every three 3 months or more frequently at the request of any member. Operator shall convene each meeting by notifying the members at least twenty eight 28 days prior to such meeting or a shorter period of notice if the members unanimously so agree of the time and place of such meeting and the purpose thereof and shall include in such notice a provisional agenda for such meeting. The Operator shall be responsible for processing the final agenda for such meeting and the agenda shall include all items of business requested by the members to be included provided such requests are received by the Operator at least ten 10 days prior to the date fixed for the meeting. The Operator shall forward the agenda to the members at least nine 9 days prior to the date fixed for the meeting. Matters not included in the agenda may be taken up at the meeting by any member with the unanimous consent of all the members.

5.9 The Chairman and in his absence any other member nominated by ONGC shall preside over the meetings of the Management Committee.

5.10 The Operator shall appoint one of the members nominated by the constituents of the Contractor as secretary to the Management Committee with responsibility inter alia for preparation of the minutes of every meeting in the English language and provision to every member of the Management Committee with two 2 copies of the minutes not later than twentyeight 28 days after the date of the meeting.

5.11 Within twentyone 21 days of the receipt of the minutes of a meeting members shall notify the Operator and the other members of their

approval of the minutes by putting their signatures on one copy of the minutes and returning the same to the Operator or by indicating such approval to the Operator by telex cable or facsimile with copies to the other members. Any member may suggest any modification amendment or addition to the minutes by telex cable or facsimile to the Operator and other members or by indicating such suggestions when returning the copy of the minutes to the Operator. If the Operator or any other member does not agree with the modification amendment or addition to the 16 minutes suggested by any member the matter shall be brought to the attention of the other members and resubmitted to the Management Committee for approval at the next meeting and the minutes shall stand approved as to all other matters. If a member fails to appropriately respond within the aforesaid twentyone 21 day period as herein provided the minutes shall be deemed approved by such member.

5.12 The meetings of the Management Committee shall be held in New Delhi India unless otherwise mutually agreed by the members of the Management Committee.

5.13 All matters requiring the approval of the Management Committee shall be approved by a vote of three 3 or more members of the Management Committee one 1 of whom shall be the Government representative.

17 ARTICLE 6 OPERATORSHIP AND OPERATING AGREEMENT

6.1 EOGIL shall be the Operator for purposes of this Contract.

6.2 No change in operatorship shall be effected without the consent of the Government which consent shall not be unreasonably withheld.

6.3 The operating functions required of the Contractor under this Contract shall be performed by the Operator on behalf of all constituents of the Contractor subject to and in accordance with the terms and provisions of this Contract and generally accepted international petroleum industry practice.

6.4 The constituents of the Contractor shall execute a mutually agreed Operating Agreement. The Agreement shall be consistent with the provisions of this Contract and shall provide for among other things a the appointment resignation removal and responsibilities of the Operator; b the establishment of an Operating Committee; c functions of the Operating Committee taking into account the provisions of the Contract procedures for decision making frequency and place of meetings; and d contribution to costs default sole risk disposal of petroleum and assignment as between the parties to the Operating Agreement.

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ARTICLE 7 GENERAL RIGHTS AND OBLIGATIONS OF THE PARTIES

7.1 Subject to the provisions of this Contract the Contractor shall have but not be limited to the following rights a the exclusive right during the term hereof to carry out Petroleum Operations in the Contract Area and to recover costs and expenses as provided in this Contract; b the right to use free of charge such quantities of Petroleum produced from any Field as are reasonably required for conducting Petroleum Operations in the Contract Area in accordance with generally accepted practices in the international petroleum industry; c the right to lay build construct or install pipelines roads bridges ferries aerodromes landing fields radio telephones satellite communications and related communication and infrastructure facilities and exercise other ancillary rights as may be reasonably necessary for the conduct of Petroleum Operations subject to such approvals as may be required which shall not be unreasonably withheld under the applicable laws andor regulations in force from time to time for the regulation and control thereof; d the right to have an expatriate work force as required and necessary together with their required personal effects; e the right to flare Gas temporarily when and as necessary provided the Operator shall give notice thereof to the Government within fortyeight 48 hours of the start of such flaring and the issue shall be discussed in the next meeting of the Management Committee; f the right to use all wells equipment and facilities installed as of the Effective Date in the Contract Area Assets free of any additional cost or charges or encumbrances and assignment of such Assets to Operator on behalf of the Contractor; g such other rights as are specified in this Contract.

7.2 The Government reserves the right to itself or to grant to the Lessee or others the right to prospect for and mine minerals or substances other than Petroleum within the Contract Area; provided however that if after the Effective Date the Lessee or others are issued rights or the Government proceeds directly to prospect for and mine in the Contract Area for any minerals or substances other than 19 Petroleum the Contractor shall use reasonable efforts to avoid obstruction to or interference with such operations within the Contract Area and in either case the Government shall use reasonable efforts to ensure that operations carried out do not obstruct or unduly interfere with Petroleum Operations in the Contract Area. In the

event of any conflict Petroleum Operations shall take preference.7.3 The Contractor shall a except as otherwise expressly provided in this Contract conduct all Petroleum Operations at its sole risk cost and expense and provide all funds necessary for the conduct of Petroleum Operations including funds for the purchase or lease of equipment materials or supplies required for Petroleum Operations as well as for making payments to employees and Subcontractors; b conduct all Petroleum Operations within the Contract Area diligently expeditiously efficiently and in a safe and workmanlike manner in accordance with good international petroleum industry practice pursuant to the approved Work Programmes; c ensure provision of all information data samples etc. which the Contractor may be required to furnish under the applicable laws; d ensure that all equipment materials supplies plant and installations used for Petroleum Operations comply with generally accepted standards in the international petroleum industry and are of proper construction and kept in good working order; e in the preparation and implementation of Work Programmes and in the conduct of Petroleum Operations follow good international petroleum industry practices with such degree of diligence and prudence reasonably and ordinarily exercised by experienced parties engaged in a similar activity under similar circumstances and conditions; f after the designation of a Field and a Development Area pursuant to this Contract forthwith proceed to take all necessary action for prompt and orderly development of the Field and the Development Area and for the production of Petroleum in accordance with the terms of this Contract; g appoint a technically competent and sufficiently experienced representative and in his absence a suitably qualified replacement therefor who shall be resident in India and who shall have full authority to take such steps as may be necessary to implement this Contract and whose names shall on appointment within 20 ninety 90 days after commencement of the first Contract Year be made known to the Government; h provide acceptable working conditions living accommodation and access to medical attention and nursing care in the Contract Area for all personnel employed in Petroleum Operations and extend these benefits to other persons who are engaged in or assisting in the conduct of Petroleum Operations in the Contract Area; i be always mindful of the rights and interests of India in

the conduct of Petroleum Operations;7.4 The infrastructure such as pipelines as may be developed established by the Contractor within the country may to the extent capacity is available be available to the Government or any other entity upon payment of compensation which shall include but not be limited to cost of operation repair maintenance interest and profit. The Government and any other entity using any of Contractors facilities shall indemnify and hold harmless Contractor from and against any and all loss damage or injury arising out of or connected with such use. 21

ARTICLE 8 GOVERNMENT ASSISTANCE8.1 Upon application in the prescribed manner and subject to compliance with applicable laws and relevant procedures the Government will without any cost to itself a provide the right of ingress and egress from the Contract Area and any facilities used in Petroleum Operations wherever located and which may be within their control; b use their good offices when necessary to assist Contractor in procurement of facilities and services required for execution of Petroleum Operations including necessary approvals permits consents authorisations visas work permits licenses rights of way easement surface rights and security protection required pursuant to this Contract and which may be available from resources within the Governments control; c use their good offices to assist in identifying and making available necessary priorities for obtaining local goods and services; d in the event that onshore facilities are required outside the Contract Area for Petroleum Operations including but not limited to storage loading and processing facilities pipelines and offices use their good offices in assisting the Contractor to obtain from the authorities of the state government in the state in which such facilities are required such licenses permits authorizations consents security protection surface rights and easements as are required for the construction and operation of the said facilities by the Contractor; e in the event there is no economical passage other than through national parks sanctuaries mangroves wetlands of national importance biosphere reserves or other biologically sensitive areas assist in obtaining the prior written permission of the concerned authorities.8.2 ONGC shall provide data if any related to the Contract Area to the Contractor which has not been previously provided.8.3 Environmental Clearances if any at the Effective Date shall be assigned to EOGIL without obligation to remediate

or correct any prior commission of omission by ONGC but obligations after the Effective Date shall be binding on Contractor.

22 ARTICLE 9 DISCOVERY DEVELOPMENT AND PRODUCTION

9.1 If and when a New Discovery is made within the Contract Area the Contractor shall forthwith inform the Government of the Discovery; b promptly thereafter but in no event later than a period of thirty 30 days from the date of such Discovery furnish to the Government particulars in writing of the Discovery; c promptly run tests to determine whether the New Discovery is of potential commercial interest and within a period of sixty 60 days after completion of such tests and analysis of results submit a report to the Management Committee and the Government containing data obtained from such tests and its analysis and interpretation thereof together with a written notification to the Government of whether in the Contractors opinion such New Discovery is of potential commercial interest and merits appraisal.

9.2 If pursuant to Article 9.1c the Contractor notifies the Government that a New Discovery is of potential commercial interest the Contractor shall prepare and submit to the Management Committee within one hundred and twenty 120 days of such notification a proposed Appraisal Programme with a Work Programme and budget to carry out an adequate and effective appraisal of such New Discovery designed to achieve both the following objectives a determine without delay and in any event within the period specified in Article 9.5 whether such New Discovery is a Commercial Discovery; and b determine with reasonable precision the boundaries of the area to be delineated as a Field.

9.3 The proposed Appraisal Programme for a New Discovery shall be considered by the Management Committee within fortyfive 45 days after submission thereof pursuant to Article 9.2. The Appraisal Programme together with the Work Programme and budget submitted by the Contractor revised in accordance with any agreed amendments or additions thereto approved by the Management Committee shall be adopted as the Appraisal Programme and the Contractor shall promptly commence implementation thereof; and the Yearly budget adopted pursuant to Article 4 shall be revised accordingly. Where in the case of an Existing Discovery Contractor desires to carry out additional appraisal work the Contractor shall submit its proposed Appraisal Programme in respect of the Existing Discovery with a Work Programme and budget to

the Management Committee for its approval within 23 one hundred twenty 120 days of the Effective Date.

9.4 The Contractor shall unless otherwise agreed in respect of a New Discovery of Crude Oil advise the Management Committee by notice in writing within a period of twentyfour 24 months from the date on which the notice provided for in Article 9.1 was delivered whether such New Discovery is a Commercial Discovery or not. Such notice shall be accompanied by a report on the New Discovery setting forth all relevant technical and economic data as well as all evaluations interpretations and analysis of such data and feasibility studies relating to the New Discovery prepared by or for the Contractor with respect to the Discovery. If the Contractor is of the opinion that Petroleum has been discovered in commercial quantities it shall propose that the Government or Management Committee as the case may be declare the New Discovery as a Commercial Discovery based on the report submitted. In respect of a New Discovery of Gas the provisions of Article 21 shall apply.

9.5 The Management Committee shall within fortyfive 45 days of the date of the notice referred to in Article 9.4 consider the proposal of the Contractor and request any other additional information it may reasonably require so as to reach a decision on whether or not to declare the New Discovery as a Commercial Discovery. Such decision shall be made within the later of a ninety 90 days from the date of notice referred to in Article 9.4 or b ninety 90 days of receipt of such other information as may be reasonably required under this Article 9.5. In the case of an Existing Discovery Contractor shall within ninety 90 days of the Effective Date propose a Development Plan following the plan brought out in Appendix G intended to achieve the production profile brought out in Appendix H containing the detailed information required in Article 9.6 with supporting budget. Where a Development Plan is so agreed it shall be the approved Development Plan pursuant to Article 9 hereof.

9.6 If a New Discovery is declared commercial the Contractor shall submit to the Management Committee a comprehensive plan for the development of the Commercial Discovery within two hundred 200 days of the declaration of the Discovery as a Commercial Discovery. Such plan shall contain detailed proposals by the Contractor for the construction establishment and operation of all facilities and services for and inental to the recovery

storage and transportation of the Petroleum from the proposed Development Area to the Delivery Point together with all data and supporting information including but not limited to a Description of the nature and characteristics of the 24 Reservoir data statistics interpretations and conclusions on all aspects of the geology reservoir evaluation petroleum engineering factors reservoir models estimates of reserves in place possible production magnitude nature and ratio of Petroleum fluids and analysis of producible Petroleum; b Outlines of the development project and/or alternative development projects if any describing the production facilities to be installed and the number of wells to be drilled under such development project and/or alternative development projects if any; c Estimate of the rate of production to be established and projection of the possible sustained rate of production in accordance with generally accepted international petroleum industry practice under such development project and/or alternative development project if any which will ensure that the area does not suffer an excessive rate of decline of production or an excessive loss of reservoir pressure; d estimates of Development Costs and Production Costs under such development project and/or alternative development projects if any; e Contractors recommendations as to the particular project that it would prefer if any; f Work Programme and budget for Development and Production Operations; g anticipated adverse impact on the environment and measures to be taken for prevention or minimization thereof and for general protection of the environment in conduct of operations; and h production profiles financial commercial analysis of the project proposal.

9.7 Any proposed Development Plan submitted by the Contractor pursuant to Articles 9.5 and/or 9.6 will be approved by the Management Committee with such amendments and modifications as may be agreed upon by the Contractor within seventyfive 75 days of submission of the Development Plan which approval shall not be unreasonably withheld. If such a Development Plan has not been approved by the Management Committee within the seventyfive 75 day period the Contractor shall have the right to submit such plan directly to the Government for approval which approval shall not be unreasonably withheld. The submission will be answered within sixty 60 days of receipt.

9.8 The Management Committee shall obtain such approvals from the Government as may be required

except where this Contract provides that the Contractor may obtain such approvals directly.9.9 If the Management Committee fails to declare a New Discovery of Oil to be commercial while the Contractor consider that it is commercial or the Management Committee fails to declare the New Discovery as a Commercial Discovery within the time limit stipulated in Article 9.5 hereof the Contractor may declare the New Discovery as a Commercial Discovery and submit development and production plans in respect of the Discovery to the Management Committee as per the provisions of Article 9.6 and after such plans have been approved by the Management Committee the Contractor shall acting solely provide the entire Development Costs and undertake development of the Oil Field. If however the Field turns out to be noncommercial the entire Development Cost of the Field shall be borne solely by the Contractor and shall not be recoverable as Cost Petroleum from any other Field or Contract Area but shall be recoverable solely from such Field.9.10 In the event that the Government considers a New Discovery to be commercial but the Contractor considers the same as noncommercial the Government shall give notice to the Contractor to that effect and thereafter the Field relating to such New Discovery shall be excluded from the Contract Area for all purposes. In this event the Contractor shall have no claim on the production from such Field.9.11 Work Programmes and budgets for Development and Production Operations shall be submitted to the Management Committee as soon as possible after the designation of a Development Area and thereafter not later than 31st December each Calendar Year in respect of the Financial Year immediately following.9.12 The Management Committee when considering any Work Programme and budget may require the Contractor to prepare an estimate of potential production to be achieved through the implementation of the programme and budget for each of the three 3 Financial Years following the Financial Year to which the Work Programme and budget relate. If major changes in Financial Year to Financial Year estimates of potential production are required these shall be based on concrete evidence necessitating such changes.9.13 Not later than the fifteenth 15 day of January each Calendar Year in respect of the Financial Year immediately following the Contractor shall determine the Programme Quantity. The Programme Quantity for any

Financial Year shall be the maximum quantity of Petroleum based on Contractors estimates as approved by the Management Committee which can be produced from a Field consistent with sound international petroleum industry practices and 26 minimizing unit production cost taking into account the capacity of the producing Wells gathering lines separators storage capacity and other production facilities available for use during the relevant Financial Year as well as the transportation facilities up to the Delivery Point.

9.14 Proposed revisions to the details of a Development Plan or an annual Work Programme or budget in respect of Development and Production Operations shall for good cause and if the circumstances so justify be submitted to the Management Committee for approval through the Operating Committee.

27 ARTICLE 10 UNIT DEVELOPMENT

10.1 If a Reservoir in a New Discovery Area is situated partly within the Contract Area and partly in an area in India over which other parties have a contract or licenselease to conduct Petroleum Operations the Government may for securing the most effective recovery of Petroleum from such Reservoir by notice in writing to the Contractor require that the Contractor a collaborate and agree with such other parties on the joint development of the Reservoir; b submit such agreement between the Contractor and such other parties to the Government for approval; and c prepare a plan for such joint development of the Reservoir within one hundred and eighty 180 days of the approval of the agreement referred to in b above.

10.2 If no plan is submitted within the period specified in Article 10.1c or such longer period as the Contractor and other parties may agree or if such plan as submitted is not acceptable to the Government and the parties cannot agree on amendments to the proposed joint development plan the Government may cause to be prepared at the expense of the Contractor and the other parties referred to in Article 10.1 a plan for such joint development consistent with generally accepted practices in the international petroleum industry which shall take into consideration any plans and presentations made by the Contractor and the aforementioned other parties.

10.3 If the Parties are unable to agree on the plan for joint development then any of them may refer the matter to a sole expert for final determination pursuant to Article 33 provided that the Contractor may in case of any disagreement on the issue of joint development or the proposed

joint development plan or within sixty 60 days of determination by a sole expert notify the Management Committee that it elects to surrender its rights in the New Discovery Area in lieu of participation in a joint development.10.4 If a proposed joint development plan is agreed and adopted by the parties or adopted following determination by the sole expert the plan as finally adopted shall be the approved joint development plan and the Contractor shall comply with the terms of the Development Plan as if the Commercial Discovery is established.10.5 The provisions of Articles 10.1 10.2 10.3 and 10.4 shall apply MUTATIS MUTANDIS to a New Discovery of a Reservoir located partly within the Contract Area which although not equivalent to a Commercial Discovery if developed alone 28 would be a Commercial Discovery if developed together with that part of the Reservoir which extends outside the Contract Area to areas subject to contract or given on licenselease for Petroleum Operations by other parties.10.6 If a New Discovery is situated partly within the Contract Area and partly outside the Contract Area the area outside the Contract Area over which at the time of the making of the New Discovery by the Contractor no production sharing contract similar to this Contract has been granted or is under negotiation andor no licenselease to conduct petroleum operations has been granted the Government will favourably consider the extension of the Contract Area to include the entire area of the Reservoir if so requested by the Contractor. 29 ARTICLE 11 MEASUREMENT OF PETROLEUM11.1 The volume and quality of Petroleum produced and saved from a Field shall be measured by methods and appliances generally accepted and customarily used in generally accepted international petroleum industry practice.11.2 The Government may at all reasonable times inspect and test the appliances used for measuring the volume and determining the quality of Petroleum provided that any such inspection or testing shall be carried out in such a manner so as not to unduly interfere with Petroleum Operations.11.3 Before commencement of production in a Field except for the Fields which are producing as of the Effective Date the Parties shall mutually agree on a methods to be employed to optimize the measurement of volumes of Petroleum; b the point at which Petroleum shall be measured and the respective shares allocated to the Parties in accordance with the terms of this

Contract; c the frequency of inspections and testing of measurement appliances and relevant procedures relating thereto; and d the consequences of a determination of an error in measurement.

In the case of existing Fields this Article 11.3 shall be given force as soon as practicable after the Effective Date but in any case not later than one hundred eighty 180 days after the Effective Date.

11.4 The Contractor shall undertake to measure the volume and quality of the Petroleum produced and saved from a Field at the agreed measurement point consistent with generally accepted practices in the international petroleum industry. The Contractor shall not make any alteration in the agreed method or procedures for measurement or to any of the approved appliances used for the purpose without the written consent of the Government.

11.5 The Contractor shall give the Government timely notice of its intention to conduct calibration operations or any agreed alteration for such operations and the Government shall have the right to be present and observe either directly or through authorized representatives such operations.

30 ARTICLE 12 PROTECTION OF THE ENVIRONMENT

12.1 The Government and the Contractor recognise that Petroleum Operations will cause some impact on the environment in the Contract Area. Accordingly in performance of the Contract the Contractor shall conduct its Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation of natural resources. In the furtherance of any laws regulations and rules promulgated by the Government the

Contractor shall employ generally accepted industrial standards including as required advanced techniques practices and methods of operation for the prevention of Environmental Damage in

conducting its Petroleum Operations; b take necessary and adequate steps to prevent Environmental Damage and where some adverse impact on the environment is unavoidable to

minimize such damage and the consequential effects thereof on property and people; and c adhere to the guidelines limitations or restrictions if any imposed by Environmental Clearance as applicable

on the Effective Date and as such Environmental Clearance may be revised expanded or replaced as a result of Contractors applications duly submitted after the Effective Date.

12.2 If the Contractor fails to substantially comply with the provisions of Article 12.1 or materially contravenes any relevant

law and such failure or contravention results in substantial Environmental Damage the Contractor shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof.

12.3 If the Government has on reasonable grounds reason to believe that any works or installations erected by the Contractor or any operations conducted by the Contractor are endangering or may endanger persons or any property of any person or are causing avoidable pollution or are harming fauna and flora or the environment to a degree which is unlawful the Government may pursuant to applicable law require the Contractor to take remedial measures within such reasonable period as may be determined by the Government and if appropriate repair such damage. The Government may pursuant to applicable law require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such action.

12.4 The Contractor shall within one hundred twenty 120 days of the Effective Date cause a person or persons with special knowledge on environmental matters approved by the 31 Government to carry out an environmental impact study in order a to determine at the time of the study the prevailing situation relating to the environment human beings and local communities the wildlife and marine life in the Contract Area and in the adjoining or neighbouring areas; and b to establish the likely effect on the environment human beings and local communities the wildlife and marine life in the Contract Area and in the adjoining or neighbouring areas in consequence of the relevant phase of Petroleum Operations to be conducted under this Contract.

12.5 The Contractor shall ensure that a Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with good international petroleum industry practice and that such Petroleum Operations are properly monitored; b the pertinent completed environmental impact studies are made available to its employees and to its Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and c the contracts entered into between the Contractor and its Subcontractors relating to its Petroleum Operations shall include the provisions stipulated herein and any established measures and methods for the implementation of the Contractors obligations in relation to the environment under

this Contract.12.6 The Contractor shall prior to conducting any drilling activities prepare and submit for review by the Government contingency plans for dealing with oil spills fires acents and emergencies designed to achieve rapid and effective emergency response. The plans referred to above shall be discussed with the Government and concerns expressed shall be taken into account.

12.6.1 In the event of an emergency acent oil spill or fire arising from Petroleum Operations affecting the environment the Contractor shall forthwith notify the Government and shall promptly implement the relevant contingency plan and perform such Site Restoration as may be necessary. 12.6.2 In the

event of any other emergency or acent arising from the Petroleum Operations affecting 32 the environment the Contractor shall take such action as may be prudent and necessary in accordance

with good international petroleum industry practice in such circumstances.12.7 In the event that the

Contractor fails to take necessary action to comply with any of the terms contained in Article 12.5 and Article 12.6 within a reasonable period specified by the Government the Government after

giving the Contractor reasonable notice in the circumstances may take any action which may be necessary to ensure compliance with such terms and recover from the Contractor immediately after

having taken such action all costs and expenditures incurred in connection with such action together with such interest as may be determined in accordance with Section 1.7 of Appendix C of this

Contract.12.8 Contractor shall notify the Government upon determination by it that the estimated remaining recoverable reserves of any Field net of operating costs equal two and onehalf 2 12 times

the estimated abandonment cost whereupon the Government shall within sixty 60 days take control of the Field and the abandonment obligation or failing which the Contractor may then proceed to

recover the abandonment cost from the remaining production and abandon such Field.12.9 Any and all costs incurred by Contractor pursuant to this Article shall be cost recoverable including but not

limited to sinking funds established for abandonment.12.10 The responsibility of the Contractor for the environment hereunder shall be limited to damage to the environment which a occurs after the

date of the environmental impact assessment EIA made to establish the benchmark condition. The EIA will be conducted as soon after the Effective Date as is reasonably possible; b results from an

act or omission of Contractor in violation of existing law; and c notwithstanding the above Contractor shall be responsible for any damage to the environment because of any evidence of Oil spill blowout fire etc. during the course of Joint Operations from the Effective Date.

33 ARTICLE 13 RECOVERY OF COSTS

13.1 The Contractor shall be entitled to recover Contract Costs out of the total volume of Petroleum produced and saved from the Contract Area in each Financial Year in accordance with the provisions of this Article and in respect of sole risk or exclusive operations Article VII of the Operating Agreement.

13.1.1 Development Costs incurred by the Contractor in the Contract Area shall be aggregated and the Contractor shall be entitled to recover out of Cost Petroleum the aggregate of such Development Costs at the rate of one hundred percent 100 per annum provided however that subject to the remaining provisions of this Article 13.1 the Contractor shall not for the purposes only of determining the volume of Petroleum to which Contractor shall be entitled under Article 13.1 as Cost Petroleum claim as Contract Costs Contractors Development Costs incurred after the Effective Date in connection with Development Operations under the Development Plan for Panna and Mukta Fields as those Fields are determined in the Development Plan first approved by the Management Committee which exceed Contractors Cost Recovery Limit as hereinafter defined.

13.1.2 For the purposes of this Article 13.1 Contractors Cost Recovery Limit means costs incurred after the Effective Date relating to the construction and/or establishment of such facilities as are necessary to produce process store and transport Petroleum from within the Existing Discoveries in order to enable Oil production of thirtyeight thousand three hundred barrels per day 38300 BOPD in accordance with the Development Plan for the Panna and Mukta Fields. Such costs shall include costs incurred in relation to those items illustrated in Appendix G and matters in connection therewith. Appendix G Annex G1 further describes Companies development concept based on an assumed project start date of 1st July 1993 and Parties understand and agree that the schedules and activities contained in such assessment shall be revised subject to Management Committee approval by the Contractor in Contractors Development Plan first submitted pursuant to this Contract. The Parties agree that for the purposes of this Article 13.1 the Contractors Cost Recovery

Limit shall be the sum of Five Hundred Seventyseven Million Five Hundred Thousand U.S. Dollars US\$775,000,000. 34 13.1.3 The Parties acknowledge that the amount representing Contractors Cost Recovery Limit has been agreed by Contractor on the basis of the following assumptions and/or factors and/or information a Included in calculations for the Cost Recovery Limit are costs relating to Gas compression offshore required for delivering Gas into ONGCs pipeline; excluded from the Cost Recovery Limit are Site Restoration and exploration or appraisal drilling; b the Cost Recovery Limit does not include any costs for the development of any satellite Fields; c the Contractor being able to obtain all necessary approvals including Government and state government approvals to enable Contractor to carry out the Development Operations contemplated by the Development Plan for the Panna and Mukta Fields in accordance with the timing set out in such plan; d the data relating to the Contract Area provided by ONGC from time to time prior to the Effective Date inclusive of the data package pertaining to the Contract Area prepared by ONGC and made available for inspection and purchase by the Companies pursuant to the Governments Notice Inviting Offers for Joint Ventures to Develop Medium Sized Oil and Gas Field in India 1992; e international market conditions relating to the availability and cost of materials and services in the international petroleum industry in constant 1993 United States Dollars; f the range of physical reservoir characteristics in respect of the Oil and Gas Fields comprising the Existing Discoveries not being materially different from the ranges for such characteristics as revealed in the data referred to in Article 13.1.3d on which Companies based their assessment as described in Annex G1 to Appendix G; g with regard to onshore facilities not included in the Cost Recovery Limit as per Articles 13.1.3a and 13.1.4a ONGC and Companies will determine a fee/terms and 35 conditions for the referenced facilities which fee shall be determined by an internationally recognized expert in the field who shall be selected by two members of the Operating Committee from a group of three internationally recognized experts selected by ONGC and the cost of the facilities shall be cost recoverable and not subject to the Cost Recovery Limit; and h no capital investment of a material nature is required on the Equipment contained in Appendix F. 13.1.4 Having regard inter alia to the matters referred to in Article 13.1.3

the Parties agree as follows a Included in calculations for the Cost Recovery Limit are costs relating to Gas compression offshore required for delivering Gas into ONGCs pipeline system; excluded from the Cost Recovery Limit are water injection; Site Restoration and exploration or appraisal drilling and capital investment if any of a material nature on the Equipment contained in Exhibit F shall not be subject to the Cost Recovery Limit; b the costs of developing the reserves and/or potential reserves and/or satellite Fields referred to in Article 13.1.3b shall not be subject to the Cost Recovery Limit notwithstanding that the development within the Contract Area of such reserves and/or potential reserves and/or satellite Fields may include shared flowlines injection lines Gaslift lines and other facilities with those constructed as part of the Development Plan for the Panna and Mukta Fields; c in the event that the Contractors Cost Recovery Limit is exceeded as a result of i delays in carrying out the Development Operations referred to in Article 13.1.3c due to a delay in obtaining any necessary approval; ii material changes to the Development Plan for the Panna and Mukta Fields 36 necessitated by Contractors review of data provided if any to the Companies by the Government and/or ONGC after the Effective Date where the Companies are able to establish that had such data been available prior to the Effective Date then the Companies acting reasonably would have included such changes in the Development Plan for the Panna and Mukta Fields; iii a material change to the international market conditions referred to in Article 13.1.3e; iv a variation to the Development Plan for the Panna and Mukta Fields approved by the Management Committee; or v an event of force majeure as provided in Article 31; vi capital investments of a material nature reasonably required as at the Effective Date on the Equipment shown in Appendix F; then the Management Committee shall at the request of the Operator in a meeting convened under Article 5.8 promptly consider what if any increase should be made to the Contractors Cost Recovery Limit to fairly reflect the circumstances in question PROVIDED THAT in the case of delays referred to in Article 13.1.3c the Management Committee shall not be obligated to consider any increase where and to the extent that such delay has been caused by the Companies failure to act in a diligent manner. 13.1.5 In the event that a there is any dispute between the Parties whether or to what

extent a circumstance referred to in Article 13.1.4c has arisen or resulted in the Contractors Cost Recovery Limit being exceeded; or b the Management Committee is unable to agree whether an increase should be made to the Contractors Cost Recovery Limit or is unable to agree on the amount of any such increase; 37 then at any time after thirty 30 days from the date of the Management Committee meeting referred to in Article 13.1.4c any Party shall be at liberty to refer the matter to arbitration in accordance with the provisions of Article 33.

13.1.6 Costs incurred by the Companies prior to the Effective Date hereof which have been approved by the Government in writing shall be cost recoverable for purposes hereof after approval of the Management Committee.

13.2 Exploration Costs if any incurred by the Contractor in respect of the Contract Area up to the date of Commercial Production of Petroleum from the Contract Area shall be aggregated and the Contractor shall be entitled to recover the aggregate of such Exploration Costs out of the Cost Petroleum from the Contract Area at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date of such Commercial Production.

13.3 The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Exploration Costs which it has incurred in that Contract Area in any Financial Year after the date of Commercial Production from the Contract Area at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date such Exploration Costs are incurred.

13.4 The Contractor shall be entitled to recover Exploration Costs as provided in Articles 13.2 and 13.3 in relation to the values of the quantity of Petroleum produced saved and sold from the Contract Area in the relevant year provided that such Exploration Costs once recovered shall not be allowable for recovery against any other contract area.

13.5 Development Costs incurred by the Contractor in the Contract Area up to the date of Commercial Production from the Contract Area shall be aggregated and the Contractor shall be entitled to recover out of the Cost Petroleum from that Contract Area the aggregate of such Development Costs at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date of such Commercial Production from the Contract Area.

13.6 The Contractor shall be entitled to recover out of the Cost Petroleum produced from the Contract Area the

Development Costs which it has incurred on such Contract Area after the date of Commercial Production from the Contract Area at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date such Development Costs are incurred.13.7 The Contractor shall be entitled to recover in full during any Financial Year the Production Costs incurred in the 38 Contract Area out of the Cost Petroleum.13.8 If during any Financial Year the Cost Petroleum is not sufficient to enable the Contractor to recover in full the Contract Costs due for recovery in that Financial Year in accordance with the provisions of Articles 13.1 through 13.7 then subject to the provisions of Article 13.1 a recovery shall first be made of the Production Costs; and b recovery shall next be made of the Exploration Costs; and c recovery shall then be made of the Development Costs. The unrecovered portions of Contract Costs shall be carried forward to the following Financial Year and the Contractor shall be entitled to recover such Costs in such Financial Year or the subsequent Financial Years as if such costs were due for recovery in that Financial Year or the succeeding Financial Years until the unrecovered costs have been fully recovered out of Cost Petroleum from the Contract Area.13.9 For the purposes of this Article as well as Article 14 costs receipts and income shall be converted into production unit equivalents and vice versa using the relevant prices established pursuant to Article 19 for Crude Oil and Article 21 for Natural Gas.13.10 Pending completion of the calculations required to establish definitively the Contractors entitlement to Cost Petroleum from the Contract Area in any Financial Year the Contractor shall take delivery provisionally of volumes of Crude Oil and/or Natural Gas representing its estimated Cost Petroleum entitlement calculated with reference to estimated production quantities costs and prices for the Contract Area as established by the Contractor and approved by the Management Committee. Such provisional determination of Cost Petroleum shall be made every quarter on a cumulative basis. Within sixty days of the end of each Financial Year a final calculation of the Contractors entitlement to Cost Petroleum based on actual production quantities costs and prices for the entire Financial Year shall be undertaken and any necessary adjustments to the Cost Petroleum entitlement shall be agreed upon between the Government and the Contractor and made as soon as practicable

thereafter.13.11 Nothing herein contained shall provide for the recovery of costs by ONGC which were incurred prior to the Effective Date. 39 ARTICLE 14 PRODUCTION SHARING OF PETROLEUM BETWEEN CONTRACTOR AND GOVERNMENT14.1 The Contractor and the Government shall share in the Profit Petroleum from the Contract Area in accordance with the provisions of this Article. The share of Profit Petroleum in any Financial Year shall be calculated for the Contract Area on the basis of the Investment Multiple actually achieved by the Companies at the end of the preceding Financial Year for the Contract Area as provided in Appendix D.14.2 Profit Petroleum 14.2.1 When the Investment Multiple of the Companies at the end of any Financial Year is less than two 2.0 the Government shall be entitled to take and receive five percent 5 and the Contractor shall be entitled to take and receive ninetyfive percent 95 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Financial Year. 14.2.2 When the Investment Multiple of the Companies at the end of any Financial Year in respect of any Contract Area is equal to or more than two 2.0 but is less than two and onehalf 2.5 the Government shall be entitled to take and receive fifteen percent 15 and the Contractor shall be entitled to take and receive eightyfive percent 85 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Financial Year. 14.2.3 When the Investment Multiple of the Companies at the end of any Financial Year in respect of the Contract Area is equal to or more than two and onehalf 2.5 but is less than three 3.0 the Government shall be entitled to take and receive twentyfive percent 25 and the Contractor shall be entitled to take and receive seventy five percent 75 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Financial Year. 14.2.4 When the Investment Multiple of the Companies at the end of any Financial Year in respect of the Contract Area is equal to or more than three 3.0 but is less than three and onehalf 3.5 the Government shall be entitled to take and receive forty percent 40 and the Contractor shall be entitled to take and receive sixty percent 60 of the total Profit Petroleum from the Contract Area with effect from the start of 40 the succeeding Financial Year. 14.2.4 When the Investment Multiple of the Companies at the end of any Financial Year in respect of the Contract Area is equal to or more than

three and onehalf 3.5 the Government shall be entitled to take and receive fifty percent 50 and the Contractor shall be entitled to take and receive fifty percent 50 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Financial Year.14.3 The value of the Companies Investment Multiple at the end of any Financial Year in respect of the Contract Area shall be calculated in the manner provided for and on the basis of net cash flows specified in Appendix D to this Contract. However the volume of Profit Petroleum to be shared between the Government and the Contractor shall be determined for each quarter on a cumulative basis. As regards the period from the Effective Date through the end of the first full Financial Year in view of the vagaries of shortterm financial records and to assure equitable calculation of the Investment Multiple based on reasonable historical records the Investment Multiple calculated at the end of the first full Financial Year shall be applied retroactively to the Effective Date and until the actual value can be determined the provisional Investment Multiple for that period shall be calculated on the basis of Contractors estimate of revenues and expenditures as provided in the Development Plan. Pending finalization of accounts delivery of Profit Petroleum shall be taken by the Government and the Contractor on the basis of provisional estimated figures of Contract Costs production prices receipts income and any other income or allowable deductions and on the basis of the value of the Investment Multiple achieved at the end of the preceding Financial Year. All such provisional estimates shall be finally approved by the Management Committee but are deemed valid until such time as the Management Committee reaches a decision or a decision is rendered under Article 33. When it is necessary to convert monetary units into physical units of production equivalents or vice versa the price or prices determined pursuant to Articles 19 and 21 for Crude Oil and Natural Gas respectively shall be used. Within sixty 60 days of the end of each Financial Year a final calculation of Profit Petroleum based on actual costs quantities prices and income for the entire Financial Year shall be undertaken and any necessary adjustments to the sharing of Profit Petroleum shall be agreed upon between the Government and the Contractor and made as soon as is practicable thereafter.14.4 The Profit Petroleum due to the Contractor in any Financial Year from the Contract

Area shall be divided between the Parties constituting the Contractor in proportion to their 41 respective Participating Interests. 42 ARTICLE 15 TAXES ROYALTIES RENTALS ETC.15.1 The Companies and the operations under this Contract shall be subject to all fiscal legislation in India except where pursuant to any authority granted under any applicable law they are exempt wholly or partly from the application of the provisions of a particular law or as otherwise provided herein.15.2.1 For the purpose of computing profits or gains of the business consisting of and prospecting for or extraction or production of Petroleum there shall be made in lieu of the allowances admissible under the Income Tax Act 1961 such allowances as are specified in this Agreement pursuant to Section 42 in relation to a expenditure by way of infructuous or abortive exploration expenses in respect of any area surrendered prior to the beginning of Commercial Production; and b after the beginning of commercial production to expenditure incurred whether before or after such Commercial Production in respect of drilling or exploration activities or services or in respect of physical assets used in that connection.15.2.2 Payments made by the Companies pursuant to Article 16 shall be deductible for income tax purpose in the year in which payment is made by the Companies as permissible under Section 42 of the Income Tax Act 1961.15.3.1 In respect of matters not covered above deduction shall be allowed in accordance with other provisions of Income Tax Act 1961 and the rules framed thereunder.15.3.2 The revenue from the Business consisting of Petroleum Operations shall be determined in accordance with Article 19 for its Participating Interest share of Crude Oil saved and sold or otherwise disposed of from each Field and from any revenue realized on the sale of ANG or NANG referred to in Article 21 as well as any other gains or receipts from Petroleum Operations as reduced by the deductions as specified within this Article and except as herein provided all the provisions of the Income Tax Act 1961 shall apply. 4315.4 The following terms used in Section 42 of the Income Tax Act 1961 and Articles 15.2 and 15.3 shall have the meanings corresponding to the terms used in this Contract and defined in Article 1 as follows a Previous Year means the year as defined in Section 234 of the Income Tax Act 1961. b The other terms used herein and not defined in the Income Tax Act 1961 shall have the meaning therein ascribed in Article 1.15.5 Except for

income tax as otherwise provided in this Article the Government covenants to the Companies that the Companies shall not be liable to the Government for payment of a any taxes calculated by reference to income from or sale of Petroleum; or b any customs or excise duties export duties or any other statutory charge on the import or reexport of machinery plant equipment materials or supplies imported by or on behalf of Contractor or its subcontractors solely and exclusively for use in Petroleum Operations. Any such payment if the Companies are made liable shall be reimbursed by the Government.

15.6.1 The constituents of the Contractor shall be liable to pay royalties and cess on their Participating Interest share of Crude Oil and Natural Gas saved and sold in accordance with the provisions of this Agreement. The royalty on Oil saved and sold will be paid at Rs. 481 per metric ton and cess on Oil saved and sold will be paid at Rs. 900 per metric ton. Royalty on Gas saved and sold will be paid at ten percent 10 of the value at wellhead. No cess shall be payable on Gas or Condensate or other Natural Gas liquids produced in association with Gas. Royalty and cess shall not exceed the herein above amounts throughout the term of the Contract. Royalty and cess shall be payable in Indian Rupees. Any such additional payment shall be made by the Government.

15.6.2 All payments except income tax made by Contractor or its constituents as applicable under appropriate law including but not limited to taxes whether levied by the Central Government or state government or any other local or statutory authority royalties cess levies duties rentals lease rent license fees export duties 44 countervailing duties provision for sinking fund for environmental or abandonment costs or any other charges whatsoever directly attributable to Petroleum Operations shall be cost recoverable.

15.7 If any change in or to any Indian law rule or regulation by any authority dealing with income tax or other corporate tax exportimport tax customs duty or tax imposed upon Petroleum or dependent on the value of Petroleum including Royalty and cess results in a material change to the economic benefits accruing to any of the Parties to this Contract after the Effective Date the Parties shall consult promptly to make necessary revisions and adjustments to the Contract in order to maintain such expected benefits to each of the Parties.

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ARTICLE 16 PAYMENT16.1 The Companies shall pay to ONGC in consideration of the right to

commence and carry out exploration and drilling activities in the Contract Area pursuant to and in accordance with the Notice Inviting Offers for Joint Ventures to Develop Medium Size Oil and Gas Fields in India 1992 and the bid submitted in response thereto as follows a within two 2 days following the Effective Date excluding days on which the banks in India or the United States are closed Three Million Six Hundred Thousand United States Dollars US3600000. EOGIL shall pay One Million Eight Hundred Thousand United States Dollars US1800000 and RIL shall pay One Million Eight Hundred Thousand United States Dollars US1800000. ONGCs bank wire transfer instructions are as follows ACCOUNT NUMBER 01 00000 3054 OIL NATURAL GAS CORPORATION LIMITED STATE BANK OF INDIA OVERSEAS BRANCH VIJAYA BUILDING BARAKHAMBA ROAD NEW DELHI INDIA 110 001 b When and if the hereinafter set forth production quantities are reached the Companies will within fifteen 15 days following such attainment pay ONGC in accordance with the following schedule i Another Six Million United States Dollars US6000000 after achieving a cumulative production of fifty million barrels of Oil; ii Another Nine Million United States Dollars US9000000 after achieving a cumulative production of one hundred million barrels of Oil; and iii Another Fifteen Million United States Dollars US15000000 after achieving a cumulative production of two hundred million barrels of Oil.16.2 Cumulative production shall for purposes of this Article mean Oil produced.16.3 Each Company shall pay its share of the payment in the proportion that it received Petroleum. 46 ARTICLE 17 CUSTOMS DUTIES17.1 Machinery plant equipment materials and supplies imported by a Contractor or its Subcontractors for use in Petroleum Operations shall be exempted from customs duties subject to compliance with procedures if any as may be determined pursuant to applicable customs duty legislation Article 23 and the terms herein specified.17.2 Contractor shall from time to time and as required submit to the Government a list of Subcontractors who are engaged by it for the purpose of obtaining the various categories of items pursuant to the conduct of Petroleum Operations and who may claim exemptions hereunder.17.3 In order to qualify for the exemption from customs duties as provided for in Article 17.1 all imported items for which duty exemption is being claimed shall be certified by a

representative of the Contractor to be imported under the terms of this Contract for use in carrying out Petroleum Operations and shall be certified by a representative of the Government to be eligible for such exemption pursuant to the terms of the Contract. In order to expedite such exemption Contractor may submit a certified list of qualified items up to sixty 60 days in advance of anticipated import.17.4 The Government shall have the right to inspect the records and documents of the physical item or items for which an exemption is or has been provided under Article 17.1 to determine that such item or items are being or have been imported for the purpose for which the exemption was granted. The Government shall also be entitled to inspect such physical items wherever located to ensure that such items are being used or held for the purpose herein specified and any item not being so used shall immediately become subject to payment of the applicable customs duties.17.5 Subject to Article 27 the Contractor and its Subcontractors may sell or otherwise transfer in India or sell for export all imported items which are no longer required for Petroleum Operations subject to applicable laws governing customs duties and sale or disposal of such items. 47 ARTICLE 18 DOMESTIC SUPPLY SALE DISPOSAL AND EXPORT OF CRUDE OIL18.1 Until such time as the total availability to the Government and government companies of Crude Oil from all Petroleum production activities in India meets the total national demand as determined by the Government each constituent of the Contractor shall be required to offer to the Government or its nominee all of the Contractors entitlement to Crude Oil from each Field in order to assist in satisfying the national demand provided however that nothing contained in any contract entered into by the Contractor for the supply sale or disposal of Petroleum with any nominee of the Government pursuant to this Contract shall in any manner abrogate the obligation of the Government contained herein.18.2 Pursuant to Article 18.1 and subject to Articles 18.4 and 18.6 each constituent of Contractor shall offer to sell to the Government or its nominee its total Participating Interest share of Crude Oil to which it is entitled under Articles 13 and 14 at the price determined in accordance with Article 19 for sales to Government and the Government shall have the option to purchase the whole or any portion thereof at the said price.18.3 The aforementioned

offer shall be made by each constituent of Contractor in writing at least six 6 months preceding the Financial Year in which the sale is to be made specifying the estimated quantities and grade of Crude Oil being offered based upon estimates which shall be adjusted within ninety 90 days of the end of each Financial Year on the basis of actual quantities produced and saved. The Government shall exercise its option to purchase in writing not later than ninety days 90 preceding the Financial Year in respect of which the sale is to be made specifying the quantity and grade of Crude Oil which it elects to take in the ensuing year. Failure by the Government to give such notice within the period specified shall be conclusively deemed an election to take all of the Crude Oil offered adjusted as provided herein in the ensuing Financial Year. Notwithstanding the above during the first six 6 months commencing with the Effective Date of this Contract notices cited in Article 18.3 shall be given as soon as practicable and are deemed to satisfy the notice obligations of this Article 18.3.

18.4 If during any Financial Year India attains SelfSufficiency the Government shall promptly thereafter but in no event later than the end of that Financial Year so advise the Contractor by written notice. In such event as from the end of the first quarter of the following Financial Year or such earlier date as the Parties may 48 mutually agree Governments option to purchase shall be suspended and each constituent of Contractor shall have the right to lift and export their Participating Interest share of Crude Oil until such time if any as SelfSufficiency shall have ceased to exist. If SelfSufficiency ceases to exist during a Financial Year the Government shall recover its option to purchase under Article 18.2 in respect of the following Financial Year by giving notice thereof to the Contractor as provided in Article 18.3.

18.5 All payments in respect of sales to the Government pursuant to provisions of this Article 18 shall be made by the Government within the period for credit applicable in the calculation of the price pursuant to Article 19. If no time frame for credit is applicable in such calculation payment shall be made within forty five 45 days from the date the invoice is delivered to the Government. Contractor shall submit a monthly invoice to the Government for the quantity of Crude Oil delivered. Payment shall be made in United States Dollars by bank wire to the credit of the Foreign Companys designated account with a bank within or

outside India. All amounts unpaid by the Government by the due date shall from the due date bear interest calculated on a daytoday basis at the LIBOR plus one percentage 1 point from the due date compounded daily until paid.18.6 If full payment is not received by Contractor when due as provided in Article 18.5 the Contractor shall at any time thereafter notify the Government of the default and unless such default is remedied within fifteen 15 days from the date of the notice the Contractor shall have the right unless otherwise agreed upon written notice to the Government and without prejudice to the Contractors right to recover all costs charges expenses and losses incurred by the Contractor a to suspend the Governments option to purchase under Article 18.2 and transport the Petroleum to any onshore facility and sell as each constituent of Contractor may in its absolute discretion deem fit; b without prejudice to the foregoing to freely lift sell and export all its Participating Interest share of Crude Oil subject to the destination restrictions specified in Article 18.7 until the Government has paid the due amount plus interest as provided herein; c if the payment plus interest is not received by the Contractor within one hundred and eighty 180 days from the date the payment was due to receive and export the Governments share of Profit Oil until such time as either Government has paid all amounts due plus interest or the value based on the price as deter mined in accordance with Article 19 of Governments share of Profit Oil so sold is equal to all amounts due 49 plus interest whichever first occurs; provided however that if the Government makes a payment to the Contractor after the Contractor has commenced sale of Governments share of Profit Oil and such payment together with the value of Governments share of Profit Oil sold based on the price determined in accordance with Article 19 exceeds the amount due plus interest necessary adjustment shall be carried out to refund to the Government forthwith the excess amount received by the Contractor.18.7 The Contractor shall be entitled to freely lift sell and export any Crude Oil which the Government is unable to take or has elected not to purchase pursuant to this Article 18 subject to Governments generally applicable destination restrictions to countries with which the Government for policy reasons has severed or restricted trade.18.8 No later than sixty 60 days prior to the commencement of production in a Field or Fields where production is

from more than one Field and thereafter no less than sixty 60 days before the commencement of each Financial Year the Contractor shall cause to be prepared and submitted to the Parties a production forecast setting out the total quantity of Crude Oil that it estimates can be produced from a Field during the succeeding year based on the maximum efficient rate of recovery of Crude Oil from that Field in accordance with good petroleum industry practice. No later than thirty 30 days prior to the commencement of each Calendar Quarter the Contractor shall advise its estimate of production for the succeeding Calendar Quarter and shall endeavour to produce the forecast quantity for each Calendar Quarter. Notwithstanding the above during the first six 6 months commencing with the Effective Date of this Contract notices cited in Article 18.8 shall be given as soon as practicable and are deemed to satisfy the notice obligations of this Article 18.8.

18.9 Each Party comprising the Contractor shall throughout the term of this Contract have the right to separately take in kind and dispose of all its share of Cost Petroleum and Profit Petroleum and shall have the obligation to lift the Cost Petroleum and Profit Petroleum on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Parties.

18.10 The Government shall throughout the term of this Contract have the right to separately take in kind and dispose of its share of Profit Petroleum and of such portion of the Contractors share of Petroleum as is purchased by the Government pursuant to Article 18 subject to Article 18.6 and shall have the obligation to lift all of the Oil on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Parties. Subject to Force Majeure any Party with an obligation to lift Oil and failing to do so shall compensate the other Parties for any loss of revenue due to such failure and will at its own cost and risk be liable for all inent expenses including demurrage if any.

18.11 For the purpose of implementing the provisions of Articles 18.9 and 18.10 a Crude Oil lifting procedure shall be agreed upon by the Parties as soon as practicable but no later than two 2 months after the Effective Date of this Contract. Such lifting procedure shall include but not necessarily be limited to a a procedure for notification by the Operator to the Government and to each Party comprising the Contractor of projected Crude Oil production; b a

procedure for notification by the Government and by each Party comprising the Contractor to the Operator of its expected offtake and the consequences of inability or failure to offtake. 51 ARTICLE 19 VALUATION OF OIL

19.1 For the purpose of this Contract the value of Crude Oil shall be based on the price determined as provided herein.

19.2 A price for Crude Oil shall be determined for each Calendar Month or such other period as the Parties may agree hereinafter referred to as the Delivery Period in terms of United States Dollars per Barrel FOB Delivery Point for Crude Oil produced and sold or otherwise disposed of from each Contract Area for each Delivery Period in accordance with the appropriate basis for that type of sale or disposal specified below.

19.3 In the event that some or all of Contractors total sales of Crude Oil during a Delivery Period are made to third parties in Arms Length Sales all sales so made shall be valued at the weighted average of the prices actually received by Contractor calculated by dividing the total receipts from all such sales FOB the Delivery Point by the total number of Barrels of the Crude Oil sold in such sales.

19.3.1 In the event that a portion of such third party Arms Length Sales are made on a basis other than an FOB basis as herein specified the portion shall be valued at the prices equivalent to the prices FOB the Delivery point for such sales determined by deducting all costs such as transportation demurrage loss of Crude Oil in transit and similar costs incurred downstream of the Delivery Point and the prices so determined shall be deemed to be the actual prices received for the purpose of calculation of the weighted average of the prices for all third party Arms Length Sales for the Delivery Period.

19.3.2 Each constituent of Contractor shall separately submit to the Government within fifteen 15 days of the end of each Delivery Period a report containing the actual prices obtained in their respective Arms Length Sales to third parties of any Crude Oil. Such reports shall distinguish between term sales and spot sales and itemize volumes customers prices received and credit terms and the constituent of the Contractor shall allow the Government to examine the relevant sales contracts.

19.4 In the event that some or all of a constituent of Contractors total sales of Crude Oil during a Calendar Month are made to the Government the price of all sales so made shall unless otherwise agreed between the Parties be determined on the basis of either the FOB

selling price per Barrel of one or more crude oils which at the time of 52 calculation are being freely and actively traded in the international market and are similar in characteristics and quality to the Crude Oil and/or Condensate in respect of which the price is being determined such FOB selling price to be ascertained from Platts Crude Oil Market Wire daily publication Platts or the spot market for the same crude oils ascertained in the same manner whichever price in the opinion of the Parties more truly reflects the current value of such crude oils. For any Calendar Month in which sales take place the price shall be the arithmetic average price per Barrel determined by calculating the average for the preceding Calendar Month of the mean of the high and low FOB or spot prices for each day of the crude oils selected for comparison adjusted for differences in the Crude Oil and the crude oils being compared for quality transportation costs delivery time quantity payment terms the market area into which the Crude Oil is being sold other contract terms to the extent known and other relevant factors. In the event that Platts ceases to be published or is not published for a period of thirty 30 consecutive days the Parties shall agree on an alternative daily publication. 19.4.1 Notwithstanding anything herein otherwise provided the price paid for such sales shall be in any Calendar Month the FOB selling price for a Marker Crude Marker Crude which shall be Brent DTD on a United States Dollar per Barrel basis less US\$0.10 per Barrel. 19.4.2 The Marker Crude price will be based on the previous Calendar Months average of the daily low and high quotations of Marker Crude as published by Platts Market wire. The average is to be calculated up to three 3 decimals to arrive at a United States Dollar per Barrel price which will be applicable for the month of supply. 19.4.3 The Government and/or its nominee shall pay any and all sales tax payable on the sale of Oil to the Government or its nominee. 19.4.4 The Government and/or its nominee shall enter into a Crude Oil sales agreement with the Constituents of the Contractor which shall contain terms and conditions normally contained in international Crude Oil sales agreements of a similar nature. 19.5 In the event that in any Delivery Period some but not all of a constituent of Contractor's sales of Crude Oil from the Contract Area are made to the Government or a Government company and some but not all of a constituent of Contractor's sales of Crude Oil from the Contract Area are 53 made to third

parties in Arms Length Sales and the price as established in accordance with Article 19.4 differs by more than one percent ¹ from the price as determined in accordance with Article 19.3 for the same Delivery Period the Parties shall meet upon notice from any Party to determine if the prices established for the relevant Delivery Period for sales to the Government should be adjusted taking into account third party Arms Length Sales made by a constituent of Contractor of the same or similar Crude Oil from the relevant Field or other fields and published information in respect of other genuine third party Arms Length Sales of the same or similar crude oil for that Delivery Period. Until the matter of an adjustment for the relevant Delivery Period is finally determined the price as established in accordance with this Article will apply for that Delivery Period. Any adjustment if necessary will be made within thirty 30 days from the date the adjustment for that Delivery Period is finally determined.

19.6 A constituent of Contractor shall determine the relevant prices in accordance with this Article and the calculation basis of calculation and the price determined shall be supplied to the Government and shall be subject to agreement by the Government before it is finally determined. Pending final determination the last established price if any for the Crude Oil shall be used.

19.7 In the event that the Parties fail to reach agreement on any matter concerning selection of the crude oils for comparison the calculation the basis of or mechanism for the calculation of the prices the prices arrived at the adjustment of any price or generally about the manner in which the prices are determined according to the provisions of this Article within thirty 30 days or such longer period as may be mutually agreed between the parties from the date of commencement of Commercial Production or the end of each Delivery Period thereafter any Party may refer the matter or matters in issue for final determination by a sole expert appointed as provided in Article 33.

19.7.1 Within ten 10 days of the said appointment the Parties shall provide the expert with all information they deem necessary or as the expert may reasonably require.

19.7.2 Within fifteen 15 days from the date of his appointment the expert shall report to the Parties on the issues referred to him for determination applying the criteria or mechanism set forth herein and indicate his decision thereon to be applicable for the relevant Delivery Period for Crude Oil and such decision shall be accepted

as final and binding by the Parties. 54 19.7.3 Except for the adjustment referred to in Article 19.5 any price or pricing mechanism agreed by the Parties pursuant to the provisions of this Article shall not be changed retroactively.19.8 Any sale or disposal to Affiliates or other sale or disposal of Crude Oil produced from a Field other than to the Government or Government companies or to third parties in Arms Length Sales in any Delivery Period shall be valued on the same basis as sales to the Government or a Government company. In the event of such a sale or disposal by a Company such Company shall submit to the Government within fifteen 15 days of the end of each Delivery Period all relevant information concerning such sales or disposals.19.9 In the event that in any Delivery Period there is more than one type of sales referred to in Articles 19.3 19.4 and 19.8 then for the purpose of calculating Cost Petroleum and Profit Petroleum entitlement pursuant to Articles 13 and 14 a single price per Barrel of Crude Oil for all the sales for the relevant Delivery Period shall be used. Such single price shall be the weighted average of the prices determined for each type of sale weighted by the respective volumes of Crude Oil sold in each type of sale in the relevant Delivery Period.19.10 In this Article the term Government shall include any other agency or nominee of the Government to whom Crude Oil is to be sold.19.11 The provisions specified above for the determination of the price of sales of Crude Oil shall apply mutatis mutandis to Condensates.19.12 The Parties shall meet annually or sooner upon notice served by any Party on the others to review the list of selected Crude Oils or the mechanism established pursuant to this Article 19 in light of any new facts since the date of selection of such Crude Oils or establishment of such mechanism and to determine what adjustment if any should be made to the said selection or mechanism by mutual agreement of the Parties. 55 ARTICLE 20 CURRENCY AND EXCHANGE CONTROL PROVISIONS20.1 Subject to the provisions herein and to compliance with the relevant provisions of the laws of general application in India governing currency and foreign exchange and related administrative instructions and procedures issued thereunder on a nondiscriminatory basis each Foreign Company comprising the Contractor shall during the term of this Contract have the right to a repatriate funds relating to Petroleum Operations abroad in United States Dollars or any other freely

convertible currency acceptable to the Government and the Foreign Company; b receive retain and use abroad the proceeds of any export sales of Petroleum under the contract; c open maintain and operate bank accounts with reputable banks both inside and outside India for the purpose of this Contract; d freely import through normal banking channels funds necessary for carrying out the Petroleum Operations; e convert into foreign exchange and repatriate sums imported pursuant to d above in excess if any of its requirements; and f make payments of interest and principal outside of India for purchases services and loans obtained abroad without the requirement that funds used in making such payments must come from or originate in India. Provided however that repatriation pursuant to subparagraphs a and e and payments pursuant to subparagraph f shall be subject to the provisions of any treaties or bilateral arrangements between the Government and any country with respect to payments to that country.

20.2 The rates of exchange for the purchase and sale of currency by the Contractor shall be the prevailing rates of general application determined by the State Bank of India or such other financial body as may be mutually agreed by the Parties and in accordance with prevailing currency and exchange regulations and for accounting purposes under this Contract these rates shall apply as provided in Section 1.6 of Appendix C.

20.3 Domestic Companies shall be subject to the relevant provisions of the applicable laws in India governing currency and foreign exchange and related administrative instructions and procedures issued thereunder.

56 ARTICLE 21 NATURAL GAS

21.1 Subject to Article 21.2 the Indian domestic market shall have the first call on the utilisation of Natural Gas discovered pursuant to Petroleum Operations and produced from the Contract Area. Accordingly any proposal by the Contractor relating to Discovery and production of Natural Gas from the Contract Area shall be made in the context of the Governments policy for the utilisation of Natural Gas and shall take into account the objectives of the Government to develop its resources in the most efficient manner and to promote conservation measures.

21.2 Contractor shall have the right to use Natural Gas produced from the Contract Area for the purpose of Petroleum Operations including but not limited to reinjection for pressure maintenance in the Oil Fields Gas lifting and power generation.

21.3 For the purpose of

sales to the domestic market pursuant to this Article 21 the Delivery Point shall be the Delivery Point set forth in the Gas sales contract entered into by the Contractor.

21.4 ASSOCIATED NATURAL GAS ANG

21.4.1

In the event that a New Discovery of Crude Oil contains ANG Contractor shall declare in the proposal for the declaration of the New Discovery as a Commercial Discovery as specified in Article 9 whether and by what amount the estimated production of ANG is anticipated to exceed the quantities of ANG which will be used in accordance with Article 21.2 hereinafter referred to as the Excess ANG. In such event the Contractor shall indicate whether on the basis of the available data and information it has reasonable grounds for believing that the Excess ANG could be commercially exploited in accordance with the terms of this Contract along with the Commercial Production of the Crude Oil from the Oil Field and whether the Contractor intends to so exploit the Excess ANG.

21.4.2

Based on the principle of full utilization and minimum flaring of ANG a proposed development plan for an Oil Field or Oil Fields shall to the extent economically reasonable include a plan for utilisation of the ANG from the Existing Discovery and New Discovery including estimated quantities to be flared reinjected and to be used for Petroleum Operations; and if the Contractor proposes to commercially exploit the Excess ANG for sale in the domestic market in accordance with Governments policy or elsewhere the proposed plans for such exploitation. If an Existing Discovery is determined to possess Excess ANG and such Existing Discovery is producing or capable of producing as of the Effective Date of this Contract Contractor is granted the right to flare without penalty or limitation such Excess ANG until Gas transportation facilities if any can be provided for and such right shall be extended to such future time or times as such Gas transportation facilities may become unavailable or their capacity would restrict or limit production of Crude Oil. Government will use its good offices to effect early reduction and/or elimination of such flaring by causing Gas transportation to be made available at reasonable rates if a proposal to that effect is proposed by Contractor or a Company and approved by the Management Committee.

21.4.3

If the Contractor wishes to exploit the Excess ANG whether from an Existing or New Discovery such ANG shall first be offered for sale to the Government or its nominee in writing in

accordance with the terms of this Contract. On receipt of such offer the Government or its nominee shall within three 3 months of the date of receipt thereof notify the Contractor in writing whether or not it wishes to exercise its option to purchase the Excess ANG. 21.4.4 If the Government exercises its option to purchase the Excess ANG as provided in Article 21.4.3 a the Government shall indicate in the notice exercising the option a date within two 2 years of the date of the Contractors offer for commencement of purchase of the Excess ANG; b within six 6 months of the date of notification of the exercise of the Governments option pursuant to Article 21.4.3. the Contractor and the Government or its nominee shall agree on the terms for the sale to Government or its nominee of the Excess ANG. 21.4.5 If the Government does not exercise its option to purchase the Excess ANG the Contractor shall be 58 free to explore markets for the commercial exploitation of the Excess ANG. 21.4.6 Where the Contractor is of the view that Excess ANG cannot be commercially exploited and chooses not to exploit ANG or is unable to find a market for the Excess ANG pursuant to Article 21.4.5 the Government shall be entitled to take and utilise such Excess ANG. 21.4.7 If the Government elects to take the Excess ANG as provided in Article 21.4.6 a the Contractor shall deliver such Excess ANG to the Government or its nominee free of cost at the downstream flange of the GasOil separation facilities; b the Government or its nominee shall bear all costs including gathering treating processing and transporting costs beyond the downstream flange of the GasOil separation facilities; c the delivery of such Excess ANG shall be subject to procedures to be agreed between the Government or its nominee and the Contractor prior to such delivery such procedures to include matters relating to timing of offtake of such Excess ANG which procedures shall not in any way restrict Oil production. 21.4.8 Excess ANG which is not commercially exploited by the Contractor or taken by the Government or its nominee pursuant to this Article 21 shall be returned to the subsurface structure or flared where such flaring is approved in the Development Plan which approval shall not be unreasonably withheld for the relevant Oil Field or where reinjection is uneconomical or inadvisable in accordance with good reservoir engineering practices. 21.4.9 Where the Contractor is of the view that there is economic merit in flaring Gas in the absence of a

Gas transmission system or during such time as the pipeline is inoperable or lacks capacity to take all available Gas Contractor shall have the right to flare Gas. In any such event Contractor shall notify the Management Committee within fortyeight 48 hours to obtain its approval for continuing operations. 59 21.4.10 As soon as practicable after the New Discovery referred to in Article 21.4.1 or the submission to the Government of the proposal for the declaration of the New Discovery as a Commercial Discovery as therein specified the Contractor and the Government or its nominee shall meet to discuss the sale andor disposal of any ANG discovered with a view to giving effect to the provisions of this Article 21 in a timely manner. 21.4.11 Notwithstanding the above during the first six 6 months commencing with the Effective Date of this Contract notices cited in Article 21.4 shall be given as soon as practicable and are deemed to satisfy the notice obligations of this Article 21.4.21.5 NON ASSOCIATED NATURAL GAS NANG 21.5.1 In the event of a New Discovery of NANG the Contractor shall promptly report such New Discovery to the Management Committee and the provisions of Articles 9.1 and 9.2 shall apply. The remaining provisions of Article 9 would apply to the New Discovery and development of NANG only in so far as they are not inconsistent with the provisions of Articles 21.5.1 to 21.5.13. 21.5.2 If pursuant to Article 9.1 the Contractor gives notification that a New Discovery is of potential commercial interest the Contractor shall submit to the Management Committee within one 1 Calendar Year from the date of notification of the above New Discovery the proposed Appraisal Programme including a Work Programme and budget to carry out an adequate and effective appraisal of such New Discovery to determine i without delay whether such New Discovery is a Commercial Discovery and ii with reasonable precision the boundaries of the area to be delineated as a Field. Such programme shall be supported by all relevant data such as Well data Contractors best estimate of reserve range and production potential and shall indicate the date of commencement of the proposed Appraisal Programme. Where in the case of an Existing Discovery Contractor desires to carry out additional appraisal work the Contractor shall submit its proposed Appraisal Programme with a Work Programme and budget to the Management Committee within one hundred twenty 120 days of the Effective Date for approval.

21.5.3 The proposed Appraisal Programme for an Existing Discovery or a New Discovery shall be considered 60 by the Management Committee within sixty 60 days of its submission by the Contractor and the programme together with the Work Programme and budget submitted by the Contractor revised in accordance with any agreed amendments or additions thereto approved by the Management Committee shall be adopted as the Appraisal Programme and the Contractor shall promptly proceed with implementation of such programme. 21.5.4. If on the basis of the results of the Appraisal Programme the Contractor is of the opinion that NANG has been discovered in commercial quantities it shall submit to the Management Committee as soon as practicable but not later than five 5 years from the date of notification of the aforementioned New Discovery a proposal for the declaration of the New Discovery as a Commercial Discovery. Such proposal shall take into account the Governments policies on Gas utilisation and propose alternative options if any for use or consumption of the NANG and be supported by inter alia technical and economic data evaluations interpretations and analyses of such data feasibility studies relating to the New Discovery prepared by or on behalf of the Contractor and other relevant information. 21.5.5 In the case of a New Discovery simultaneously with the Contractors Appraisal Programme Government and the Contractor shall seek to reach an agreement on the development production processing utilisation and sale of the NANG in the context of Article 21.1 within thirtysix 36 months of the date of notification of the Discovery referred to in Article 21.5. If no proposal is submitted to the Management Committee by the Contractor within five 5 years from the date of notification of such New Discovery the Contractor shall relinquish its rights to develop such New Discovery and the area relating to such New Discovery shall be excluded from the Contract Area. 21.5.6 Where the Contractor has submitted a proposal for the declaration of a New Discovery as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilisation of the NANG in the domestic market or elsewhere and in the context of Governments policy on Gas utilisation and the chain of activities required to bring the NANG from the Delivery Point to 61 potential consumers in the domestic market or elsewhere. The Management

Committee may within ninety 90 days request that the Contractor submit any additional information on the New Discovery and the related Appraisal Programme that it may reasonably require to facilitate a decision on whether or not to declare the New Discovery as a Commercial Discovery.

21.5.7 The Management Committee shall make a decision regarding the declaration of a New Discovery as a Commercial Discovery within the latter of a one hundred eighty 180 days of receipt of such proposal; or b one hundred eighty 180 days of receipt of the additional information referred to above.

21.5.8 If the Management Committee with the approval of the Government declares a New Discovery a Commercial Discovery such declaration shall be accompanied by an indication of the probable dates by when the markets would be ready to receive the Gas and an estimate of the quantities of Gas that could be so utilised. The Contractor in such an event shall within One 1

Calendar Year of the declaration of the New Discovery as a Commercial Discovery submit a Development Plan for the development of the Gas Field to the Management Committee for its approval. Such plan shall be supported by all relevant information including inter alia the information required in Article 9.6. In the case of an Existing Discovery Contractor shall within ninety 90 days of

the Effective Date propose a Development Plan following the plan brought out in Appendix G intended to achieve the production profile brought out in Appendix H containing the detailed information required in Article 9.6 with supporting budget and the Management Committee shall

render its decision regarding such proposal within thirty 30 days of such submittal. Where a Development Plan is so agreed it shall be an approved Development Plan pursuant to this Article.

62 21.5.9 If the Development Plan has not been approved by the Management Committee within one hundred and eighty 180 days of its submission the Contractor shall have the right to submit such plan or plans directly to the Government for approval within sixty 60 days of the expiry of the

time provided to the Management Committee to approve the plan or plans. The Government shall respond to the submission within ninety 90 days of receipt thereof. If the Government rejects the Contractors proposed plan or plans the Government shall state in writing the reasons for such rejection and the Contractor shall have the right to resubmit within sixty 60 days of written notice of

such rejection such plan or plans duly amended to meet the Governments objections thereto. Such right of resubmission of each proposed plan or plans shall be exercisable by the Contractor only once. If the Parties are unable to agree any Party shall have the right to submit the matter to arbitration. If no such plan or plans isare submitted to the Government within the aforesaid period the Contractor shall relinquish its right to develop such Gas Field and such Gas Field shall be excluded from the Contract Area. 21.5.10 If the Management Committee is unable to agree on the declaration of a New Discovery as a Commercial Discovery within the time limit prescribed in Article 21.5.7 the Contractor or any of its constituents shall be entitled to submit such proposal directly to the Government for approval. In such event the Contractor or any of its constituents shall also submit a comprehensive plan or plans for development of such New Discovery which shall detail the proposed Development Plan for utilisation of the NANG produced in the domestic market giving inter alia the data specified in Article 21.5.8. The proposal for declaration of the New Discovery as a Commercial Discovery as well as the proposed Development Plan shall be submitted to the Government within one hundred and eighty 180 days of the expiry of the time given to the Management Committee to reach a decision on the proposal for declaration of the New Discovery as a Commercial Discovery and Government shall respond to the said submission within one hundred 63 twenty 120 days of its receipt. If the Government disapproves the proposed plan or plans the Government shall state in writing the reasons for such disapproval and the concerned Parties shall have the right to resubmit within sixty 60 days such plan or plans duly amended to meet the Governments objections thereto. Such right of resubmission of each proposed plan or plans shall be exercisable by the Contractor only once. In the event the Government does not approve such plan or plans any Party shall have the right to submit the matter to arbitration. If no such plan plans is are submitted to the Government within the aforesaid period the Contractor shall relinquish its rights to develop such Gas Field and such Gas Field shall be excluded from the Contract Area. 21.5.11 In the event the Management Committee or Government as the case may be approves the Contractors proposal for declaration of the New Discovery as a Commercial Discovery

and also the comprehensive plan or plans for development of such New Discovery and for the utilisation of NANG produced in the domestic market the Gas Field shall be promptly developed by the Contractor in accordance with the approved plan which shall be the Development Plan for the Field.

21.5.12 In the event the Contractor does not commence development of a New Discovery within ten 10 years from the date of completion of the first Discovery Well the Contractor shall relinquish its rights to develop such New Discovery and the area relating to such New Discovery shall be excluded from the Contract Area.

21.5.13 The price of the ANG and NANG produced from the Oil or Gas Field for use in India shall be specified in the Gas sales contract which shall be in accordance with the provisions of this Article 21.5.13 between the Contractor and the nominee of the Government.

a Unless the context otherwise requires the following words and terms wherever and whenever used or appearing in this 64 Article 21.5.13 shall have the following meaning i British Thermal Unit or BTU means the amount of energy required to raise the temperature of one 1 pound avoirdupois of pure water at sixty degrees 60degree Fahrenheit one degree 1degree Fahrenheit at an absolute pressure of 14.73 pounds per square inch. ii Buyer means the Government of India or as Authority of India Limited GAIL. iii Deliverability means the lesser of the maximum aggregate rate of all wells in the Contract Area or the maximum delivery capacity of the processing facility subject to generally accepted international petroleum industry practices. iv Delivery Point means the upstream well at the underwater connection between Sellers pipeline and ONGCs underwater Gas transmission line or lines which transport Gas from the Bassein Field to the Hazira area. v Maximum Delivery Pressure has the meaning set forth in Article 21.5.13c. vi MMBTU means one million 1000000 BTUs on a net heating value basis. vii Seller means Contractor.

b The Seller agrees to produce and deliver on a daily basis to the Buyer one hundred percent 100 of the Deliverability of ANG and NANG and Condensate delivered therewith at the Delivery Point and the Buyer provided the Gas and Condensate are made available and tendered for delivery by the Seller agrees to take and purchase on a daily basis one hundred percent 100 of the Deliverability of ANG and NANG and Condensate delivered therewith provided however that Seller at Sellers sole discretion subject to

generally accepted operator practices in the international petroleum industry may adjust deliveries to provide for necessary maintenance service and testing. Buyer may request that Seller vary deliveries to accommodate similar circumstances in the 65 Buyers operation and Sellers approval shall not be unreasonably withheld. Communications procedures shall be mutually agreed in the Gas sales contract in accordance with internationally accepted industry standards. c The Gas and Condensate sold hereunder shall be separated into Gas and Condensate at the offshore processing facility measured separately and recombined and delivered at the Delivery Point at the operating pressure of the Buyers owned or contracted pipeline up to a maximum pressure Maximum Delivery Pressure of one thousand 1000 psig. d Subject to the provisions hereof the Buyer shall pay the Seller for each MMBTU of Gas delivered hereunder or for each MMBTU of Gas for which the Buyer is obligated to pay hereunder a price calculated as follows The Base Price Base Price in United States Dollars US per MMBTU is fixed on the basis of ninety-nine percent 99 of a Low Sulfur Fuel Oil Basket LSFO Basket calculated as the average of the daily mean value for low and high prices of fuel oil taking into account equal parts of 1 bulk residual fuel oil containing one percent 1 sulfur quoted for barges at Northwest Europe Barges FOB Rotterdam; and 2 bulk residual fuel oil containing one percent 1 sulfur quoted for Mediterranean basis Italy Cargoes FOB Med basis Italy; and 3 a theoretical blend of residual fuel oil composed of Singapore Cargoes made up of seventy-four percent 74 of LSWRSR 0.3 three-tenths percent 0.3 sulfur and twenty-six percent 26 of HSFO 180 three and one-half percent 3.5 sulfur viscosity 180 centistokes. The Base Price is calculated on the basis of the arithmetic average of the monthly values of the prices of the listed products as published in Platts Oilgram Price Report for the eighteen 18 months of May 1992 through October 1993 inclusive. These values are derived from the mean of the daily 66 ranges on days the postings are published to give a monthly value. For the purpose of this Contract Base Price will be equal to 2.32MMBTU. The price of Gas for each MMBTU for each Calendar Quarter thereafter shall be determined by the following formula $\text{Price} = \text{Base Price} \times \text{AB}$ Where A a value calculated for the HSLSFO Basket defined in this Article 21.5.13 d evaluated for the twelve 12

months preceding the Calendar Quarter using the method for averaging as described for calculating the Base Price and B A value calculated for the HSLSFO Basket evaluate for the twelve 12 months April 1993 through March 1994. The High SulfurLow Sulfur Fuel Oil Basket HSLSFO Basket is valued as equal parts of 1 bulk residual fuel oil containing one percent 1 sulphur quoted for Mediterranean basis Italy Cargoes FOB Med basis Italy; and 2 bulk residual fuel oil containing one percent 1 sulfur quoted for Northwest Europe Cargoes CIF basis ARA Cargoes CIF NWE Basis ARA and 3 bulk residual fuel oil Singapore Cargoes containing three and onehalf percent 3.5 sulfur viscosity 180 centistokes Singapore HSFO 180 cst and 4 bulk residual fuel oil Cargoes FOB Arab Gulf viscosity 180 centistokes Arab Gulf FOB HSFO 180 cst using the method for averaging as described for calculating the Base Price. The Floor Price Floor Price shall be ninety percent 90 of the monthly values of 67 the prices of the LSFO Basket as published in Platts Oilgram Price Report for the eighteen 18 months of May 1992 through October 1993 inclusive. These values are derived from the mean of the daily ranges on days the postings are published to give a monthly value. For the purpose of this Contract Floor Price will be equal to 2.11MMBTU. Notwithstanding results of the calculations for price as shown in this Article 21.5.13 d the actual price shall in no event be less than a Floor Price Floor Price which is calculated as US2.11MMBTU nor more than a Ceiling Ceiling of the Floor Price plus US1.00MMBTU provided that after seven 7 years from the Effective Date the Seller shall have the option to revise the Ceiling to one hundred fifty percent 150 of ninety percent 90 of the same or equivalent basket of fuel oils used in calculating the Base Price averaged over the immediately preceeding eighteen 18 months. Parties agree to convert USbarrel prices for fuel oil as published in Platts Oilgram to USMMBTU using a factor of 6.28. If Platts Oilgram is no longer published an alternate publication shall be mutually agreed upon. e Parties acknowledge that Gas is to be received by GAIL at Hazira downstream of separation and sweetening facilities owned and operated by ONGC. In order to compensate ONGC for cost of ownership and operations of these facilities Contractor shall make payments to ONGC on the basis of the costs fixed on an incremental basis by an internationally recognised expert who shall be selected by two members of the

Operating Committee from a panel of three internationally recognised experts selected by ONGC. In case there is no agreement between the Companies and ONGC on the advice tendered the matter shall be referred to Government. The decision of Government shall be final and binding on all the Parties.

21.5.14 Nothing contained in any contract entered into by the Contractor for the supply sale or disposal of Gas with any nominee of the Government shall in any manner abrogate the obligation of the Government contained herein.

21.5.15 The Government and/or its nominee shall pay any and all sales tax payable on the sale of Gas to the Government or its nominee.

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ARTICLE 22 EMPLOYMENT TRAINING AND TRANSFER OF TECHNOLOGY

22.1 Without prejudice to the right of the Contractor to select and employ personnel in numbers and with the qualifications as in the opinion of the Contractor are required for carrying out Petroleum Operations in a safe cost effective and efficient manner the Contractor shall to the maximum extent reasonably possible employ and require the Operator and Subcontractors to employ citizens of India having appropriate qualifications and experience taking into account the experience required and the level and nature of the Petroleum Operations.

22.2 Contractor shall offer up to two man months per year of on the job training and practical experience in skilled management and executive positions of their ongoing Petroleum Operations to Indian nationals of the Government's choice.

22.3 Contractor shall associate and involve mutually agreed numbers of citizens of India designated by the Government which shall in no event exceed three people at any one time in the technological aspects of the then ongoing Petroleum Operations for up to two man months per year. Such aspects shall include a seismic data acquisition processing and interpretation; b computerized formation evaluation using well logs; c computerized analysis of geological data for basin analysis; d laboratory core analysis; e reservoir simulation and modelling; f geochemistry including analytical methods source rock studies hydrocarbon generation modelling; g measurement while drilling techniques; h stimulation of wells; i production engineering including optimization methods for surface and subsurface facilities e.g. NODAL analysis and implementation; j reservoir engineering and management including gas and water injection; k enhanced oil recovery

techniques; 71 l gas production technology; m pipeline technology; n well design and drilling technology; o design of offshore facilities.22.4 Except as herein provided no Party shall be obliged to disclose by virtue of this Article 22 any data process or information whether owned by itself any of its Affiliates or a third party of a proprietary nature.22.5 At the request of the Government the Contractor shall separately endeavour to negotiate in good faith technical assistance agreements with the Government setting forth the terms by which each constituent of the Contractor may render technical assistance and make available commercially proven technical information of a proprietary nature for use in India by the Government. The issues to be addressed in negotiating such technical assistance agreements shall include but not be limited to licensing issues royalty conditions confidentiality restrictions liabilities costs and method of payment. 72 ARTICLE 23 LOCAL GOODS AND SERVICES23.1 In the conduct of Petroleum Operations the Contractor shall a give preference to the purchase and use of goods manufactured produced or supplied in India provided that such goods are available on terms equal to or better than imported goods with respect to timing of delivery quality and quantity required price and other terms; b employ Indian Subcontractors having the required skills or expertise to the extent reasonably possible in so far as their services are available on comparable standards with those obtained elsewhere and at competitive prices and on competitive terms; provided that where no such Subcontractors are available preference shall be given to nonIndian Subcontractors who utilise Indian goods to the maximum extent possible subject however to the proviso in paragraph a above; c cooperate to the extent possible and without financial obligation with domestic companies in India to enable them to develop skills and technology to service the petroleum industry; d ensure that provisions in terms of paragraphs a to c above are contained in contracts between the Operator and its Subcontractors.23.2 The Contractor shall establish appropriate procedures including tender procedures for the acquisition of goods and services which shall ensure that suppliers and Subcontractors in India are given adequate opportunity to compete for the supply of goods and services. The tender procedures shall include inter alia the financial amounts or value of contracts which will be awarded on the basis of selective

bidding or open competitive bidding the procedures for such bidding and the exceptions to bidding in cases of emergency.23.3 Within one hundred and twenty 120 days after the end of each Calendar Year the Contractor shall provide the Government with a report outlining its achievements in utilising Indian resources during that Calendar Year.23.4 In this Article goods means equipment materials and supplies. 73 ARTICLE 24 INSURANCE AND INDEMNIFICATION24.1 INSURANCE 24.1.1 The Contractor shall during the term of this Contract obtain and maintain insurance coverage for and in relation to Petroleum Operations for such amount and against such risks in accordance with generally accepted international operating practices as are set forth herein and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government as additional insured and shall waive subrogation against the Government. The insurance shall without prejudice to the generality of the foregoing cover a Loss or damage to all installations equipment and other assets for so long as they are used in or in connection with Petroleum Operations; provided however if Contractor fails to insure any such installation equipment or assets it shall replace any loss thereof or repair any damage caused thereto; b Loss damage or injury caused by pollution in the course of or as a result of Petroleum Operations; c Loss or damage to property or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor may be liable; d With respect to Petroleum Operations offshore the cost of removing wrecks and cleaning up operations following any accident in the course of or as a result of Contractors Petroleum Operations; e The Contractors and/or Operators liability to its employees engaged in Petroleum Operations. 24.1.2 The Contractor shall require its Subcontractors to obtain and maintain insurance against the risks referred to in Article 24.1.1 relating mutatis mutandis to such Subcontractors. 7424.2 INDEMNITY The Contractor shall indemnify defend and hold the Government harmless against all claims losses and damages of any nature whatsoever including without limitation claims for loss or damage to property or injury or death to persons caused by or resulting from any Petroleum Operations conducted by or on behalf of the Contractor.24.3 ONGC shall indemnify and hold the Companies harmless against all claims losses

and damages of any nature whatsoever including but not by way of limitation claims for loss or damage to property or injury or death to persons or Environmental Damage caused by or resulting from and attributable to any operations in the nature of Petroleum Operations conducted by or on behalf of ONGC or failure to comply with any Environmental Clearances prior to the Effective Date.

75 ARTICLE 25 RECORDS REPORTS ACCOUNTS AND AUDIT

25.1 The Contractor shall prepare and maintain at an office in India accurate and current books records reports and accounts of its activities for and in connection with Petroleum Operations so as to present a fair clear and accurate record of all its activities expenditures and receipts. The Contractor shall also keep representative samples of cores and cuttings.

25.2 Based on generally accepted and recognised accounting principles and modern petroleum industry practices records books accounts and accounting procedures in respect of Petroleum Operations shall be maintained on behalf of the Contractor by the Operator at its business office in India.

25.3 The annual audit of accounts shall be carried out on behalf of the Contractor by a qualified independent firm of internationally recognised chartered accountants registered in India and selected by the Contractor.

25.4 Accounts together with the auditors report thereon shall be submitted to the Parties for approval not later than the thirtieth 30th day of September following the Financial Year.

25.5 The Government shall have the right to audit the accounting records of the Contractor in respect of Petroleum Operations as provided in the Accounting Procedure.

25.6 The accounting and auditing provisions and procedures specified in this Contract are without prejudice to any other requirements imposed by any statute in India including without limitation any specific requirements of the statutes relating to taxation of companies.

25.7 For the purpose of any audit referred to in Article 25.5 the Operator or the Contractor shall make available to the auditor all such books records accounts and other documents and information as may be reasonably required by the auditor during normal business hours.

76 ARTICLE 26 INFORMATION DATA CONFIDENTIALITY INSPECTION AND SECURITY

26.1 The Contractor shall promptly after they become available make available to the Government in its offices all data obtained as a result of Petroleum Operations under the Contract including but not limited to

geological geophysical geochemical petrophysical engineering well logs maps magnetic tapes cores and production data as well as all interpretative and derivative data including reports analyses interpretations and evaluations prepared in respect of Petroleum Operations hereinafter referred to as Data. Data shall be the property of the Government provided however that the Contractor shall have the right to make use of such Data free of cost for the purpose of Petroleum Operations under this Contract as provided herein.

26.2 Contractor shall keep the Government currently advised of all developments taking place during the course of Petroleum Operations and shall furnish the Government with such progress reports containing full and accurate information relating to Petroleum Operations on a periodic basis as the Government may reasonably require provided that this obligation shall not extend to proprietary technology. Without prejudice to the generality of the foregoing the Contractor shall submit regular statements and reports relating to Petroleum Operations as provided in Appendix C. Contractor shall meet with the Government at a mutually convenient location to present the results of all geological and geophysical work carried out as well as the results of all engineering and drilling operations as soon as practical after such Data becomes available to the Contractor.

26.3 All Data information and reports obtained or prepared by for or on behalf of the Contractor pursuant to this Contract shall be treated as confidential and subject to the provisions hereinbelow the Parties shall not disclose the thereof to any third party without the consent in writing of the other Parties.

26.4 The obligation specified in Article 26.3 shall not operate so as to prevent disclosure a to Affiliates Contractors or Subcontractors for the purpose of Petroleum Operations; b to employees professional consultants advisers data processing centres and laboratories where required for the performance of functions in connection with Petroleum Operations for any Party comprising the Contractor; c to banks or other financial institutions in connection with Petroleum Operations; 77 d to bona fide intending assignees or transferees of an interest hereunder of a Party comprising the Contractor or in connection with a sale of stock of a Party comprising the Contractor; e to the extent required by any applicable law or in connection with any legal proceedings or by the regulations of any stock exchange upon which the shares of a Party

comprising Contractor are quoted; f to Government departments for or in connection with the preparation by or on behalf of the Government of statistical reports with respect to Petroleum Operations or in connection with the administration of this Contract or any relevant law or for any purpose connected with Petroleum Operations; g by a Party with respect to any Data or information which without disclosure by such Party is generally known to the public.

26.5 Any Data information or reports disclosed by the Parties comprising the Contractor to any person other than pursuant to Article 26.4 a b and g shall be disclosed on the terms that such Data information or reports shall be treated as confidential by the recipient. Prompt notice of disclosures made by the Contractor pursuant to Article 26.5 shall be given to the Government.

26.6 Any Data information and reports relating to the Contract Area which in the opinion of the Government might have significance in connection with offers by the Government of open acreage or an exploration programme to be conducted by a third party in another area may be disclosed by the Government for such purposes on conditions to be agreed upon between the Government and the Contractor.

26.7 Where an area ceases to be part of the Contract Area the Contractor shall continue to treat Data and information with respect to the area as confidential and shall deliver to the Government copies or originals of all Data and information in its possession with respect to the area. The Government shall however have the right to freely use the Data and information thereafter.

26.8 The Government shall at all reasonable times through duly authorised representatives be entitled to observe Petroleum Operations and to inspect all assets books records reports accounts contracts samples and Data kept by the Contractor or the Operator in respect of Petroleum Operations under the Contract provided however that the Contractor shall not be required to disclose any proprietary technology. The duly authorised representatives shall be given reasonable assistance by the Contractor for such functions and the Contractor shall afford such 78 representatives all facilities and privileges afforded to its own personnel in the field including the use of office space and housing free of charge. The representatives shall be entitled to make a reasonable number of surveys measurements drawings tests and copies of documents take samples and make a reasonable use of the equipment and

instruments of the Contractor provided that such functions shall not unduly interfere with the Contractor's Petroleum Operations.

26.9 Contractor shall give reasonable advance notice to the Government or to any other authority designated by the Government for such purpose of its programme of conducting surveys by aircraft or by ships indicating inter alia the name of the survey to be conducted approximate extent of the area to be covered the duration of the survey the commencement date and the name of the airport or port from which the survey aircraft or ship will commence its voyage.

26.10 The Government or the authority designated by the Government for such purpose shall have the right to inspect any aircraft or ship used by the Contractor or a Subcontractor carrying out any survey or other operations in the Contract Area and shall have the right to put on board such aircraft or ship Government officers in such number as may reasonably be necessary to ensure compliance by the Contractor or the Subcontractor with the security requirements of India.

26.11 Expatriate employees and Subcontractors shall for national security purposes be subject to the approval of the Government such approval not to be unreasonably withheld.

79 ARTICLE 27 TITLE TO PETROLEUM DATA AND ASSETS

27.1 The Government is the sole owner of Petroleum underlying the Contract Area and shall remain the sole owner of Petroleum produced pursuant to the provisions of this Contract except that part of Crude Oil or Gas the title whereof has passed to each constituent of the Contractor or any other person in accordance with the provisions of this Contract.

27.2 Title to Crude Oil and Gas to which each constituent of the Contractor is entitled under this Contract and title to Crude Oil and Gas sold to Government or its nominee by the constituents of the Contractor shall pass to the relevant Party or as the case may be to Government or its nominee at the Delivery Point. Contractor shall be responsible for all costs and risks prior to the Delivery Point and each Party shall be responsible for all costs and risks associated with such Party's share after the Delivery Point. Where the Government or its nominee purchases all or some of the Contractor's share of Crude Oil or Condensate the Government or its nominee shall be responsible for all costs and risks in respect of the amount purchased after the Delivery Point.

27.3 Title to all Data specified in Article 26 shall be vested in the Government and the

Contractor shall have the right of use thereof as therein provided.27.4 Assets in place or contracted for use in or on the Contract Area purchased by the Contractor for use in Petroleum Operations shall be owned by the Parties comprising Contractor in proportion to their Participating Interest provided that the Government or its nominee shall have the right to require vesting of full title and ownership including abandonment obligations if any in it free of cost charge and encumbrances of any or all assets whether fixed or movable acquired and owned by the Contractor for use in Petroleum Operations inside or outside the Contract Area except assets required by a Party for ongoing operations in the nature of Petroleum Operations in India such right to be exercisable by the Government or its nominee upon expiry or earlier termination of the Contract.27.5 Contractor shall be responsible in accordance with international petroleum standards for proper maintenance insurance and safety of all assets acquired for Petroleum Operations for keeping them in good repair order and working condition at all times and the costs thereof shall be recoverable as Contract Costs in accordance with Appendix C.27.6 So long as this Contract remains in force the Contractor shall free of any charge for the purpose of carrying out Petroleum Operations hereunder have the exclusive use of 80 the assets which have become or are the property of the Government including without limitation those identified in Appendix F except that the Sagar Laxmi shall be released to ONGC as soon as alternate facilities are available but not later than thirty 30 months after the Effective Date unless agreed otherwise by the Parties. During the period Contractor is using the Sagar Laxmi Contractor shall pay to ONGC as rental a price to be based upon a mutually agreed daily rate. The daily rate shall be determined in accordance with competitive prices for like type of service. In the event the daily rate cannot be mutually agreed upon it shall be determined by an internationally recognized expert in the field selected by two members of the Operating Committee from a group of three internationally recognized experts selected by ONGC. If the parties do not agree the Government shall make the determination.27.7 Equipment and assets no longer required for Petroleum Operations shall first be offered free of cost charge and encumbrance to the Government or its nominee and if not required by the Government or its nominee will be so indicated

in writing within thirty 30 days of such offer. Failure to so indicate will be deemed to be a rejection of the offer by the Government.

27.8 Assets not acquired by the Government or its nominee may be sold or otherwise disposed of subject to the terms of this Contract.

81 ARTICLE 28 ASSIGNMENT OF INTEREST

28.1 Subject to the terms of this Article and other terms of this Contract any Party comprising the Contractor may assign or transfer a part or all of its Participating Interest with the prior written consent of the Government which consent shall not be unreasonably withheld provided that the Government is satisfied that a the prospective assignee or transferee has the financial standing technical competence capacity and ability to meet its obligations hereunder and is willing to provide an unconditional undertaking to assume its Participating Interest share of obligations and to provide a guarantee in respect thereof as provided in the Contract. b the prospective assignee or transferee is not a company incorporated in a country with which the Government for policy reasons has restricted trade or business; c the prospective assignor or transferor and assignee or transferee respectively are willing to comply with any reasonable conditions of the Government as may be necessary in the circumstances with a view to ensuring performance under the Contract; and d the assignment or transfer will not adversely affect the performance or obligations under this Contract or be contrary to the interests of India.

28.2 An application by a Company for consent to assign or transfer shall be accompanied by all relevant information concerning the proposed assignment or transfer including detailed information on the proposed assignee or transferee and its shareholding and corporate structure as was earlier required from the Companies constituting the Contractor the terms of the proposed assignment or transfer and the unconditional undertaking referred to in Article 28.1a above. The applicant shall also submit such information relating to the prospective assignee or transferee of the assignment or transfer as the Government may reasonably require to enable proper consideration and disposal of the application.

28.3 No assignment or transfer shall be effective until the approval of the Government is received which approval may be given by the Government on such terms as it may deem fit. Upon assignment or transfer of its interest in this Contract the assignor or transferor shall be released and discharged from its obligations hereunder

only to the extent that such obligations are assumed by the assignee or transferee with the approval of the Government. 8228.4 The assignor shall clearly state in its deed of assignment that the assignee shall be liable for all future obligations under the Contract to the extent of assignment.28.5 Upon prior notice to the Contractor the Government may assign or transfer all or any part of its rights and interest under this Contract to any Government company wholly or partly owned by the Government and authorised by the Government to explore for and exploit Petroleum in the Contract Area. Upon prior notice to the Government a Company may assign or transfer all or any part of its rights and interest under this Contract to an Affiliate subject to Article 6.2 and the parent company guarantee shall apply.28.6 An assignment or transfer shall not be made so as to reduce the Participating Interest of a constituent of the Contractor at any time to less than ten percent 10 of the total Participating Interest of all the constituents of the Contractor except where the Government may in special circumstances so permit.28.7 Nothing herein contained shall prohibit a Company in the normal course of business from pledging its Participating Interest share for purposes of financing such as a mortgage charge or encumbrance on Petroleum assets or production of Petroleum at its own risk cost and responsibility. The Contractor shall provide the Government with fifteen 15 days prior written notice before entering into any such financing arrangements.28.8 No assignment or pledge under this Article shall have the effect of decreasing the benefits accruing to Government under this Contract in any manner whatsoever. 83 ARTICLE 29 GUARANTEE29.1 Each of the Companies shall deliver to the Government on the Effective Date of this Contract a a financial and performance guarantee for the performance of all obligations under the Contract in the case of EOGIL from a parent company of good financial standing acceptable to the Government in favour of the Government in the form and substance set out in Appendix E; b a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the aforesaid guarantee has been duly signed and delivered on behalf of the guarantors with due authority and is legally valid and enforceable and binding upon them.29.2 If any of the documents referred to in Article 29.1 are not delivered within the period specified herein this Contract may be cancelled by the Government

upon ninety 90 days written notice of its intention to do so.29.3 Notwithstanding any change in the composition or shareholding of the parent company furnishing the guarantees herein it shall under no circumstances be absolved of its obligations contained in the guarantees provided pursuant to this Article. 84 ARTICLE 30 TERMINATION OF CONTRACT30.1 This Contract may subject to the provisions hereinbelow and Article 31 be terminated by the Government without any financial liability upon giving ninety 90 days written notice of its intention to do so in the following circumstances namely that a Company a has knowingly submitted any false statement to the Government in any manner which was a material consideration in the execution of this Contract; or b has intentionally and knowingly extracted or authorised the extraction of any mineral not authorised to be extracted by the Contract or without the authority of the Government except such extractions as may be unavoidable as a result of operations conducted hereunder in accordance with generally accepted international petroleum industry practice which when so extracted were immediately notified to the Government; or c is adjudged bankrupt by a competent court or enters into any agreement or scheme of composition with its creditors or takes advantage of any law for the benefit of debtors; or d has passed a resolution to apply to a competent court for liquidation of the Company unless the liquidation is for the purpose of amalgamation or reconstruction of which the Government has been given notice and the Government is satisfied that the Companys performance under this Contract would not be adversely affected thereby and has given its approval thereto; or e has assigned any interest in the Contract without the prior consent of the Government as provided in Article 28; or f fails to make any monetary payment required by law or under this Contract by the due date or within the specified period after the due date; or g fails to comply with or contravenes the provisions of this Contract in a material particular; or h fails to comply with any final determination or award made by a sole expert or arbitrators pursuant to Article 33; or i has been served a notice of cancellation pursuant to Article 29.2. PROVIDED THAT 85 where the Contractor comprises two or more Companies the Government shall not exercise its rights of termination pursuant to Article 30.1 on the occurrence in relation to one or more but not all of the Companies of an event entitling the

Government to terminate the Contract if any other Company or Companies constituting the Contractor satisfies the Government that it or they isare willing and would be able to carry out the obligations of the Contractor.30.2 This Contract may also be terminated by the Government on giving the requisite notice specified above if the events specified in Article 30.1 c and d occur with respect to a company which has given a guarantee pursuant to Article 29 subject however to Article 30.3.30.3 If the circumstances that give rise to the right of termination under Article 30.1 f or g or Article 29.2 are remedied by the Contractor within the ninety 90 day period or such extended period as may be granted by the Government following the notice of the Governments intention to terminate the Contract as aforesaid such termination shall not become effective.30.4 If the circumstance or circumstances that would otherwise result in termination are the subject matter of proceedings under Article 33 then termination shall not take place so long as such proceedings continue and thereafter may only take place when and if consistent with the arbitral award.30.5 On termination of this Contract for any reason whatsoever the rights and obligations of the Contractor shall cease but such termination shall not affect any rights of any Party which may have accrued or any obligations undertaken or incurred pursuant to this Contract by Government or the Contractor or any Party comprising the Contractor and not discharged by the Contractor or the Party prior to the date of termination.30.6 In the event of termination pursuant to Articles 30.1 or 30.2 a the Government may require the Contractor for a period not exceeding one hundred and eighty 180 days from the date of termination to continue for the account and at the cost of the Government Crude Oil or Natural Gas production activities until the right to continue such production has been transferred to another entity; b A Foreign Company which is a constituent of the Contractor shall subject to the provisions hereof have the right to remove and export all its property which has not vested in the Government provided that in the event that ownership of any property is in doubt 86 or disputed such property shall not be exported unless and until the doubt or dispute has been settled in favour of the Foreign Company. 87 ARTICLE 31 FORCE MAJEURE31.1 Performance by any Party hereto of any of its obligations under this Contract or in fulfilling any condition of any lease

granted to such Party or any lease issued thereunder shall except for the payment of monies due under this Contract or under the Act and the Rules or any law be suspended or excused if and to the extent that such nonperformance or delay in performance is caused by Force Majeure as defined in this Article.

31.2 For the purpose of this Contract the term Force Majeure means any cause or event other than the unavailability of funds whether similar to or different from those enumerated herein beyond the reasonable control of and unanticipated or unforeseeable by and not brought about at the instance of the Party claiming to be affected by such event or which if anticipated or foreseeable could not be avoided or provided for and which has caused the nonperformance or delay in performance. Without limitation to the generality of the foregoing the term Force Majeure shall include natural phenomena or calamities earthquakes typhoons fires wars declared or undeclared hostilities invasions blockades riots insurrection and civil disturbances.

31.3 Where a Party is claiming suspension of its obligations on account of Force Majeure it shall promptly but in no case later than seven 7 days after the occurrence of the event of Force Majeure notify the other Parties in writing giving full particulars of the Force Majeure the estimated duration thereof the obligations affected and the reasons for its suspension.

31.4 A Party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the effects thereof on the performance of its obligations under this Contract provided however that the settlement of strikes or differences with employees shall be within the discretion of the Party having the difficulty. The Party affected shall promptly notify the other Parties as soon as the Force Majeure event has been removed and no longer prevents it from complying with the obligations which have been suspended and shall thereafter resume compliance with such obligations as soon as possible. The period of work commitment or this Contract may be extended by such additional period as may be agreed by the Parties.

31.5 Notwithstanding anything contained herein if an event of Force Majeure occurs and is likely to continue for a period in excess of thirty 30 days the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be taken to mitigate the effects thereof or to be adopted in the circumstances.

88 ARTICLE 32 APPLICABLE

LAW AND LANGUAGE OF THE CONTRACT32.1 Subject to the provisions of Article 33.12 this Contract shall be governed and interpreted in accordance with the laws of India.32.2 Nothing in this Contract shall entitle the Government or the Contractor to exercise the rights privileges and powers conferred upon it by this Contract in a manner which will contravene the laws of India.32.3 The English language shall be the language of this Contract and shall be used in arbitral proceedings. All communication hearings or visual materials or documents relating to this Contract shall be in English.

89 ARTICLE 33 SOLE EXPERT CONCILIATION AND ARBITRATION33.1

The Parties shall use their best efforts to settle amicably all disputes differences or claims arising out of or in connection with any of the terms and conditions of this Contract or concerning the interpretation or performance thereof.33.2 Except for matters which by the terms of this Contract the Parties have agreed to refer to a sole expert and any other matters which the Parties may agree to so refer any dispute difference or claim arising between the Parties hereunder which cannot be settled amicably may be submitted by any Party to arbitration pursuant to Article 33.3. Such sole expert shall be an independent and impartial person of international standing with relevant qualifications and experience appointed by agreement between the Parties. Any sole expert appointed shall be acting as an expert and not as an arbitrator and the decision of the sole expert on matters referred to him shall be final and binding on the Parties and not subject to arbitration. If the Parties are unable to agree on a sole expert the disputed subject matter may be referred to arbitration.33.3 Subject to the provisions herein any unresolved dispute difference or claim which cannot be settled amicably within a reasonable time may except for those referred to in Article 33.2 be submitted to an arbitral tribunal for final decision as hereinafter provided.33.4 The arbitral tribunal shall consist of three arbitrators. The Party or Parties instituting the arbitration shall appoint one arbitrator and the Party or Parties responding shall appoint another arbitrator and both Parties shall so advise the other Parties. The two arbitrators appointed by the Parties shall appoint the third arbitrator.33.5 Any Party may after appointing an arbitrator request the other Parties in writing to appoint the second arbitrator. If such other Party fails to appoint an arbitrator within fortyfive 45 days of receipt of the written request to do

so such arbitrator may at the request of the first Party be appointed by the Secretary General of the Permanent Court of Arbitration at the Hague within fortyfive 45 days of the date of receipt of such request from amongst persons who are not nationals of the country of any of the Parties to the arbitration proceedings.33.6 If the two arbitrators appointed by the Parties fail to agree on the appointment of the third arbitrator within thirty 30 days of the appointment of the second arbitrator and if the Parties do not otherwise agree the Secretary General of the Permanent Court of Arbitration at the Hague 90 may at the request of either Party and in consultation with both appoint the third arbitrator who shall not be a national of the country of any Party.33.7 If any of the arbitrators fails or is unable to act his successor shall be appointed in the manner set out in this Article as if he was the first appointment.33.8 The decision of the arbitration tribunal and in the case of difference among the arbitrators the decision of the majority shall be final and binding upon the Parties.33.9 Arbitration proceedings shall be conducted in accordance with the arbitration rules of the United Nations Commission on International Trade Law UNCITRAL of 1985 except that in the event of any conflict between these rules and the provisions of this Article 33 the provisions of this Article 33 shall govern.33.10 The right to arbitrate disputes and claims under this Contract shall survive the termination of this Contract.33.11 Prior to submitting a dispute to arbitration a Party may submit the matter for conciliation under the UNCITRAL conciliation rules by mutual agreement of the Parties. If the Parties fail to agree on a conciliator or conciliators in accordance with the rules the matter may be submitted for arbitration. No arbitration proceedings shall be instituted while conciliation proceedings are pending and such proceedings shall be concluded within sixty 60 days.33.12 The venue of conciliation or arbitration proceedings pursuant to this Article unless the Parties otherwise agree shall be London England and shall be conducted in the English language. The arbitration agreement contained in this Article 33 shall be governed by the laws of England. Insofar as practicable the Parties shall continue to implement the terms of this Contract notwithstanding the initiation of arbitral proceedings and any pending claim or dispute.33.13 The fees and expenses of a sole expert or conciliator appointed by the Parties shall be borne equally by

the Parties. Assessment of the costs of arbitration including inental expenses and liability for the payment thereof shall be at the discretion of the arbitrators. 91 ARTICLE 34 ENTIRE AGREEMENT AMENDMENTS WAIVER AND MISCELLANEOUS34.1 This Contract supersedes and replaces any previous agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the Effective Date of this Contract.34.2 This Contract shall not be amended modified varied or supplemented in any respect except by an instrument in writing signed by all the Parties which shall state the date upon which the amendment or modification shall become effective.34.3 No waiver by any Party of any one or more obligations or defaults by any other Party in the performance of this Contract shall operate or be construed as a waiver of any other obligations or defaults whether of a like or of a different character.34.4 The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest.34.5 In the event of any conflict between any provisions in the main body of this Contract and any provision in the Appendices the provision in the main body shall prevail.34.6 The headings of this Contract are for convenience of reference only and shall not be taken into account in interpreting the terms of this Contract. 92 ARTICLE 35 CERTIFICATES35.1 A Company shall furnish prior to execution of this Contract a duly authorised copy of a resolution properly and legally passed by the Board of Directors of the Company specifying the person authorised to execute this Contract along with a Certificate duly signed by the Secretary or an Assistant Secretary of the Company under its seal in this regard and to the effect that the Company has the power and authority to enter into this Contract and to perform its obligations thereunder and has taken all necessary action to authorise the execution delivery and performance of the Contract. 93 ARTICLE 36 NOTICES36.1 All notices statements and other communications to be given submitted or made hereunder by any Party to another shall be sufficiently given if given in writing in the English language and sent by registered post postage paid or by telegram telex facsimile radio or cable to the address or addresses of the other Party or Parties as follows a To the President of India through the Secretary to the Government of India Ministry of Petroleum and Natural Gas

Shastri Bhavan Dr. Rajendra Prasad Marg New Delhi 110 001 India Attention Joint Secretary
Facsimile No. 9111384787 b The Secretary Oil Natural Gas Corporation Limited Tower II 8th Floor
Jeevan Bharati 124 Connaught Circus New Delhi 110 001 India Facsimile No. 91113316413 c
Reliance Industries Limited Maker Chambers IV 3rd Floor 222 Nariman Point Bombay 400 021
INDIA Attention Chief Executive Officer Oil Gas Facsimile No. 0222042268 d Enron Oil Gas India
Ltd. Amiya Apartments 1st Floor 63A Linking Road Santa Cruz W Bombay 400 054 INDIA Attention
Managing Director Facsimile No. 01191226049119 with a copy to Enron Oil Gas India Ltd. 1400
Smith Street Houston Texas 77002 U.S.A. Attention Vice President Operations Facsimile No.
713646811536.2 Notices when given in terms of Article 36.1 shall be effective when delivered if
offered at the address of the other Parties as under Article 36.1 during business hours on working
days and if received outside business hours on the next following working day.36.3 Any Party may
by reasonable notice as provided hereunder to 94 the other Parties change its address and other
particulars for notice purpose. IN WITNESS WHEREOF the representatives of the Parties to this
Contract being duly authorised have hereunto set their hands and have executed these presents this
22 day of December 1994. Signed for and on behalf of the President of India By NAJERB JR. In the
presence of V. RAMANI Signed for and on behalf of Oil Natural Gas Corporation Limited By S. K.
MANGLIK In the presence of R. N. DESAI Signed for and on behalf of Reliance Industries Limited By
AKHIL GUPTA In the presence of Ba La SAGRAMANI Signed for and on behalf of Enron Oil Gas
India Ltd. By J. A. KOPECKY In the presence of E. J. VANDERMARK 95 APPENDIX A
DESCRIPTION OF CONTRACT AREA The area comprising approximately 430 sq. km offshore
India identified as Panna Block and the area comprising approximately 777 sq. km offshore
India identified as the Mukta Block described herein and shown under map attached as Appendix B1
and B 2. Longitude and Latitude measurements are as follows MUKTA about 100 km Northwest of
Bombay See Appendix B2. LATITUDE LONGITUDE A. 19 degrees 27'00"N 71 degrees 38'00"E B. 19
degrees 27'00"N 71 degrees 54'00"E C. 19 degrees 12'00"N 71 degrees 54'00"E D. 19 degrees 12'00"N 71
degrees 38'00"E PANNA about 95 km Northwest of Bombay See Appendix B1. LATITUDE

LONGITUDEA. 19degree2800N 71degree5400EB. 19degree2800N 72degree0500EC.
19degree1930N 72degree0500ED. 19degree1500N 72degree0000EE. 19degree1500N
71degree5400E 96 APPENDIX B1 MAP OF CONTRACT AREA PANNA BLOCKWESTERN INDIA
OFFSHOREBOMBAY BASIN 97A APPENDIX B2 MAP OF CONTRACT AREA MUKTA
BLOCKWESTERN INDIA OFFSHOREBOMBAY BASIN 97B APPENDIX C ACCOUNTING
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STATEMENTSECTION 11 BUDGET STATEMENT 100 ACCOUNTING PROCEDURE SECTION 1
GENERAL PROVISIONS1.1 PURPOSE Generally the purpose of this Accounting Procedure is to
set out principles and procedures of accounting which will enable the Government of India to
monitor effectively the Contractors costs expenditures production and income so that the
Governments entitlement to Profit Petroleum royalty cess etc. as well as Contractors entitlement to
Cost Petroleum and Profit Petroleum can be accurately determined pursuant to the terms of the
Contract. More specifically the purpose of the Accounting Procedure is to classify costs and
expenditures and to define which costs and expenditures shall be allowable for cost recovery
production sharing and participation purposes; specify the manner in which the Contractors
accounts shall be prepared and approved. This Accounting Procedure is intended to apply to the
provisions of the Contract and is without prejudice to the computation of income tax under
applicable provisions of the Income Tax Act 1961 as amended.1.2 DEFINITIONS For purposes of
this Accounting Procedure the terms used herein which are defined in the Contract shall have the
same meaning when used in this Accounting Procedure.1.3 INCONSISTENCY In the event of any
inconsistency or conflict between the provisions of this Accounting Procedure and the other
provisions of the Contract the other provisions of the Contract shall prevail.1.4 DOCUMENTATION
AND STATEMENTS TO BE SUBMITTED BY THE CONTRACTOR 1.4.1 Within thirty 30 days of the
Effective Date of the Contract the Contractor shall submit to and discuss with the Government a
proposed outline of charts of accounts operating records and reports which outline shall reflect each
of the categories and subcategories of costs and income specified in Sections 2 and 3 and shall be
in accordance with generally accepted standards and recognized accounting systems and
consistent with normal petroleum industry practice and procedures 101 for joint venture operations.
Within ninety 90 days of receiving the above submission the Government shall either provide written
notification of its approval of the proposal or request in writing revisions to the proposal. Within one
hundred and eighty 180 days from the Effective Date of the Contract the Contractor and the

Government shall agree on the outline of charts of accounts records and reports which shall also describe the basis of the accounting system and procedures to be developed and used under this Contract. Following such agreement the Contractor shall expeditiously prepare and provide the Government with formal copies of the comprehensive charts of accounts records and reports and allow the Government to examine the manuals and to review procedures which are and shall be observed under the Contract.

1.4.2 Notwithstanding the generality of the foregoing the Contractor shall make regular Statements relating to the Petroleum Operations as follows i Production Statement and Royalty and Cess Statement see Section 5 of this Accounting Procedure ii Value of Production and Pricing Statement see Section 6 of this Accounting Procedure iii Statement of Costs Expenditures and Receipts see Section 7 of this Accounting Procedure iv Cost Recovery Statement see Section 8 of this Accounting Procedure v Production Sharing Statement see Section 9 of this Accounting Procedure vi End of Year Statement see Section 10 of this Accounting Procedure vii Budget Statement see Section 11 of this Accounting Procedure

1.4.3 All reports and statements shall be prepared in accordance with the Contract and the laws of India and where there are no relevant provisions in either of these in accordance with generally accepted practices in the international petroleum industry.

1.4.4 Each of the entities constituting the Contractor shall be responsible for maintaining its own accounting records in order to comply with all legal requirements and to support all returns or any other accounting reports required by any Government authority in relation to the Petroleum Operations. However for the purposes of giving effect to this Accounting Procedure the Contractor shall appoint and notify the Government in writing thereof one of the Parties constituting Contractor who shall be responsible for maintaining at its business office in India on behalf of the Contractor all the accounts of the Petroleum Operations in accordance with the provisions of the Accounting Procedure and the Contract.

1.5 LANGUAGE AND UNITS OF ACCOUNT All accounts records books reports and statements shall be maintained on an accrual basis and prepared in the English language. The accounts shall be maintained in United States Dollars which shall be the controlling currency of account for cost recovery production sharing and

participation purposes. Metric units and Barrels shall be employed for measurements required under the Contract. Where necessary for clarification the Contractor may also maintain accounts and records in other languages currencies and units. Following any new discovery of Petroleum the Parties shall meet to establish specific principles and procedures for identifying all costs expenditures receipts and income with respect to the Contract Area.

1.6 CURRENCY EXCHANGE RATES

1.6.1

For translation purposes between United States Dollars and Indian Rupees or any other currency the previous months average of the daily means of the buying and selling rates of exchange as quoted by the State Bank of India or any other financial body as may be mutually agreed between the Parties shall be used for the month in which the revenues costs expenditures receipts or income are recorded. However in the case of any single nonUS Dollar transaction in excess of the equivalent of one hundred thousand US Dollars US\$100,000 the conversion into US Dollars shall be performed on the basis of the average of the applicable exchange rates for the day on which the transaction occurred.

1.6.2

Any realized or unrealized gains or losses from the exchange of currency in respect of Petroleum Operations shall be credited or charged to the accounts. A record of the exchange rates used in converting Indian Rupees or any other currencies into United States Dollars as specified in Section 1.6.1 shall be maintained by the Contractor and shall be identified in the relevant statements required to be submitted by the Contractor in accordance with Section 1.4.2.

1.7 PAYMENTS

1.7.1

Subject to the foreign exchange laws and regulations prevailing from time to time all payments between the Parties shall unless otherwise agreed be in United States Dollars and shall be made through a bank designated by each receiving Party.

1.7.2

Unless otherwise specified all sums due under the Contract shall be paid within fortyfive 45 days from the date on which the obligation to pay was incurred.

1.7.3

Unless otherwise specified all sums due by one Party to the other under the Contract during any month shall for each day such sums are overdue during such month bear interest compounded daily at the applicable LIBOR plus one percentage 1 point.

1.8 ARMS LENGTH TRANSACTIONS

Unless otherwise specifically provided for in the Contract all transactions giving rise to revenues costs or expenditures which will

be credited or charged to the accounts prepared maintained or submitted hereunder shall be conducted at arms length or on such a basis as will assure that all such revenues costs or expenditures will be equal to or better than as the case may be would result from a transaction conducted at arms length on a competitive basis with third parties. For the purposes of clarification this means revenues would be equal to or higher and costs would be equal to or lower.

1.9 AUDIT AND INSPECTION RIGHTS OF THE GOVERNMENT

1.9.1 Without prejudice to statutory rights the Government upon at least ninety 90 days advance written notice to the Contractor shall have the right to inspect and audit during normal business hours all records and documents supporting costs expenditures expenses receipts and income such as Contractors accounts books records invoices cash vouchers debit notes price lists or similar documentation with respect to the Petroleum Operations conducted hereunder in each Financial Year within two 2 years or such longer period 104 as may be required in exceptional circumstances from the end of such Financial Year.

1.9.2 The Government may undertake the conduct of the audit either through its own representatives or through a qualified firm of recognized international chartered accountants registered in India appointed for the purpose by the Government.

1.9.3 In conducting the audit the Government or its auditors shall be entitled to examine and verify at reasonable times all charges and credits relating to Contractors activities under the Contract and all books of account accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records considered necessary by the Government to audit and verify the charges and credits. The auditors shall also have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the Contractor directly or indirectly serving the Petroleum Operations and to physically examine other property facilities and stocks used in Petroleum Operations wherever located and to question personnel associated with those operations. Where the Government requires verification of charges made by an Affiliate the Government shall have the right to obtain an audit certificate from an internationally recognized firm of public accountants acceptable to both the Government and the Contractor which may be the

Contractors statutory auditor. Any and all such costs shall be for the Governments account. 1.9.4 Any audit exceptions shall be made by the Government in writing and notified to the Contractor within one hundred and twenty 120 days following completion of the audit in question. 1.9.5 The Contractor shall answer any notice of exception under Section 1.9.4 within one hundred and twenty 120 days of the receipt of such notice. Where the Contractor has after the one hundred and twenty 120 days failed to answer a notice of exception the exception shall prevail. 1.9.6 All agreed adjustments resulting from an audit and all adjustments required by prevailing exceptions shall be promptly made in the Contractors accounts and any consequential 105 adjustments to the Governments entitlement to Petroleum shall be made as promptly as practicable. 1.9.7 If the Contractor and the Government are unable to reach final agreement on proposed audit adjustments either Party may refer any dispute thereon to a sole expert as provided for in the Contract. So long as any issues are outstanding with respect to an audit the Contractor shall maintain the relevant documents and permit inspection thereof until the issue is resolved.1.10 REVISION OF THE ACCOUNTING PROCEDURE 1.10.1 By mutual agreement between the Government and the Contractor this Accounting Procedure may be revised from time to time in writing signed by the Parties stating the date upon which the amendments shall become effective. 106 SECTION 2 CLASSIFICATION DEFINITION AND ALLOCATION OF COSTS AND EXPENDITURES2.1 SEGREGATION OF COSTS Costs shall be segregated in accordance with the purposes for which such expenditures are made. All costs and expenditures allowable under Section 3 relating to Petroleum Operations shall be classified defined and allocated as set out below in this Section. Expenditure records shall be maintained in such a way as to enable proper allocation.2.2 EXPLORATION COSTS Exploration Costs are all direct and allocated indirect expenditures incurred in the search for Petroleum in an area which is or was at the time when such costs were incurred part of the Contract Area including expenditures incurred in respect of 2.2.1 Aerial geophysical geochemical palaeontological geological topographical and seismic surveys analyses and studies and their interpretation. 2.2.2 Core hole drilling and water well drilling. 2.2.3 Labor materials supplies

and services used in drilling Wells with the object of finding Petroleum or in drilling Appraisal Wells provided that if such Wells are completed as producing Wells the costs of completion thereof shall be classified as Development Costs.

2.2.4 Facilities used solely in support of the purposes described in Sections 2.2.1 2.2.2 and 2.2.3 above including access roads all separately identified.

2.2.5 Any Service Costs and General and Administrative Costs directly incurred on exploration activities and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to Exploration Operations determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Exploration Costs.

2.2.6 Geological and geophysical information purchased or acquired in connection with Exploration Operations.

107 2.2.7 Any other expenditure incurred in the search for Petroleum not covered under Sections 2.3 or 2.4.

2.3 DEVELOPMENT COSTS Development Costs are all direct and allocated indirect expenditures incurred with respect to the development of the Contract Area including expenditures incurred on account of

2.3.1 Drilling Development Wells whether these Wells are dry or producing and drilling Wells for the injection of water or Gas to enhance recovery of Petroleum and Recompletion or working over of existing or service wells.

2.3.2 Purchase installation or construction of production transport and storage facilities for production of Petroleum from a Field such as pipelines flow lines production and treatment units wellhead equipment subsurface equipment enhanced recovery systems offshore and onshore platforms export terminals and piers harbours and related facilities and access roads for production activities.

2.3.3 Engineering and design studies for facilities referred to in Section 2.3.2.

2.3.4 Any Service Costs joint Development Plans and General and Administrative Costs directly incurred in Development Operations and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to development activities determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Development Costs.

2.4 PRODUCTION COSTS 2.4.1 Production Costs are expenditures incurred on Production Operations in respect of the Contract Area after the

start of production from the Field which are other than Exploration and Development Costs. The balance of General and Administrative Costs and Service Costs not allocated to Exploration Costs or Development Costs shall be allocated to Production Costs.

2.4.2 Production Costs shall include costs for completion of Exploration Wells by way of installation of casing or equipment or otherwise or for the purpose of bringing a Well into use as a producing Well or as a Well for the injection of water or Gas to enhance recovery of Petroleum and Recompletion or working over of existing or service wells.

2.5 SERVICE COSTS Service Costs are direct and indirect expenditures incurred in support of Petroleum Operations in the Contract Area including expenditures on insurance environmental protection warehouses piers marine vessels vehicles motorized rolling equipment aircraft fire and security stations workshops water and sewerage plants power plants housing community and recreational facilities and furniture and tools and equipment used in these activities. Service Costs in any Year shall include the costs incurred in such Year to purchase and/or construct the facilities as well as the annual costs of maintaining and operating the same each to be identified separately. All Service Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.4 and 2.4 to Exploration Costs Development Costs and Production Costs and shall be separately shown under each of these categories. Where Service Costs are made in respect of shared facilities the basis of allocation of costs to Petroleum Operations hereunder shall be on the basis of gross expenditures.

2.6 GENERAL AND ADMINISTRATIVE COSTS General and Administrative Costs are expenditures incurred on general administration and management primarily and principally related to Petroleum Operations in or in connection with the Contract Area and shall include

2.6.1 main office field office and general administrative expenditures in India including supervisory accounting and employee relations services;

2.6.2 an annual overhead charge for services rendered by the parent company or an Affiliate of the Operator outside India to support and manage Petroleum Operations under the Contract and for staff advice and assistance including financial legal accounting and employee relations services but excluding any remuneration for services charged separately under this Accounting Procedure calculated on the basis of one percent (1%) of expenditures.

2.6.3 The

expenditures used to calculate the monthly indirect charge shall not include the indirect charge calculated either as a percentage of expenditures or as a minimum monthly charge rentals on surface rights acquired and maintained for the joint account guarantee deposits 109 concession acquisition costs bonuses paid in accordance with the Contract royalties value added taxes and taxes paid under the Contract settlement of claims proceeds from the sale of assets including division in kind amounting to more than US\$10,000 per transaction and similar items mutually agreed upon by the parties. Credits arising from any government subsidy payment and disposition of joint account property shall not be deducted from total expenditures in determining such charge. 2.6.4

The indirect charges provided for in this Section may be amended periodically by mutual agreement between the Parties if in practice these charges are found to be insufficient or excessive. 110

SECTION 3 COSTS EXPENSES EXPENDITURES AND INCIDENTAL INCOME OF THE CONTRACTOR

3.1 COSTS RECOVERABLE AND ALLOWABLE WITHOUT FURTHER APPROVAL OF THE GOVERNMENT.

Costs incurred by the Contractor on Petroleum Operations pursuant to the Contract as classified under the headings referred to in Section 2 shall be allowable for the purposes of the Contract except to the extent provided in Section 3.2 or elsewhere in this Accounting Procedure and subject to audit as provided for herein. 3.1.1 Surface Rights All direct costs necessary for the acquisition renewal or relinquishment of surface rights acquired and maintained in force for the purposes of the Contract except as provided in Section 3.1.9. Why expected How applicable 3.1.2 Labor and Associated Costs a Costs of all Contractors locally recruited employees who are directly engaged in the conduct of Petroleum Operations under the Contract in India. Such costs shall include the costs of employee benefits and Government benefits for employees and levies imposed on the Contractor as an employer transportation and relocation costs within India of the employee and such members of the employees family limited to spouse and dependent children as required by law or customary practice in India. If such employees are engaged in other activities in India in addition to Petroleum Operations the cost of such employees shall be apportioned on a time sheet basis according to sound and acceptable accounting

principles. b Assigned Personnel Costs of salaries and wages including bonuses of the Contractors employees directly and necessarily engaged in the conduct of the Petroleum Operations under the Contract whether temporarily or permanently assigned irrespective of the location of such employees it being understood that in the case of those personnel only a portion of whose time is wholly dedicated to Petroleum Operations under the Contract only that pro rata portion of applicable salaries wages 111 and other costs as specified in Sections 3.1.2c d e and f shall be charged and the basis of such pro rata allocation shall be specified. c Expenses or contributions made pursuant to assessments or obligations imposed under the laws of India which are applicable to the Contractors cost of salaries and wages. d The Contractors cost of established plans for employees group life insurance hospitalization pension retirement and other benefit plans of a like nature customarily granted to the Contractors employees provided however that such costs are in accordance with generally accepted standards in the international petroleum industry applicable to salaries and wages chargeable to Petroleum Operations under Section 3.1.2b above. e Personal Income taxes where and when they are paid by the Contractor to the Government of India for the employee in accordance with the Contractors standard personnel policies. f Reasonable transportation and travel expenses of employees of the Contractor including those made for travel and relocation of the expatriate employees including their dependent family and personal effects assigned to India whose salaries and wages are chargeable to Petroleum Operations under Section 3.1.2b. Actual transportation expenses of personnel transferred to Petroleum Operations from their country of origin and/or relocation to their country of origin shall be charged to the Petroleum Operations. Where such transfer or relocation is to or from a country other than the country of origin there shall be no reimbursement. Transportation cost as used in this Section shall mean the cost of freight and passenger service and any accountable incidental expenditures related to transfer travel and authorized under Contractors standard personnel policies. Contractor shall ensure that all expenditures related to transportation costs are equitably allocated to the activities which have benefited from the personnel concerned. 112 3.1.3 Transportation Costs The reasonable cost of

transportation of equipment materials and supplies within India and from outside India to India necessary for the conduct of Petroleum Operations under the Contract including but not limited to directly related costs such as unloading charges dock fees and inland and ocean freight charges.

3.1.4 Charges for Services a Third Party Contracts The actual costs of contract services services of professional consultants utilities and other services necessary for the conduct of Petroleum Operations under the Contract performed by third parties other than an Affiliate of the Contractor provided that the transactions resulting in such costs are undertaken pursuant to Section 1.8 of this Accounting Procedure.

b Affiliated Company Contracts i Professional and Administrative Services and Expenses Cost of professional and administrative services provided by any Affiliate for the direct benefit of Petroleum Operations including but not limited to services provided by the production exploration legal financial insurance accounting and computer services divisions other than those covered by Section 3.1.4bii which Contractor may use in lieu of having its own employees. Charges shall be equal to the actual cost of providing their services shall not include any element of profit and shall not be any higher than the most favorable prices charged by the Affiliate to third parties for comparable services under similar terms and conditions elsewhere and will be fair and reasonable in the light of prevailing international petroleum industry practice and experience.

113 ii Scientific or Technical Personnel Cost of scientific or technical personnel services provided by any Affiliate of Contractor for the direct benefit of Petroleum Operations which cost shall be charged on a cost of service basis. Charges therefor shall not exceed charges for comparable services currently provided by outside technical service organizations of comparable qualifications. Unless the work to be done by such personnel is covered by an approved Work Programme and Budget Operator shall not authorize work by such personnel without approval of the Management Committee. c Equipment facilities and property owned and furnished by the Contractors Affiliates at rates commensurate with the cost of ownership and operation provided however that such rates shall not exceed those currently prevailing for the supply of like equipment facilities and property on comparable terms in the area where the Petroleum Operations are being conducted. The equipment

and facilities referred to herein shall exclude major investment items such as but not limited to drilling rigs producing platforms oil treating facilities oil and gas loading and transportation systems storage and terminal facilities and other major facilities rates for which shall be subject to separate agreement with the Government.

3.1.5 Communications Cost of acquiring leasing installing operating repairing and maintaining communication systems including satellite radio and microwave facilities between the Contract Area and the Contractors base facility offices helicopter bases port and railway yards.

3.1.6 Office Shore Bases and Miscellaneous Facilities Net cost to Contractor of establishing maintaining and operating any office suboffice shore base facility warehouse housing or other facility directly serving the Petroleum Operations. If any such facility services contract 114 areas other than the Contract Area or any business other than Petroleum Operations the net costs thereof shall be allocated on an equitable and consistent basis.

3.1.7 Environmental Studies and Protection Costs incurred in conducting the environmental impact studies for the Contract Area and in taking environmental protection measures pursuant to the terms of the Contract.

3.1.8 Materials and Equipment a General So far as is practicable and consistent with efficient and economical operation only such material shall be purchased or furnished by the Contractor for use in the Petroleum Operations as may be required for use in the reasonably foreseeable future and the accumulation of surplus stocks shall be avoided to the extent possible. Material and equipment held in inventory shall only be charged to the accounts when such material is removed from inventory and used in Petroleum Operations. Contractor shall be allowed to recover interest at the LIBOR rate plus one percent 1 for reasonable inventories it carries. Costs shall be charged to the accounting records and books based on the average cost method.

b Warranty In the case of defective material or equipment any adjustment received by the Contractor from the suppliers or manufacturers or their agents in respect of any warranty on material or equipment shall be credited to the accounts under the Contract.

c Value of Materials Charged to the Accounts Under the Contract. i Except as otherwise provided in subparagraph b materials purchased by the Contractor and used in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts if any

purchase and procurement fees plus freight and forwarding charges between point of 115 supply and point of shipment freight to port of destination insurance taxes customs duties consular fees other items chargeable against imported material and where applicable handling and transportation costs from point of importation to or from warehouse or operating site and these costs shall not exceed those currently prevailing in normal arms length transactions on the open market. ii Material purchased from or sold to Affiliates or transferred to or from activities of the Contractor other than Petroleum Operations under the Contract aa new material hereinafter referred to as condition A shall be valued at the current international price which shall not exceed the price prevailing in normal arms length transactions on the open market; bb used material which is in sound and serviceable condition and is suitable for reuse without reconditioning hereinafter referred to as condition B shall be priced at not more than seventyfive percent 75 of the current price of the above mentioned new materials; cc used material which cannot be classified as condition B but which after reconditioning will be further serviceable for original function as good secondhand condition B material or is serviceable for original function but substantially not suitable for reconditioning hereinafter referred to as condition C shall be priced at not more than fifty per cent 50 of the current price of the new material referred to above as condition A. The cost of reconditioning shall be charged to the reconditioned material provided that the condition C material value plus the cost of 116 reconditioning does not exceed the value of condition B material. Material which cannot be classified as condition B or condition C shall be priced at a value commensurate with its use. Material involving erection expenditure shall be charged at the applicable condition percentage referred to above of the current knockeddown price of new material referred to above as condition A. When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price in relation to materials referred to above as conditions B and C such material shall be priced on a basis that will result in a net charge to the accounts under the Contract consistent with the value of the service rendered. 3.1.9 Duties Fees and Other Charges Any duties levies fees charges and any other assessments levied by any governmental or taxing authority in connection

with the Contractors activities under the Contract and paid directly by the Contractor except corporate income tax payable by the constituents of the Contractor. If Operator or its Affiliate is subject to income or withholding tax as a result of service performed at cost for Petroleum Operations under the Agreement its charges for such services may be increased by the amount of such taxes incurred grossed up provided such charges have not been otherwise recovered or a tax credit received.

3.1.10 Insurance and Losses Insurance premia and costs incurred for insurance required by law or pursuant to Article 24 of the Contract provided that such insurance is customary affords prudent protection against risk and is at a premium no higher than that charged on a competitive basis by insurance companies which are not Affiliates. Actual costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs may include but are not limited to repair and replacement of property resulting from damages or losses incurred by fire flood storm theft accident or such other cause.

3.1.11 Legal Expenses All reasonable costs and expenses resulting from the handling investigating asserting defending or settling of any claim or legal action necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of Petroleum Operations under the Contract or sums paid in respect of legal services necessary for the protection of the joint interest of Government and the Contractor shall be allowable. Such expenditures shall include attorneys fees court costs costs of investigation and procurement of evidence and amounts paid in settlement or satisfaction of any such litigation and claims provided such costs are not covered elsewhere in the Accounting Procedure. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliate such compensation shall be included instead under Sections 3.1.2 or 3.1.4bi above as applicable.

3.1.12 Training Costs All costs and expenses incurred by the Contractor in training as is required under Article 22 of the Contract.

3.1.13 General and Administrative Costs The costs described in Section 2.6.1 and the charge described in Section 2.6.2 of this Accounting Procedure.

3.2 COSTS NOT RECOVERABLE AND NOT ALLOWABLE UNDER THE CONTRACT

The following costs and expenses shall not be recoverable or allowable whether directly as such or indirectly as part of any other charges or expenses for cost recovery and production sharing purposes under the Contract i costs and charges incurred before the Effective Date including costs in respect of preparation signature or ratification of this Contract except as otherwise provided in Article 13.1; ii expenditures in respect of any financial transaction to negotiate float or otherwise obtain or secure funds for Petroleum Operations including but not limited to interest commission brokerage and fees related to such 118 transactions and exchange losses on loans or other financing; iii costs of marketing or transportation of Petroleum beyond the Delivery Point; iv expenditures incurred in obtaining furnishing and maintaining the guarantees required under the Contract and any other amounts spent on indemnities with regard to nonfulfillment of contractual obligations; v attorneys fees and other costs and charges in connection with arbitration proceedings and sole expert determination pursuant to the Contract; vi fines and penalties imposed by courts of law of the Republic of India; vii donations and contributions; viii expenditures for the creation of any partnership or joint venture arrangement; ix amounts paid with respect to nonfulfillment of contractual obligations; x costs incurred as a result of failure to insure where insurance is required pursuant to the Contract; xi costs and expenditures incurred as a result of wilful misconduct or gross negligence of the Contractors supervisory personnel; xii payments pursuant to Article 16 of the Contract.

3.3 OTHER COSTS RECOVERABLE AND ALLOWABLE. Any other costs and expenditures not included in Section 3.1 or 3.2 of this Accounting Procedure but which have been incurred by the Contractor for the necessary and proper conduct of Petroleum Operations pursuant to an approved Work Programme and Budget.

3.4 INCIDENTAL INCOME AND CREDITS All incidental income and proceeds received from Petroleum Operations under the Contract including but not limited to the items listed below shall be credited to the accounts under the Contract and shall be taken into account for cost recovery production sharing and participation purposes in the manner described in Articles 13 and 14 of the Contract i The proceeds of any insurance or claim or 119 judicial awards in connection with Petroleum Operations under the Contract or any assets charged

to the accounts under the Contract where such operations or assets have been insured and the premia charged to the accounts under the Contract; ii Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Contract; iii Any adjustment received by the Contractor from the suppliers/manufacturers or their agents in connection with defective material the cost of which was previously charged by the Contractor to the accounts under the Contract; iv Rentals refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Contract; v Prices originally charged to the accounts under the Contract for materials subsequently exported from the Republic of India without being used in Petroleum Operations under the Contract; vi Proceeds from the sale or exchange by the Contractor of plant or facilities from a Field the acquisition costs of which have been charged to the accounts under the Contract for the relevant Field; vii Legal costs charged to the accounts under Section 3.1.11 of this Accounting Procedure and subsequently recovered by the Contractor.

3.5 NONDUPLICATION OF CHARGES AND CREDITS Notwithstanding any provision to the contrary in this Accounting Procedure it is the intention that there shall be no duplication of charges or credits to the accounts under the Contract. 120 **SECTION 4 RECORDS AND INVENTORIES OF ASSETS**

4.1 RECORDS 4.1.1 The Contractor shall keep and maintain detailed records of property and assets in use for or in connection with Petroleum Operations under the Contract in accordance with normal practices in exploration and production activities of the international petroleum industry. Such records shall include information on quantities location and condition of such property and assets and whether such property or assets are leased or owned.

4.1.2 The Contractor shall furnish annually particulars to the Government by notice in writing as provided in the Contract of all major assets acquired by the Contractor to be used for or in connection with Petroleum Operations.

4.2 INVENTORIES 4.2.1 The Contractor shall at not less than once every twelve 12 Calendar Months with respect to movable assets take an inventory of the controllable assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Government with a statement of the principles upon which

valuation of the assets mentioned in such inventory has been based. Controllable assets means those assets the Operator shall submit to detailed record keeping. b not less than once every three 3 years with respect to immovable assets take an inventory of the assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Government together with a written statement of the principles upon which valuation of the assets mentioned in such inventory has been based. Immovable assets means those assets which are placed in service and have an original cost in excess of Fifty Thousand United States Dollars US50000.

4.2.2 The Contractor shall give the Government at least thirty 30 days notice in writing in the manner provided for in the Contract of its intention to take the inventory referred to in Section 4.2.1 121 and the Government shall have the right to be represented when such inventory is taken.

4.2.3 When an assignment of rights under the Contract takes place a special inventory shall be taken by the Contractor at the request of the assignee provided that the cost of such inventory is borne by the assignee and paid to the Contractor.

4.2.4 In order to give effect to Article 27 of the Contract the Contractor shall provide the Government with a comprehensive list of all relevant assets when requested by the Government to do so.

122 SECTION 5 PRODUCTION STATEMENT AND ROYALTY AND CESS STATEMENT

5.1 From the date of first production after the Effective Date of Petroleum from the Contract Area the Contractor shall submit a Production Statement for each Calendar Month to Government showing the following information separately for each producing field and in aggregate for the Contract Area

5.1.1 The quantity of Crude Oil produced and saved.

5.1.2 The quality and characteristics of such Crude Oil produced and saved.

5.1.3 The quantity of Associated Natural Gas and Non Associated Natural Gas produced and saved.

5.1.4 The quality characteristics and composition of such Natural Gas produced and saved.

5.1.5 The quantities of Crude Oil and Natural Gas used for the purposes of carrying on drilling and Production Operations and pumping to field storage as well as quantities reinjected.

5.1.6 The quantities of Crude Oil and Natural Gas unavoidably lost.

5.1.7 The quantities of Natural Gas flared and vented.

5.1.8 The size of Petroleum stocks held on the first day of the Calendar Month in question.

5.1.9

The size of Petroleum stocks held on the last day of the Calendar Month in question. 5.1.10 The quantities of Natural Gas reinjected into the Petroleum Reservoir. 5.1.11 The number of days in the Calendar Month during which Petroleum was produced from each Field. 5.1.12 The GasOil ratio for each Field for the relevant Calendar Month. 5.1.13 The waterOil ratio for each Field for the relevant Calendar Month if available. 5.2 All quantities shown in this Statement shall be expressed in both volumetric terms barrels of oil and cubic metres of gas and in weight metric tonnes. 5.3 The Government may direct in writing that the Contractor include other particulars relating to the production of Petroleum in its Production Statement and the Contractor shall to the extent possible comply with such direction. 5.4 The Production Statement for each Calendar Month shall be submitted to Government no later than ten 10 days after the end of such Calendar Month for Oil and the immediately succeeding Calendar Month for Gas. 5.5 The Contractor shall for the purposes of Article 15 submit a statement to Government providing the calculation of the amount of royalty and cess separately paid with respect to each Calendar Month for each producing Field and in aggregate for the Contract Area. The statement shall show the following information 5.5.1 The quantity of Crude Oil and Condensate produced and saved. 5.5.2 The quantity of ANG and NANG produced and saved. 5.5.3 The amount of royalty and cess separately paid on Crude Oil and Condensate produced saved and sold and the particulars of the calculation thereof. 5.5.4 The amount of royalty paid on ANG and NANG and the particulars of the calculation thereof. 5.6 The Royalty and Cess Statement for each Calendar Month shall be submitted to Government no later than twentyone 21 days after the end of such Calendar Month for Oil and the most recently available Calendar Month for Gas.

124 SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT

6.1 The Contractor shall prepare a Statement providing calculations of the value of Crude Oil produced and saved during each Calendar Month. This Statement shall contain the following information 6.1.1 The quantities prices and receipts realized by the Contractor as a result of sales of Crude Oil to third parties with any sales to Government being separately identified made during the Calendar Month in question. 6.1.2 The quantities prices and receipts realized therefor by

the Contractor as a result of sales of Crude Oil made during the Calendar Month in question other than to third parties. 6.1.3 The quantities of Crude Oil appropriated by the Contractor to refining or other processing without otherwise being disposed of in the form of Crude Oil. 6.1.4 The value of stocks of Crude Oil on the first day of the Calendar Month in question. 6.1.5 The value of stocks of Crude Oil on the last day of the Calendar Month in question. 6.1.6 The percentage volume of total sales of Crude Oil made by the Contractor during the Calendar Month that are Arms Length Sales to third parties. 6.1.7 Information available to the Contractor in so far as required for the purposes of Article 19 of the Contract concerning the prices of competitive crude oils produced by the main petroleum producing and exporting countries including contract prices discounts and premia and prices obtained on the spot markets. 6.2 The Contractor shall prepare a statement providing calculations of the value of ANG and NANG produced and sold during each Calendar Month for the most recently available Calendar Month. This Statement shall contain all information of the type specified in Section 6.1 for Crude Oil as is applicable to Gas and such other relevant information as may be required by the Government. 6.3 The Statements required pursuant to Sections 6.1 and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil Associated Natural Gas and Non Associated Natural Gas. 125 6.4 The Value of Production and Pricing Statement for each Calendar Month shall be submitted to Government not later than twentyone 21 days after the end of such Calendar Month for Oil and the most recently available Calendar Month for Gas. 126

SECTION 7 STATEMENT OF COSTS EXPENDITURES AND RECEIPTS

7.1 The Contractor shall prepare with respect to each Calendar Quarter a Statement of Costs Expenditures and Receipts under the Contract. The statement shall distinguish between Exploration costs Development Costs and Production Costs and shall separately identify all significant items of costs and expenditure as itemized in Section 3 of this Accounting Procedure within these categories. The statement of receipts shall distinguish between income from the sale of Petroleum and inental income of the sort itemized in Section 3.4 of this Accounting Procedure. If the Government is not satisfied with the categories it shall be entitled to request a more detailed breakdown. The Statement shall show the

following 7.1.1 Actual costs expenditures and receipts for the Calendar Quarter in question. 7.1.2 Cumulative costs expenditures and receipts for the Year in question. 7.1.3 Latest forecast of cumulative costs expenditures and receipts at the Year end. 7.1.4 Variations between budget forecast and latest forecast and explanations thereof. 7.2 The Statement of Costs Expenditure and Receipts of each Calendar Quarter shall be submitted to Government not later than sixty 60 days after the end of such Calendar Quarter. 127 SECTION 8 COST RECOVERY STATEMENT

8.1 The Contractor shall prepare with respect to each Calendar Quarter a Cost Recovery Statement containing the following information 8.1.1 Unrecovered Contract Costs carried forward from the previous Calendar Quarter if any. 8.1.2 Contract costs for the Calendar Quarter in question. 8.1.3 Total Contract Costs for the Calendar Quarter in question Section 8.1.1 plus Section 8.1.2. 8.1.4 Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Calendar Quarter in question. 8.1.5 Contract Costs recovered during the Calendar Quarter in question. 8.1.6 Total cumulative amount of Contract Costs recovered up to the end of the Calendar Quarter in question. 8.1.7 Amount of Contract Costs to be carried forward into the next Calendar Quarter. 8.2

Where necessary and possible the information to be provided under Section 8.1 shall be identified separately Field by Field and also separately for Crude Oil Associated Natural Gas and Non Associated Natural Gas. 8.3 The cost recovery information required pursuant to Subsection 8.1 above shall be presented in sufficient detail so as to enable Government to identify how the cost of assets are being recovered. 8.4 The Cost Recovery Statement for each Calendar Quarter shall be submitted to Government not later than sixty 60 days after the end of such Calendar Quarter. 128

SECTION 9 PRODUCTION SHARING STATEMENT 9.1 The Contractor shall prepare with respect to each Calendar Quarter a Production Sharing Statement containing the following information 9.1.1

The calculation of the applicable net cash flows as defined in Appendix D for the Calendar Quarter in question. 9.1.2 The Investment Multiple applicable in the Calendar Quarter in question. 9.1.3 Based on Section 9.1.2 and Article 14 the appropriate percentages of Profit Petroleum if any for the Government and Contractor in the Calendar Quarter in question. 9.1.4 The total amount of Profit

Petroleum if any to be shared between the Government and Contractor in the Calendar Quarter in question. 9.1.5 Based on Sections 9.1.3 and 9.1.4 the amount of Profit Petroleum due to the Government and Contractor as well as to each constituent of the Contractor in the Calendar Quarter in question. 9.1.6 The actual amounts of Petroleum taken by the Government and Contractor as well as by each constituent of the Contractor during the Calendar Quarter in question to satisfy their entitlement pursuant to Section 9.1.5. 9.1.7 Adjustments to be made if any in future Calendar Quarters in the respective amounts of Profit Petroleum due to the Government and Contractor as well as to each constituent of the Contractor on account of any differences between the amounts specified in Sections 9.1.5 and 9.1.6 as well as any cumulative adjustments outstanding from previous Calendar Quarters. 9.2 Where necessary and if possible the information to be provided under Section 9.1 shall be identified separately for each Field and also separately for Crude Oil as distinct from Natural Gas. 9.3 The Production Sharing Statement shall be submitted to Government not later than sixty 60 days after the end of such Calendar Quarter. 129 SECTION 10 END OF FINANCIAL YEAR STATEMENT

10.1 The Contractor shall prepare a definitive End of Year Statement. The statement shall contain aggregated information in the same format as required in the Production Statement and Royalty and Cess Statement Value of Production and Pricing Statement Statement of Costs Expenditure Receipts Cost Recovery Statement and Production Sharing Statement but shall be based on actual quantities of Petroleum produced income received and costs and expenditures incurred. Based upon this Statement any adjustments that are necessary shall be made to the transactions concerned under the Contract. 10.2 The End of Year Statement for each year shall be submitted to Government within ninety 90 days of the end of such Year. 130 SECTION 11 BUDGET STATEMENT 11.1 The Contractor shall prepare a Budget Statement for each Year. This statement shall distinguish between budgeted Exploration Costs Development Costs and Production Costs and shall show the following 11.1.1 Forecast costs expenditures and receipts for the Year in question. 11.1.2 A schedule showing the most important individual items of total costs expenditures and receipts for the Year. 11.2 The Budget Statement

shall be submitted to Government with respect to each Year not less than ninety 90 days before the start of the Year provided that in the case of the Year in which the Effective Date falls the Budget Statement shall be submitted within ninety 90 days of the Effective Date. 131

APPENDIX D CALCULATION OF THE INVESTMENT MULTIPLE FOR PRODUCTION SHARING PURPOSES¹.

In accordance with the provisions of Article 14 the share of the Government and the Contractor respectively of Profit Petroleum from the Contract Area in any Financial Year shall be determined by the Investment Multiple earned by the Companies from the Contract Area at the end of the preceding Financial Year. These measures of profitability shall be calculated on the basis of the appropriate net cash flows as specified in this Appendix D.

INVESTMENT MULTIPLE². The Net Cash Income of the Companies from the Contract Area in any particular Financial Year is the aggregate value for the year of the following i Cost Petroleum entitlement of the Companies as provided in Article 13; PLUS ii Profit Petroleum entitlement of the Companies as provided in Article 14; PLUS iii Rental income of the Companies of the type specified in Section 3.4 of the Accounting Procedure arising from Petroleum Operations and apportioned to the Contract Area; LESS iv the Companies share of all Production Costs and royaltycess payments incurred on or in the Contract Area; LESS v the notional income tax determined in accordance with paragraph 7 of this Appendix payable by the Companies on profits and gains from the Contract Area.

3. The Investment made by the Companies in the Contract Area in any particular Financial Year is the aggregate value for the year of i Exploration Costs incurred by the Companies in the Contract Area and apportioned to the Contract Area in the same proportion that said Costs were recovered pursuant to Articles 13.2 and 13.3. 132 PLUS ii Development Costs incurred by the Companies in the Contract Area.

4. For the purposes of the calculation of the Investment Multiple Costs or expenditures which are not allowable as provided in the Accounting Procedure shall be excluded from Contract Costs and be disregarded.

5. The Investment Multiple ratio earned by the Companies as at the end of any Financial Year from the Contract Area shall be calculated by dividing the aggregate value of the addition of each of the annual Net Cash Incomes accumulated without interest up to and including

that Financial Year starting from the Financial Year in which Production Costs were first incurred or production first arose after the Effective Date on or in the Contract Area by the aggregate value of the addition of each of the annual Investments accumulated without interest up to and including that Financial Year starting from the Financial Year in which Exploration and Developments Costs were first incurred.

6. Profit Petroleum from the Contract Area in any Financial Year shall be shared between the Government and the Contractor in accordance with the value of the Investment Multiple earned by the Companies as at the end of the previous Financial Year pursuant to Articles 14.2 14.3 and 14.4.

GENERAL 7. In determining the amount of notional income tax to be deducted in the applicable cash flows specified in paragraph 2 of this Appendix a notional income tax liability in respect of the Contract Area shall be determined for each Company as if the conduct of Petroleum Operations by the Company in the Contract Area constituted the sole business of the Company and as if the provisions of the Income Tax Act 1961 with respect to the computation of income tax at a fifty percent 50 rate applicable to Petroleum Operations on the basis of the income and deductions provided for in Article 15 of this Contract were accordingly applicable separately to the Contract Area disregarding any income allowances deductions losses or setoff of losses from any other Contract Area or business of the Company.

8. Sample Calculation is attached in Appendix D1.

APPENDIX D1 INVESTMENT MULTIPLE CALCULATION EXAMPLE PROBLEM

The following example is intended to demonstrate the calculation and impact of the Investment Multiple. The figures shown would be for the Companies and are fictitious in this example for demonstration purposes. The investment multiple is calculated individually for the Companies.

	RIL	OR	EOGIL
Investment Multiple at beginning of	1.96	Financial Year 11	Profit Oil Shares at beginning of
24.00	Financial Year 11	US MILLIONS	SA Cumulative Net Cash Income at 100.00 beginning of
Financial Year 11	Cost Petroleum in Financial Year 11	10.00	Profit Petroleum in Financial Year 11
1.00	Inental Income in Financial Year 11	.00	Production Costs in Financial Year 11
.60	Oil Royalty and Cess in Financial Year 11	1.57	Gas Royalty in Financial Year 11
0.41	Notional Income Tax in Financial Year 11	2.00	B Cumulative Net Cash Income at end of
106.42	Financial Year 11	C	

Cumulative Investment at beginning of 51.00 Financial Year 11 Exploration Costs in Financial Year 11 0.30 Development Costs in Financial Year 11 1.50 Service Costs in Financial Year 11 0.00D
 Cumulative Investment at end of 52.80 Financial Year 11Investment Multiple at beginning of 2.02
 Financial Year 12 B DProfit Oil Shares at beginning of 18.00 Financial Year 12Since the Investment
 Multiple is calculated to be greater than 2.0 at thebeginning of Financial Year 12 the Profit
 Petroleum share to be received by RILor EOGIL falls from 24 to 18 at the inception of Financial Year
 12.In the event that the Investment Multiple were found to exceed 2.0during the financial close of
 Financial Year 11 the Contractor mayhave received excess Profit Petroleum during the first sixty
 60days of Financial Year 12. In this case the quantity of excessProfit Petroleum will be calculated
 and the accounts will besettled by adjustment to entitlements within sixty 60 days of the
 followingyear year twelve. 134 APPENDIX E FORM OF FINANCIAL AND PERFORMANCE
 GUARANTEE to be furnished pursuant to Article 29 of the ContractWHEREAS ENRON
 EXPLORATION COMPANY a Company duly organized and existing underthe laws of Delaware
 U.S.A. having its registered office at 1400 Smith StreetHouston Texas U.S.A. hereinafter referred to
 as the Guarantor whichexpression shall include its successors and assigns is the indirect owner
 of100 of the capital stock of ENRON OIL GAS INDIA LIMITED Company anddirect owner of its
 parent company; andWHEREAS Company is signatory to a Production Sharing Contract of even
 date ofthis guarantee in respect of an Offshore area identified as Panna and MuktaBlocks
 hereinafter referred to as the Contract made between the Governmentof India hereinafter referred to
 as the Government Company RELIANCEINDUSTRIES LIMITED and OIL NATURAL GAS
 CORPORATION LIMITED hereinafterreferred to as Contractor which expression shall include its
 successors andpermitted assigns; andWHEREAS the Guarantor wishes to guarantee the
 performance of Company or itsAffiliate Assignee under the Contract as required by the terms of the
 Contract;NOW THEREFORE this Deed hereby provides as follows1. The Guarantor hereby
 unconditionally and irrevocably guarantees to the Government that it will make available or cause to
 be made available to Company or any other directly or indirectly owned Affiliate of Company to

which any part or all of Companys rights or interest under the Contract may subsequently be assigned Affiliate Assignee to ensure that Company or any Affiliate Assignee can carry out its work commitment as set forth in the Contract.2. The Guarantor further unconditionally and irrevocably guarantees to the Government reasonable compliance by Company or any Affiliate Assignee of any obligations of Company or any Affiliate Assignee under the Contract.3. The Guarantor hereby undertakes to the Government that if Company or any Affiliate Assignee shall in any respect fail to perform its work commitments under the Contract or commit any material breach of such obligations then the Guarantor shall fulfill or cause to be fulfilled the obligations in place of Company or any Affiliate Assignee and will indemnify the Government against all actual losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on the part of Company. In no event shall Guarantor be liable for any special consequential indirect inental or punitive damages of any kind or character including but not limited to loss of profits or revenues loss of product or loss of use arising out of or related to a material breach by Company of its obligations under the Contract.4. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the Contract and thereafter until no sum remains payable by Company or its Affiliate Assignee under the Contract or as a result of any decision or award made by any expert or arbitration tribunal thereunder.5. This guarantee shall not be affected by any change in the Articles of Association and bylaws of Company or the Guarantor or in any instrument 135 establishing the Licensee.6. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity; or d the dissolution amalgamation reconstruction or reorganization of Company.7. This guarantee shall be governed by and construed in accordance with the laws of India. IN WITNESS WHEREOF the Guarantor through its duly authorized representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 1994.The seal of was hereto duly affixed by this

day of 1994 in accordance with its bylaws and this guarantee was duly signed by and as required by the said bylaws. Secretary Vice President Witness 136 APPENDIX F EQUIPMENT

The development plan illustrated in Figure G1 is based on the assumption that ONGC has provided at the Effective Date as represented in data and information heretofore provided by ONGC certain structures and facilities. All Equipments specified below including that not yet installed shall be provided at ONGC cost and risk. The following facilities have been installed and placed into service by ONGC as of 1st August 1993 1 well platform PA 8 wells PA1 PA2 PA3 PA4 PA5 PA6 PA7 PA8 Early Production System EPS jackup rig SAGAR LAXMI including production systems and all fixtures and appurtenances Tanker loading system loading buoy and appurtenances PB PD PE jackets only installed; well fluid line connecting each to EPS 23 development wells drilled in PB PD PE MA well platform 8 development wells drilled in MA 14 well fluid pipeline connects MA to Panna EPS Interconnecting Flowlines and Pipelines

The following facilities were assumed by the Companies to be installed and commissioned by ONGC prior to the Effective Date and Companies estimate of project cost does not include the following ONGCs schedule for installation as represented to Companies is also shown PB Deck and Facilities Fourth Quarter 1993 PD Deck and Facilities First Quarter 1994 PE Deck and Facilities Second Quarter 1994 MA Deck and Facilities First Quarter 1994 137 APPENDIX G DEVELOPMENT COMMITMENT SPECIFIED BY THE COMPANIES

The development plan illustrated in Figure G1 is based on the assumption that ONGC has provided at the Effective Date as represented in data and information heretofore provided by ONGC certain structures and facilities. The development of the Fields is proposed to be completed by Contractor through its activities under this Contract. The following describes what facilities platforms and wells are provided by ONGC prior to the Effective Date. The following facilities have been installed and placed into service by ONGC 1 well platform PA 8 wells PA1 PA2 PA3 PA4 PA5 PA6 PA7 PA8 Early Production System EPS jackup Tanker loading system via SBM PB PD PE jackets only installed; well fluid line connecting each to EPS 23 development wells drilled in PB PD PE MA well platform 8 development wells drilled in MA 14 well fluid pipeline connects MA to Panna EPS

The

following facilities were assumed by the Companies to be installed and commissioned by ONGC prior to the Effective Date and Companies estimate of project cost does not include the following ONGCs schedule for installation as represented to Companies is also shown PB Deck and Facilities Fourth Quarter 1993 PD Deck and Facilities First Quarter 1994 PE Deck and Facilities Second Quarter 1994 MA Deck and Facilities First Quarter 1994 Drill two horizontal wells from PD Second half 1993 Drill two horizontal wells from PE Second half 1993 Complete two horizontal wells from PE Second half 1993 The following work intended to complete the development plan contemplated is included in Companies plan and only these facilities and wells are subject to the Cost Recovery Limit as defined in Article 13 Panna Drill two horizontal wells from PD Drill two horizontal sections in two suspended wells on PE and complete same Fabricate and install PC and PF jackets Fabricate or refurbish and install PC and PF deck packages Drill nine horizontal wells from PC Drill nine horizontal wells from PF Fabricate and install PPA and PQ 138 Lay necessary well fluid gaslift and free gas lines Lay sour gas export line from PPA to proposed ONGC 42 pipeline Acquire 850 km of 2D seismic data Drill two exploratory wells Geophysical geological and engineering studies Mukta Fabricate and install MB jacket Fabricate or refurbish and install MB deck package Drill six directional wells from MB Lay MBMA well fluid line Lay PPAMAMB gaslift line Drill two exploratory wells Geophysical geological and engineering studies Reprocess and interpret the 198889 3D survey and usable data from the 1991 SBS 2 D survey Annex G1 shows Companies development concept based on an assumed project start date of 1st July 1993. 139 APPENDIX G ANNEXURE G1 TECHNICAL INFORMATION The following analysis is based on information presented by GOI which has not been independently verified. Hence the information given here is without warranty although we believe it to be accurate. We have accounted for relevant technical details provided in the Docket and Data Package. These technical data are subject to different interpretations and may not necessarily lead to unique results.

VIIA TECHNICAL INFORMATION FOR PANNA FIELD

abc 1. LOCATION The 430 square kilometers Panna block is located in the Offshore Bombay basin of India about 50 km east of the giant Bombay High field. Panna field is a large culmination that occurs

where the westplunging axis of the HeeraBassein structural block intersects the western flank of the faultbound northsouth trending Central Graben FIGURE VIIA1.

2. STRATIGRAPHY

Commercial hydrocarbons are trapped in porous and permeable shoal carbonate reservoirs of the Bassein B zone Middle Eocene and A zone Early Oligocene. The B zone consists of over 300 meters of porous algal and fusillinid packstones and grainstones. It is the primary oil reservoir in Panna with up to 27 meters of oil column and 25 meters of gas. The B zone overlies shales and thin sandstones of the Early EocenePaleocene Basal Clastics formation which have yielded some interesting but apparently subcommercial tests of oil and gas. The top of the Bzone is an unconformable surface overlain by 10 to 15 meters of thin shales and argillaceous limestones called the Tight zone. The Tight zone grades upward into the A zone. It consists of 50 to 60 meters of interbedded tight and porous wackestones and packstones which are in turn overlain by alternating shales and tight limestones of the upper Bassein formation. The A zone is primarily a gas reservoir with upwards of 75 meters of gas column. Mappable seismic reflectors occur at the top A zone H3A and top B zone H3B FIGURE VIIA2.

3. STRUCTURE

ONGC structure maps on the B and A zones are shown in FIGURES VIIA3 and 4. A EECRIL seismic time map on the H3B reflector is exhibited in FIGURE VIIA5. Comparison of the time map with the cited B zone structure map reveals similarities in the general structural aspects of Panna field including a large broad lowrelief SE structure which was tested by the BS136 and 8 exploration wells; a highrelief WNW structure penetrated in a flank position by the BN1 development well; and another highrelief NW structure that was also penetrated in a flank position by the BS5 exploration well. Both the BN1 and BS5 wells have indicated log pay but neither was production tested. The time map exhibits numerous NWSE oriented faults with upwards of 100 meters of throw on the eastern margin of the field and lesser amounts of the 5 to 20 meters range in the field proper where they appear to control the cited highrelief popup structures. The seismic section BS425A located on FIGURE VIIA6 reveals the nature of the faults along a WNWSE transect FIGURE VIIA7. Although all appear to have normal throw their similar orientation and cross sectional geometry suggest a possible transtensional wrench component. This is

supported by the smaller conjugate ENEWSW faults that lie enechelon along the larger fault trends. The large SE structure currently under development by ONGC is considered as the BaseCase reserve target in this proposal. It will be referred to by platform designation as the PAPF structure. The two smaller highrelief structures are considered as upside Success Case targets whose development would be contingent on the successful outcome of a work program detailed later in this document. They are referred to as the PG and PH structures as shown in FIGURE VIIA3 which exhibits a conceptual development scheme overlay to the B zone structure.

4. RESERVOIR CHARACTERIZATION

Core studies indicate that both the A and B zones have been subjected to sealevel lowering and emergence which brought about diagenetic dissolution and general enhancement of porosity and permeability FIGURES VIIA89. Hydrocarbon fluid contacts appear to be extremely consistent throughout the greater field area. The WE diagrammatic cross section of FIGURE VIIA10 demonstrates the cross cutting nature of the fluid levels through formational boundaries. Well performance data suggest strong pressure support from an active water drive mechanism associated with the massive B zone aquifer. Dissolutionenhanced vertical permeability and the cited smallscale faults are interpreted to have locally breached the sealing capacity of the Tight zone between the A and B zones. Therefore concurrent production of B zone oil and A zone gas is not advised especially in the early life of the field. Detailed petrophysical analysis was done on straighthole exploration wells with complete modern log suites including BS5 BS6 and BS8. TABLE VIIA1 lists the petrophysical input parameters utilized for the density porosity and Archie water saturation calculations. The oilfreewater contact was observed at 1760 meters subsea in analysed wells. Similarly the gasoil contact consistently occurred at 1733 meters subsea as defined by RFT and log analysis data. In the B zone up to 50 meters of the upper hydrocarbonbearing interval has average density porosity of 29 while the middle and lower waterwet portions exhibit an average density porosity of 20. For the A zone only higher porosity beds were counted as pay with an average of 13 meters net out of 55 gross and 23 density porosity. Petrophysical analysis of the B Zone indicates that there is a distinct zonation of the hydrocarbon interval as depicted on the type

log in FIGURE VIIA11. These zones include the following ZONE BASE SUBSEA ELEVATIONm
Free Gas 1733 Free Oil 1746 Moveable Oil 1751 Residual Oil 1760 Surfaces vary 12 meters as a
function of reservoir quality 5. VOLUMETRIC RESERVE CALCULATIONS Volumetric input
parameters depict the maximum minimum and most likely values of area under closure net pay
thickness porosity and water saturation for each hydrocarbon zone of the A and B intervals.
Volumetric parameters for the Base Case PAPF structure are listed in TABLE VIId i. The Success
Case for PG and PH is set forth in TABLE VIId ii. It bears noting that the distinction of the various
hydrocarbon zones in the A interval are generally inferred from production tests of the BS4 BS9 and
PBM2 exploration wells. Determination of the cited hydrocarbon zones is inhibited by A zones
poorer reservoir quality and interbedded nature. Fluid properties of A and B zones are listed in
TABLE VIIA2. Of note is the residual oil ROS and gas RGS saturation values of 40 and 45
respectively. The assumed average value for ROS of 40 which is common for carbonate reservoirs
compares with values of 32 37 from data provided in the data package for the highestquality
reservoir samples. The high RGS value of 45 is consistent with the strong waterdrive model where
reservoir pressure drawdown remains relatively low through the fields productive life. The
methodology for volumetric calculations utilizes the B zone and A zone structure maps to determine
the area and resulting rock volume of each cited hydrocarbon zone in the respective A and B
intervals. Average values for pay porosity hydrocarbon saturation were then utilized to calculate oil
and gas in place. Recoverable reserves were calculated by subtracting ROS and RGS from the
hydrocarbon saturation of the respective zones and assuming a sweep efficiency for the natural
water drive as follows A zone gas sweep efficiency 70 A zone oil sweep efficiency 60 B zone gas
sweep efficiency 95 B zone oil sweep efficiency 60 Although calculated no A zone recoverable oil
reserves were included in the Base or Success Cases because the oil occurs in a rim around the
outer perimeter of the field where it is beyond reach with the envisioned development scheme that
targets B zone oil and A zone gas reserves. Comparison of volume per unit area calculations e.g.
MMtsquare kilometers indicate that the A zone oil reservoir requires 5X the area of the B zone oil

reservoir to yield an equivalent volume of recoverable reserves. Stated another way for a given drainage area the A zone will yield 20 of the reserves delivered by the B zone. FIGURE VIIA12 shows the recoverable reserve uncertainty for the base case PAPF structure expressed as a log normal distribution on a log probability scale. It indicates the following range

PROBABILITY	RECOVERABLE	RECOVERABLE or Oil Gas MMt	MMM cubic meters
Minimum	90	12.1	7.25
Most Likely	50	16.2	10.00
Maximum	10	22.4	13.88

The most likely reserve range was utilized in the Base Case development plan and production profile. Comparison of the oil inplace for the B zone and recoverable B zone oil indicates a recovery factor of 23.8. Gas recovery for the A and B zones is 27.3. This low gas recovery is a function of the relatively high percentage of solution gas to total gas volume 33.6 and the relatively poor A zone reservoir quality and high residual gas saturation assumed for the water drive model. Detailed reserves by zone are listed in TABLE VIIAei for the base case TABLE VIIAeii for the upside reserves and TABLE VIIAeiii for the combined Success case.

de PANNA PARAMETERS AND RESERVES Please refer to TABLES VII

Adi dii ei eii eiif

PLANS FOR UTILIZATION OF GAS PANNA

1. The natural water drive characteristics of the Panna field are well substantiated and therefore no gas reinjection for pressure maintenance is necessary. Instead all effort will be made to avoid flaring any gas volumes other than as necessary for optimum oil production. It should be recognised that under some development scenarios increased gas flaring will result from unavailability of the GOlowned gas transmission line. GOI approval for such temporary flaring is presumed and is a condition of this bid.
2. The need for gas lifting of producing wells is not an immediate concern due to the flow capability of the producing wells. Adequate gas lift gas is available and facilities to gather compress and distribute for either sale or gas lift is planned.
3. Upon the installation of either a processing platform or other means of compression and dehydration gas sales will begin expected no later than July 1995.
4. Flaring until gas processing facilities are installed will be minimised by flaring only gas associated with oil production.
5. The proposed gas transportation option is a connection to the planned 42inch ONGC gas pipeline to Hazira. The connecting pipeline will be built by the Bidder as part of the costrecoverable work

program. VIIB. TECHNICAL INFORMATION FOR MUKTA FIELD

abc 1. LOCATION The 777 square kilometers Mukta block is located in the offshore Bombay basin of India about 25 km east of the giant Bombay High field and 25 km west of Panna field. It contains a complex of relatively small structures that are positioned on the axial crest of the westplunging HeeraBassein structural block. The Mukta block lies approximately midway between two major NWSE structural elements that cut the HeeraBassein nose. These include the Bombay High fault to the west and the Central Graben to the east FIGURE VIIB1. The numerous mapped structures of the block have been geographically subdivided into three structural blocks or areas by ONGC called B57 B19 and B126. The B57 and B19 areas are jointly called Mukta field. FIGURE VIIB2 highlights the significant structural closures and defines the B57 seismic 3D map area in red.

2. STRATIGRAPHY Commercial hydrocarbons are trapped in multiple porous and permeable shoal carbonate reservoirs of the Bassein B zone Middle Eocene and sandstones of the underlying Early EocenePaleocene Basal Clastics formation. The Bassen A zone Early Oligocene has tested high rates of gas and condensate in several exploration wells but exhibits low porosity and is considered to have limited reserve potential. The B zone consists of 200 to 250 meters of tight mudstones and pelletal wackestones interbedded with porous algal and fusillinid packstones and grainstones. The impermeable lithologies form effective seals for three major reservoir intervals called B upper B middle and B lower. No free water level was observed in the porous B zones suggesting oil columns in excess of 70 meters. However significant water tests from apparent pay zones indicate that much of the oil saturation is residual. The B zone overlies the Basal Clastics formation which consists of 25 to 35 meters of shale underlain by 25 to 40 meters of porous and permeable sandstone. Hydrocarbon columns appear to be in the range of 10 to 20 meters with a well defined oil freewater contact. The top of the Bzone is an unconformable surface overlain by 5 to 10 meters of thin shales and argillaceous limestones called the Tight zone. The Tight zone grades upwards into the A zone. It consists of 40 to 50 meters of lowporosity pelletal wackestones which are in turn overlain by alternating shales and tight limestones of the upper Bassein formation. The A zone is considered to be a marginal gas reservoir

and was not quantified in this evaluation. Mappable seismic reflectors occur at the top A zone H3A top B zone H3B and top Basal Clastics H4 FIGURE VIIA2. 3. STRUCTURE FIGURE VIIB3 is an ONGC structure map on top of the B zone in the B57 and B19 area. The map is based on 2D seismic data and exhibits a series of interpreted NESW faults that separate and trap B upper oil pools with columns up to 85 meters in thickness. A generally SWNE diagrammatic cross section through the mapped area depicts the interpretation FIGURE VIIB4. It demonstrates the sealing nature of the faults and thick multiple hydrocarbons. The seismic section BS423 located in FIGURE VIIB5 reveals the structural aspects of the same area shown in FIGURE VIIB3 following a WNWSE transect oriented normal to the cited fault trend FIGURE VIIB6 and subparallel to the cross section of FIGURE VIIB4. At the approximate top of the Bassein H3 shown in blue the section clearly shows a moderate relief structure on the east side that corresponds to the position of the B571 and B5712 exploration wells and MA development platform. Another low relief structure can be seen on the western side which occurs in the B126 area. The one critical aspect of the previous interpretation that is not supported by this hard data is any evidence of faulting in the Bassein interval. FIGURE VIIB8 is a depth structure map on top B zone in the B57 area. It was interpreted from a recent vintage 3D seismic survey by ONGC. It basically covers the same area as the previous 2D interpretation FIGURE VIIB3 and is mapped at the same structural level. Areas of structural closure have been colored orange. The two interpretations are radically different. The 3D map shows no faults in support of the hard seismic data FIGURE VIIB7 and depicts relatively small closures on a SW plunging structural nose. The most significant structure with approximately 30 meters of relief is the MA platform structure which also agrees with the cited hard seismic data. From review of the data package and communications with ONGC representatives in the negotiating sessions it is the understanding of EECRIL that reserves quoted by ONGC for the Mukta field do not reflect the recent 3D interpretation and are based on the cited 2D interpretation designed to account for the apparent large oil columns. Based on the compelling evidence of the 3D interpretation it is the position of EECRIL that the MA structure is the only quantifiable feature available for a base case analysis at

this time. The subsequent volumetric evaluation of the MA structure utilizes the ONGC 3D B zone structure map and detailed log analysis to derive base case reserves. The upside case assumes two appraisal tests of features that are exactly 50 of the size of the MA structure with one success and one dry.

4. RESERVOIR CHARACTERIZATION Core studies indicate that the B zone reservoirs have roughly half of the porosity and a fraction of the matrix permeability observed in the neighboring Panna block. The Mukta area appears to have been the site of a lower energy environment of deposition in comparison to Panna. The sequence exhibits alternating low energy finer grained carbonate and moderate energy pelletal to fusulinid wackestones packstones and grainstones. Core descriptions indicate that like Panna the A and B zones have been subjected to sealevel lowering and emergence which brought about diagenetic dissolution and general enhancement of porosity and permeability. This secondary macroporosity and permeability seem to be critical to the excellent fluid flow rates exhibited in both the exploration and development wells in the block. The occurrence of multiple tight and porous zones in the B interval suggests cyclic emergence of a restricted shallow marine platform environment. The stratigraphic thinning of the Bassein formation at Mukta relative to Panna 225 versus 325 meters indicates that the Mukta area was possibly in a higher paleostructural position during Bassein deposition. It is located on the landward side of the Bombay High structural block which is devoid of Bassein age sediments. These observations suggest that the currently westplunging Heera Bassein nose may have undergone structural rotation from a previously eastplunging position with stratigraphic thinning and pinchout of Bassein reservoirs on to the Bombay High block. This paleostructural and stratigraphic setting provides the mechanism for the trapping of a large volume of hydrocarbons in the Mukta area prior to structural rotation in to its current setting. FIGURES VII B7 through 11 show production test results by zone overlain on the appropriate 3D structure map for the B57 area. A similar set of production overlays are shown in FIGURES VII B12 to 15 on the 2D ONGC structure maps of the B126 area. There are 3 water free gas tests of the A zone in the block which are localized on defined structural closures in the northeast B57 area in wells B571 2 and 7 FIGURES VII B7 and 12. Poor or wet A

zone tests were recorded in the remainder of the area. The B upper and B middle zones are the two most prolific intervals in the block with 8 water free oil tests each. The B upper tested rates up to 1900 BOPD and the B middle reported a maximum rate of 2083 BOPD from the BS571. The better tests occur on defined structural closures in the B57 and B126 areas with the exception of well B5710 which tested water free rates of 408 and 1455 BOPD respectively from the B upper and middle zones. The well is located on a small WSWplunging nose with no apparent closure implying a stratigraphic component to the trapping mechanism. However it bears noting that other wells located on the regional SWplunging nose that runs diagonally through the B57 map area are wet or have tested high water cuts including B575 6 17 and 18 FIGURES VIIB8 9 13 14. The most structurally controlled interval in the Mukta block is the B lower zone. It has three significant water free oil tests in the block. Both the B571 and 12 wells in the MA structure tested high rates of up to 2314 BOPD FIGURE VIIB10. Also the structurally highest mapped well in the B126 area B1261 reported an excellent rate of 2286 BOPD FIGURE VIIB15. It is the understanding of EECRIL that the MA platform was positioned and the subsequent 8 development wells were drilled on the basis of the cited 2D interpretation in the B57 area FIGURE VIIB3. An important point to make is that the 3D map matches extremely well with the results of the completions in the B lower zone. Wells MA1 5 6 and 7 are clearly at the edge of closure and tested water or had high water cut except MA 7 which was not tested and has not been completed. Another well MA2 that was completed as a producer has quit flowing due to water encroachment leaving only three currently producing wells. These results indicate that the 3D maps are reliable and that the B lower zone reservoir may have at least a partial water drive mechanism. The pressure drawdown observed in the development wells has been interpreted by ONGC as evidence for a depletion drive mechanism. It is the position of EECRIL that accurate bottom hole pressure monitoring and remediation of cementmechanical problems is required before accurate determination of drive mechanism and reservoir modeling can be done. This would provide the basis for any future pressure maintenance or waterflood operations. The Basal Clastics sandstone reservoirs have yielded significant tests in 3 wells in the

B57 area B576 1218 and B126 area B126245 respectively with rates up to 1540 BOPD FIGURE B16. A certain degree of stratigraphic trapping seems to be occurring in nonclosed areas FIGURES VII B1115. This indicates reserves may be difficult to quantify and conversely that all future exploration and development wells should evaluate this interesting interval. All development wells proposed in the Mukta base development plan are scheduled to be Basal Clastics tests. Detailed petrophysical analysis was done on straighthole exploration wells with complete modern log suites. TABLE VII B1 lists the petrophysical input parameters utilised for the density porosity and WaxmanSmit water saturation calculations of the B zone reservoirs and Archie water saturation calculations for Basal clastics. FIGURE VII B17 is a cross plot of BQV versus Porosity with an interpreted trend line that provides an algorithm tying clay conductance effects into the log analysis through the WaxmanSmit water saturation model. Petrophysical analysis of the B zone indicates that there is a distinct zonation of the hydrocarbon interval as depicted on the type log in FIGURE VII B18. These zones include the following ZONE BASE WATER SATURATION RANGE Free Oil 15 to 30 Moveable Oil 31 to 59 Residual Oil 60 to 100 FIGURE VII B19 is a capillary pressure curve from a typical Mukta B zone reservoir. It demonstrates that for water saturations of 20 or less oil columns of more than 100 meters are required to displace the water from the low permeability matrix. It is clear from the 3D mapping that the largest closures at Mukta have around 30 meters of relief as seen at the location of the type log of well B5712. Clearly none of the free oil zones exceed 30 meters of thickness in the type log example nor do they in other exploration wells examined. This observation combined with the presence of ubiquitous residual oil saturation and lack of free water level in the Bassein reservoirs supports the cited hypothesis of a large accumulation that has been later breached or tilted leaving oil behind in existing smaller structures and stratigraphic traps. The large oil columns of a major accumulation would be required to achieve the free oil saturations seen today and explain the top to bottom residual oil saturation of the Bassein B zones. FIGURE VII B20 is a diagrammatic Resistivity Index versus Water Saturation plot. It provides an explanation of the effects on log analysis of a breached or waterflooded reservoir. The straight line represents the

water drainage cycle of a normal reservoir that has been filled with hydrocarbons over the course of geologic time. In essence oil has displaced water. The arcuate imbibition cycle line represents a breached or flood reservoir where oil has been displaced by water. The saturation exponent N is derived from the slope of the lines. Clearly for a given resistivity the resulting water saturation calculated would be much higher if the reservoir was following the imbibition cycle rather than the water drainage cycle. It is concluded that much of the original thick oil columns mapped by ONGC and disappointing wet tests of apparent pay zones are a product of this breached reservoir phenomena. Restricting pay counts to the free oil zones provides a realistic minimum case and gives the analyst a conservative approximation of oil column height. Inclusion of the moveable pay provides a maximum case.

5. VOLUMETRIC RESERVE CALCULATIONS

Volumetric input parameters listed in TABLE VIIbD depict the maximum minimum and average values of area under closure net pay thickness porosity and water saturation for each hydrocarbon zone for the B upper middle lower and Basal Clastic intervals. Fluid properties of the B zones and Basal Clastics are listed in TABLE VIIb2. Of note is the residual oil ROS saturation value of 40 which is the same used at Panna. The methodology for volumetric calculations of the base case MA structure utilizes the B upper zone structure map to determine the area and resulting rock volume of each cited hydrocarbon zone in the respective B zones and Basal Clastics intervals. Values for pay porosity and hydrocarbon saturation derived from analysis of the B571 and 12 wells and utilized to estimate oil and gas in place. Recoverable reserves were calculated by subtracting ROS from the hydrocarbon saturation of the respective zones and assuming a sweep efficiency for partial water drive of 60. Oil in place was calculated using only the Moveable and Free oil zones. FIGURE VIIb21 shows the recoverable reserve uncertainty for the base case MAMB structure expressed as a log normal distribution on a log probability scale. It indicates the following range

PROBABILITY	RECOVERABLE OIL	RECOVERABLE GAS	MMt	MMM cubic meters
Minimum	90	4.1	0.46	
Most likely	50	5.3	1.85	
Maximum	10	6.7	3.57	

The base case mostlikely reserves represents an average between the maximum case which combines moveable and free oil zone reserves and a minimum

case of free oil zone reserves only. Gas reserves occur as solution gas and show a wide range from a maximum value derived from total oil in place assuming a severe depletion pressure draw down of the reservoir to a minimum based on pressure supported water drive mechanism and straight GOR based volume related to oil produced. Comparison of oil in place for the B zone and recoverable oil indicates a most likely case recovery factor of 17.2. Gas recovery is 51.8 reflecting the partial water drive depletion drive model assumed for the reservoir. Reserves for the base case are listed in TABLE VII Bei. The upside is assumed to be 50 of the Base Case reserves. The Success Case is a combination of the two as follows

	RECOVERABLE OIL	RECOVERABLE GAS
Base	5.37 MMt	1.85 MMM cubic meters
Upside	2.68 MMt	0.93 MMM cubic meters
Success	8.05 MMt	2.78 MMM cubic meters

de MUKTA PARAMETERS AND RESERVES Please refer to TABLES VII B di ei and eii. f PLANS FOR UTILIZATION OF GAS MUKTA

i A study is needed to justify water injection pressure maintenance. No gas reinjection is contemplated. ii After the MA permanent deck is installed at Mukta appropriate testing will be undertaken to determine the timing for gas lift gas installation. Given the water production observed the need for gas lifting at some point is considered likely and provisions for this eventuality have been made in the Base Case work program. iii Apart from the gas requirement for internal use such as power generation and technical flaring the bulk of the gas will be available for sale after dehydration and compression. iv During the producing life of the field efforts will be continuously made to minimise flaring. Flaring of associated gas is presumed without GOI restriction until the gas sales line is commissioned. v After hookup gas not used in operation will be sold via Panna facilities. g MONITORING SYSTEMS RESERVOIR MANAGEMENT 1 MONITORING SYSTEM

Production of all fluids will be monitored on a well by well basis as well as on an aggregate basis as required by standard oil gas field practices. For effective operational control these production rates will be recorded on a daily basis. For fiscal purposes production will be aggregated and reported monthly. An appropriate state of the art well testing system will be installed at each unit. The field will be monitored locally at platforms and remotely from the shore base. EECRIL intend to operate the satellite platforms unmanned to the extent possible and to use computer assisted operations to

monitor ongoing performance. 2 RESERVOIR MANAGEMENT Reservoir Management will be carried out through conventional surface as well as down hole monitoring systems such as bottom hole pressure surveys production testing and well deliverability testing at prescribed intervals. This data will be analysed at regular intervals but at least once a year to study the reservoir performance and to ascertain the reservoir drive mechanism. The operations will be adjusted to maximize economic recovery. It is envisioned that a suitable mathematical model will be used and updated as and when required.

VIII PROPOSED PANNAMUKTA WORK PROGRAMMEa CONCEPTUAL DEVELOPMENT PLAN Data Package material provided by GOI demonstrates a significant potential for increased reserves at PannaMukta in the event of exploration success the Success Case. Described below is a staged development scheme in which Stage I provides a building block towards the expansion needed in the Success Case. The Success Case arises in the event of positive results from exploratory wells included in the EECRIL firm work commitment. The fully developed Success Case is described first so that the integrated buildingblock nature of Stage I is apparent. The firm work programme bid by EECRIL commits to all items needed for Stage I the Base Case; we are dedicated to full Success Case development in the event of exploration success. The risk of such exploration work precludes a firm commitment to additional platforms pipelines and development wells until the additional reserves are conclusively demonstrated.

1 SUCCESS CASE DEVELOPMENT 29.5 MMt or 224 MMBO remaining recoverable oil reserves EECRIL are proposing four exploratory wells as part of the firm work programme. We believe because of exploratory wells previously drilled in the Panna G and H areas that both of these areas are likely to contain commercially viable accumulations. In addition several Mukta area wells have shown encouraging results. As a result we assume that one of the two exploratory tests proposed at Mukta will also yield a commercially viable develop the PannaMukta fields will require See FIGURE VIII1 8 Well platforms at Panna 3 Well platforms at Mukta 1 Common 45000 BOPD processing facility INCLUDING LIVING QUARTERS 1 Interfield MuktaPanna well fluid pipeline and gas lift line POSSIBLY ALSO A WATER FLOOD LINE 84 Development wells 1 Export gas line EECRIL are

capable of developing a highly accelerated production schedule but to do so require the full support and cooperation of GOI.

2. BASE CASE DEVELOPMENT 155 MMBO or 20.4 MMT or remaining recoverable oil reserves This case corresponds to RILEECs committed work programme and is not a reflection of our expectations which are reflected in the Success Case. The extensive drilling campaign conducted by ONGC has demonstrated the viability of developing a large area on Panna and supports the installation of one additional platform at Mukta. The development plan and schedule are illustrated in FIGURES VIII2 VIII3 and includes 6 Well platforms at Panna 2 Well platforms at Mukta 1 Common 45000 BOPD processing facility and living quarters. 1 Interfield MuktaPanna well fluid pipeline and gas lifeline POSSIBLY ALSO A WATERFLOOD LINE 67 Development wells 4 Exploratory wells 1 Export gas line The Base Case assumes that a sour gas export line will be laid from PPA to an interconnect on the proposed ONGC 42inch sour gas line and that the 42inch line will be available no later than April 1 1995.

3 ACCELERATED DEVELOPMENT

A limited unique window of opportunity could exist wherein EECRIL may acquire an existing operating 40000 BOPD Floating Production System FPS capable of a significant acceleration of the availability of processing at a major cost saving to GOIEECRIL. This approach would have positive early cash flow implications to all concerned and obviously enhances the value of the project to a major degree See FIGURE VIII4. Uncertainty about securing the facility preclude bidding the project based on acquiring the unit. However EECRIL commit to a Best Efforts Reasonable Endeavours attempt to acquire the unit if GOI will commit by July 26 1993 to awarding the requested blocks to EECRIL.

b PANNAMUKTA WORK DEVELOPMENT Since PannaMukta development has started a baseline must be established so that the transition from ONGC to EECRIL is clearly defined. Accordingly following are sections defining status of the development specifying ONGC activities which we presume will be completed and then future work which EECRIL commit to undertake.

1. STATUS AS OF JULY 1 1993 The following facilities have been installed and placed into service by ONGC

1 Well platform PA 8 Wells PA1 PA2 PA3 PA4 PA5 PA6 PA7 PA8 Early Production System EPS Jackup Tanker Loading via SBM PB PD PE Jackets only installed; well fluid line connecting

each to EPS. 23 Development wells drilled in PB PD PE. MA Jacket only installed. 8 Development wells drilled in MA 14 well fluid pipeline connects MA to Panna EPS. We understand that The Panna EPS is currently processing approximately 13000 BOPD derived from the PA PB PD PE and MA platforms against a design capacity of 10000 BOPD. Production rates and bottomhole pressures for individual wells on the PB PD PE and MA platforms cannot currently be measured due to the temporary decks. Efforts are being made to balance reservoir withdrawals areally and to minimise gas production all of which is being flared.

2. WORK PLANNED AND COMMITTED BY ONGC We understand that ONGC has work in progress on certain projects related to ongoing PannaMukta development. In formulating the bid EECRIL have assumed that ONGC will design fabricate and install permanent decks and facilities for the PB PD PE and MA jackets at its own cost. The bid assumes that the decks and facilities will be installed and commissioned according to the following schedule PB fourth quarter 1993; PD first quarter 1994; PE second quarter 1994 MA first quarter 1994. Early installation of these deck packages is considered imperative to monitor and optimise reservoir performance. EECRIL would be willing to negotiate the following alternatives to the above EECRIL assumption of responsibility for fabrication of one or more of the deck packages currently under construction EECRIL would prefer to manage the deck installation EECRIL would be willing to locate purchase and refurbish used deck packages or fabricate new deck packages to substitute for those under fabrication by ONGC if this does not result in any delay in project timing. We understand that ONGC has committed to drilling two horizontal wells from PD and two horizontal wells plus two horizontal completions from PE in the second half of 1993. The bid assumes that EECRIL will have the option but not the obligation to accept assignment of any or all drilling rig service and supply contracts and will perform the work at GOIEECRIL expense subject to cost recovery.

WORK TO ACHIEVE BASE CASE DEVELOPMENT EECRIL are committed to proceeding with the Base Case development. EECRIL plan to pursue a very aggressive development schedule FIGURE VIII3 which can only be achieved with the active assistance of ONGC and GOI authorities.

3. WORK PLAN OFFERED AND COMMITTED BY EECRIL PANNA

Drill two horizontal wells from PD Drill two horizontal wells from PE Complete two horizontal wells from PE Fabricate and install PC and PF jackets Fabricate or refurbish and install PC and PF deck packages Drill nine horizontal wells from PC Drill nine horizontal wells from PF Fabricate and install PPA and PQ Lay necessary well fluid gaslift and free gas lines Lay sour gas export line from PPA to proposed ONGC 42inch pipeline Drill two exploratory wells Geophysical geological and engineering studies. MUKTA Fabricate and install MB jacket Fabricate or refurbish and install MB deck package Drill six directional wells from MB Lay MBMA wellfluid line Lay PPAMAMB gaslift line Drill two exploratory wells Geophysical geological and engineering studies Please note that a second EPS is included in the Base Case development plan. However a firm commitment has not been made since the economics are marginal if new construction is required and highly sensitive to project timing and EPS cost.

DEVELOPMENT WORK COMMITMENT EECRIL will immediately begin the design and fabrication of a jacket and deck for location PC. If available a used deck will be acquired and refurbished; otherwise a new deck will be fabricated EECRIL plan to install used decks wherever possible to minimise costs. A new nineslot jacket will be fabricated for PC. At the time of jacket installation nine conductors will be driven. As soon as the PC jacket is installed and drilling on PD and PE is completed the rig will be moved to PC and nine horizontal wells will be drilled. EECRIL plan to employ a single rig to drill all Panna horizontal wells to take advantage of the associated learning curve to minimise drilling time and cost. After drilling is completed the rig will be moved to PF and the deck will be installed on PC. Production will commence from PC as soon as a well fluid line is installed. Drilling prior to deck installation on PC will allow production to be significantly accelerated due to the lead time required to prepare the deck package. Nine horizontal wells will also be drilled from PF. However in this case the deck package will be available and installed prior to drilling. This approach has the advantages of allowing producewhiledrilling operations to accelerate production and raising the wellheads further above the splash zone. Work will commence immediately on the design and fabrication of a new jacket for MB. Six directional wells will be drilled from MB and should be completed at the time the MB deck package becomes available

premonsoon 1995. Production will ensue after the installation of the deck package and a wellfluid line from MB to MA is installed. Work will commence immediately on the design and fabrication of a new 45000 BOPD production processing jacket and deck PPA as described below

FUNCTIONALDESIGN BASIS Production and Test Manifolds Production and Test Separation Gas Compression Gas Dehydration Chemical Injection Corrosion Inhibition Produced Water Treatment Disposal Power Generation Safety systems Fire Protection Utilities STRUCTURAL BASIS 8Pile 86x160 Deck Structural Redundancy Earthquake Zone IV Design PPA is expected to be available for installation premonsoon 1995. Work will also commence immediately on design and fabrication of a separate 100man quarters platform PQ. Although not currently in the Base Case development plan studies will be conducted to ascertain the merit of combining PPA and PQ. In addition the desirability of a manifolding platform PLM possibly combined with PQ will be investigated. A manifolding platform may be justified given the large number of lines associated with the producing platforms riser loads on PA and the future connections and disconnections associated with the Sagar Laxmi EPSI the second early production system EPSII and the PPA. Work will begin immediately to secure a jackup suitable for conversion preferably already converted for service as a second early production system EPSII of 10000 BOPD capacity. If such a unit can be secured at a cost and within a time frame that project economics are enhanced it will be implemented. Installation of EPSII would occur postmonsoon 1994 and would allow PannaMukta production processing capacity to be expanded to 20000 BOPD at the beginning of 1995. EPSII will allow considerable acceleration of oil production prior to the commissioning of PPA. In addition the Sagar Laxmi and EPSII can be retained temporarily after the installation of PPA to process as much as 65000 BOPD in the event production exceeds expectations or the Success Case is achieved. Although EECRIL have included the installation of EPSII in discussion additional economic analysis will be conducted to confirm that the acceleration of oil production justifies the additional expense. The need for future gas lift and free gas lines is anticipated. The lines will be installed when required by field performance and when convenient in terms of lay barge utilisation. A long gas lift line from PPA to

MA and MB will almost certainly be required whereas a free gas line should be unnecessary. Preliminary EECRIL studies indicate that a significant possibility of communication between the Panna Azone and Bzone exists. As a result EECRIL intend to defer production from the Azone gascap to maximise oil recovery. However although every effort will be made to minimise gas production elevated gasoil ratios are inevitable given the thin oil column and free gas lines may become necessary prior to gascap blowdown. The Base Case assumes that a gas export line may be laid from PPA to a connection with the proposed 42inch ONGC gas pipeline to Hazira. It is assumed that line installation would occur premonsoon 1995 with resulting gas sales in July 1995 that 100 of PannaMukta gas will be taken and that oil production will not be restricted by gas flaring considerations. As an alternative not considered in the Base Case EECRIL is studying the possibility of constructing a sour gas pipeline to the Bombay area and constructing onshore sweetening plant. EECRIL assume that suitable shore base facilities including dock space yard space warehousing communications will be made available for lease to support PannaMukta operations.

EXPLORATION WORK COMMITMENT Two exploratory wells will be drilled at Panna and two at Mukta. These wells will be drilled as soon as possible by either of the two rigs after firm locations are established and when the development drilling schedule allows. The wells must be drilled early enough to allow timely jacket and deck commitments to be made in the event of success to ensure minimum delay in the development program. Details of the program are as follows

PANNA SEISMIC Reprocess and interpret all usable data in concession

Commitment 850 km DRILLING Drill and evaluate 2300 meter delineation tests. Penetrate base of Basal Clastics Paleocene/Early Eocene below B Zone middle Eocene limestone. Maintain options to test complete and suspend at mudline if results warrant.

Commitment 2 wells

POTENTIAL RESERVES Based upon the assumption that both of the above mentioned delineation tests are successful in place and recoverable reserves are provided in TABLE VIIAe. For this purpose we have assumed that the tests will be on Panna structures PG and PH

FIGURE VIIA3. However after reprocessing and interpreting seismic

SEE ABOVE WORK COMMITMENT the best two structures will be selected and drilled. **MUKTA**

SEISMIC Reprocess and interpret the 198889 3D survey 150 sq.km 4100 line km and all usable data from 1991 SBS 2D survey 750 km. Commitment Processing and interpretation as noted above.

DRILLING Drill and evaluate two 2300 meter delineation tests. Penetrate to base of Basal Clastics PaleoceneEarly Eocene below B Zone middle Eocene limestone. Maintain options to test complete and suspend at mudline if results warrant. Commitment 2 wells POTENTIAL RESERVES Based upon the assumption that one of the above mentioned delineation tests is successful inplace and recoverable reserves are expected to increase by 50 those provided in TABLE VIIBei. After reprocessing and interpreting seismic SEE ABOVE WORK COMMITMENT the best two prospects will be selected and drilled.f OTHER COMMITMENTS EECRIL have committed to a Base Case development plan based upon data packages prepared by GOI. Upon contract signature it is assumed that all relevant information will be provided to EECRIL and that key ONGC personnel will be made available to allow optimization of the development plan. Based upon this information EECRIL will perform the following technical work the results of which will be shared with GOI.

PANNA The Panna field oil accumulation is relatively thin and lies between an active aquifer and a gascap. Optimum oil recovery will be achieved by minimising gascap gas production thereby minimising movement of the oil bank into the gascap which results in unrecoverable residual oil saturations in the gascap and maintaining reservoir energy. EECRIL believe that the added expense of drilling horizontal wells will be more than made up by the increase in productivity index such completions will achieve. EECRIL intend to conduct single well simulations to determine the optimum completion interval placement with respect to the fluid contacts optimum production rate and optimum horizontal completion length. The results of detailed geological modeling PVT analysis petrophysical analysis and well performance studies will be used to prepare a 3D fullfield reservoir simulation model for the Panna field. The model will be used to optimise areal well placement and platform locations. Analysis of fluid contact movements and areal balancing of withdrawals will be conducted. The model will be used to forecast fluid production rates and pressure changes and will be used to determine the optimum time for gas cap blowdown. History matching will be complicated

by the lack of individual well data concerning PB PD and PE and by the lack of current gas production measurements. Drilling and completion studies will be conducted to minimise costs and formation damage. EECRIL are experienced in the drilling of horizontal wells and hope to meet or exceed ONGC performance. In particular we believe that great improvements in current cementing and formation damage control practices can be made. MUKTA The drive mechanism controlling the lower B Zone reservoir performance cannot be conclusively determined at present since the temporary deck at MA precludes individual well testing and bottomhole pressure measurements. One of the MA wells has ceased to produce probably due to water production and significant water production is occurring from one or more of the remaining wells. In addition flowing wellhead pressures are declining. Based upon this evidence as well as geological considerations we currently assume that the reservoir is producing with a partial water drive. Early installation of the permanent MA deck is considered vital to allow well testing and bottomhole pressure measurement to identify the drive mechanism. Once appropriate data has been collected reservoir engineering studies will be conducted probably 3D reservoir simulation to optimise the development plan. Due to the observed water production gaslifting will almost certainly be required and is therefore included in the Base Case commitment. Waterflood facilities and pipelines are not included in the Base Case commitment since the necessity of water injection has not been established however PPA will include deck space and utilities to allow for subsequent addition of injection facilities if justified. The requirements for water injection facilities will be identified shortly after testing the MA wells and measuring bottomhole pressures. The risk of premature water breakthrough and poor sweep efficiency in the naturally fractured reservoir must also be assessed. Pressure transient analysis will probably be used to confirm well interference and analyze dual porosity behavior. If these preliminary studies indicate that waterflooding might be beneficial a pilot waterflood using one of the EPS units at MA could be conducted. If the above studies indicate that waterflooding is economically viable EECRIL will proceed to install the necessary infrastructure. The MA wells penetrate four reservoirs which appear to be effectively sealed from each other. EECRIL therefore

intend to drill directional wells from MB to penetrate multiple pays. Engineering studies will be conducted to optimise the completion design and depletion plan single completions single completions with sliding sleeve or tubing selectives or dual completions. As the reservoir mechanism becomes better understood horizontal drilling applications may become evident.g PANNAMUKTA FACILITIES Systems analysis nodal analysis will be conducted to optimise surface and subsurface equipment design and operation. Appendix3 WORK PROGRAM COMMITTED BY EECRILPANNAo Drill and complete two horizontal wells from PDo Drill and complete two horizontal wells from PEO Complete two horizontal wells from PEO Fabricate and install PC and PF jacketso Fabricate or refurbish and install PC and PF deck packageso Drill nine horizontal wells from PCo Drill nine horizontal well from PFo Fabricate and install PPA and PQo Lay necessary well fluid gaslift and free gas lineso Lay sour gas export line from PPA to proposed ONGC 42inch pipelineo Drill two exploratory wellso Geophysical geological and engineering studiesMUKTAo Fabricate and install MB jacketo Fabricate or refurbish and install MB deck packageo Drill six directional wells from MBo Lay MBMA wellfluid lineo Lay PPAMAMB gaslift lineo Geophysical geological and engineering studies APPENDIX H ESTIMATED PRODUCTION PROFILE OF THE PANNA AND MUKTA FIELDS Oil Gas YEAR THOUSAND BARRELS MILLION CUBIC METERS PER YEAR PER YEAR

1	1098	0	2	1098	0	3	3285	100	4	6256	201	5	13922	566	6	12693	521	7	10954	456	8	9516	402	9	8735	493	10	7913	484	11	7179	479	12	6549	473	13	5997	470	14	5511	467	15	7655	527	16	6502	521	17	5579	513	18	4899	507	19	4407	549	20	3792	581	21	3260	564	22	2834	552	23	2355	354	24	1986	232	25	1695	159	140	GRAPHICAL APPENDIX									
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Appendix B1 Map of Contract Area Panna BlockAppendix B2 Map of Contract Area Mukta BlockAppendix G Figure G1 Panna and Mukta Field Development Base Case Reserves Figure VIIA1 Regional Seismic Map on Early Eocene Top H4 Panna Field Figure VIIA2 Generalised Stratigraphy Panna Field Figure VIIA3 Structure Contour Map on Top of B Zone Panna Field Figure VIIA4 Structure Contour Map on Top of A Zone Panna Field Figure VIIA5 Time Structure Map H3B Panna Field Figure VIIA6 Scheme of Seismic Profiles Panna Field Figure VIIA7 REA Bombay High INE BS425A Migrated Panna Field Figure VIIA8 BSchematic

View of Ground Water System and Development Destruction of Porosity in B Zone Middle Eocene Panna Field Figure VIIA9 ASchematic View of Ground Water System and Development Destruction of Porosity in A Zone Early Oligocene Panna Field Figure VIIA10 Geological Section Across Panna Field Figure VIIB1 Regional Map at H4 Level Figure VIIB2 Isochron Map at the Top of Basal Clastics H4 Mukta and B 126 Fields Figure VIIB3 Structure Map on Top of BUpper Reservoir Mukta Field Figure VIIB4 Geological Section Across Mukta and B 126 Fields Figure VIIB5 Scheme of Seismic Profiles Figure VIIB6 Area Bombay High Line BS423 Figure VIII3 PannaMukta Development Schedule Revised Base Case Figure VIIB7 Isochron Map at the Top of AZone H3A Mukta Field Based on 3D Data Figure VIIB8 Structure Map on BUpper Top Mukta Field Based on 3D Data B Upper Zone Production Test Results Figure VIIB9 Structure Map on BUpper Top Mukta Field Based on 3D Data B Middle Zone Production Test Results Figure VIIB10 Structure Map on BUpper Top Mukta Field Based on 3D Data B Lower Zone Production Test Results Figure VIIB11 Isochron Map at the Top of Basal Clastics H4 Mukta Field Based on 3D Data Figure VIIB12 Structure Contour Map at the Top of BUpper B 126 Field A Zone Production Test Results Figure VIIB13 Structure Contour Map at the Top of BUpper B 126 Field B Upper Zone Production Test Results Figure VIIB14 Structure Contour Map at the Top of BUpper B 126 Field B Middle Zone Production Test Results Figure VIIB15 Structure Contour Map at the Top of BUpper B 126 Field B Lower Zone Production Test Results Figure VIIB16 Structure Contour Map at the Top of BUpper B 126 Field Basal Clastics Production Test Results Figure VIIB17 Clay Conductance Mukta Field Figure VIIB18 Type Log Mukta Field Figure VIIB19 Capillary Pressure Centrifuge Data Mukta Field Figure VIIB20 ISW Plot

REPUBLIC OF CAMEROONPEACE WORKFATHERLANDyySINOSTEEEMINING AGREEMENTBETWEENTHE REPUBLIC OF CAMEROONANDSINOSTEEL CAM S.ARELATING TO THE INDUSTRIAL MINING OF THELOBE IRON ORE IN KRIBIPRESIDENCE DE LAREPUBLIQUEWFESA00009521 AVR 2022HE REPUBLICPRESIDENC1BETWEEN THE UNDERSIGNEDTHE REPUBLIC OF CAMEROON represented by the Minister in charge of Mines withvested authority and according to the provisions of Section 44 2 of Law No. 2016017 of

14December 2016 instituting the Mining Code Hereinafter designated the State on the onehandANDSINOSTEEL CAM S.A. Limited Liability Company governed by Cameroon law with sharecapital of CFA Francs 400000000 and head office located at Rue 1828 BastosEkoudou P.O.Box 252 Yaounde Cameroon registered on 10 October 2008 at the Yaounde Trade andPersonal Property Credit Register RCCM as SINOSTEEL CAM S.A. under numberRCYAO2008B1737 having as Taxpayers number M100800026370U represented by MrZHENGHAO ZHENG in his capacity as General Manager of SINOSTEEL CAM S.A.Hereinafter designated SINOSTEEL CAM S.A. on the other hand.The State and SINOSTEEL CAM S.A. shall be collectively designated as the Parties andindividually as a Party.Mindful of constitution;Mindful of Law No. 2016017 of 14 December 2016 instituting the Mining Code;Considering that mining deposits which include the soil and the subsoil of the territory of theState are and remain the sole property of the State;Considering the importance of the mining sector for the economic and social development ofthe Republic of Cameroon;Considering the will of the State under its mineral resources development programme tofoster and boost private investment in exploring and mining these resources;toawardedLOBEConsidering the findings of the exploration phase purpose of exploration permit number 154No.SINOSTEELcalled00175MINIMIDTSGDMGSDAM of 22 March 2008 as successively renewed by OrdersNo.No.006972MINMIDTSGDMSDCM of 19 November 2013 which established the existence ofthe iron ore deposit at LOBE in the Kribi 1 and Campo SubDivisions Ocean Division SoutRegion Republic of Cameroon;00447MINIMIDTSGDMGSDAM ofCAM S.A.SeptemberOrder2009andby8PRESIDENCE DELA REPUBLIQUE00009PRESIDENCY OF THE REPUBLICAVR0222Considering the findings of the feasibility study ordered by SINOSTEEL CAM S.A. whichdemonstrate that mining the LOBE iron ore deposit is economically profitable as per the taxand customs system under this agreement;Recognizing the rights of the indigenous peoples and local communities of the LOBE;Considering the free prior and informed consent of the indigenous peoples and localpopulations for the execution of LOBE iron ore mining project;HEREBY AGREE AS FOLLWSPRESIDENCE DE LA REPUBLIQUEPART IGENERAL

PROVISIONS 000095 i vnPRESIDENCY OF THE REPUBLICtARTICLE 2. PURPOSE OF THE AGREEMENTThis agreement hereby lays down the rights and obligations of the Parties as stipulated in LawtoNo. 2016017 of 14 December 2016 instituting the Mining Code and guaranteesSINOSTEEL CAM S.A. the stable legal economic fiscal customs and exchange conditionsexplicitly listed within the framework of the LOBE iron ore industrial mining.ARTICLE 2. SCOPE OF THE AGREEMENT1 The rights laid down by this agreement shall only be binding to the Parties herein and theirrespective permitted assignees.2 Shareholders affiliates cocontractors subcontractors consignors and creditors as well asother third party beneficiaries shall benefit in accordance with the terms and conditions of thisagreement from the rights and guarantees granted to them respectively within the frameworkof their activities on the extraction and processing of ores plus the production of iron oreconcentrates in Cameroon.3 Establishment siteThe LOBE industrial mining project is located about 200km SouthEast of the city of DoualaCameroons economic capital and 40km from the seaside city of Kribi from a birds eye view.More specifically it is found in the Kribi and Campo SubDivisions of the Ocean Divisionin the South Region of Cameroon. It covers a total surface area of 138.5 km. The geographicand cadastral coordinates of the permit are annexed in this agreement.4 Detailed of the projecta The Project purpose of this agreement is a largescale mining project of the LOBE ironore found within the mining area. SINOSTEEL CAM S.A. plans to extract 10000000 tonnesof ore per year with 33 of iron and then enrich it to produce 4 four million tonnes of higcontent iron ore concentrates over 60.43A4bThe project purpose of this Agreement comprisesThe development of a mine towards the production of 4 four million tonnes of ironore concentrates per year as initial capacity;the creation of an iron ore enrichment unit;the establishment of a pipeline to transport the enriched iron ore;the setting up of a power generation unit for the project;the continuation of exploration activities within the perimeter of the mining permit;the development of a mining terminal and its related infrastructure for the marketingof products on the international market.ARTICLE 3. DEFINITIONS1 The definitions enshrined in Law No. 2016101 7 of 14December2016 instituting the MiningCode shall apply to the terms used under this agreement.

The terms used under this agreement may however not for any reason override the provisions of the above law.² Under this agreement the following terms not defined by the above law or aimed at supplementing and/or clarifying it shall have the following definitions: Project agreements refers collectively to this agreement, special agreements, the mining permit and individually to one of these documents and any other agreement, certificate or document signed, issued or established in line with the Project. Cocontractors refer to an entity other than the Creditors which within the framework of a contract signed with SINOSTEEL CAM S.A. provides its goods and/or services for the needs of the Project. Force Majeure refers for either of the Parties to any external unpredictable overwhelming and unavoidable event or circumstance for the Party invoking it against its will and beyond its reasonable control which prevents the Party invoking it to fulfil its legal and/or regulatory obligations as well as any other obligation under this agreement and any project agreement to which it is a party. Bank guarantee refers to a collateral which is acceptable and regular for the State at its sole discretion issued by an independent bank located on the territory of the State or not for the amounts mentioned in this agreement. State holding refers to State shares in the share capital of SINOSTEEL CAM S.A. under this agreement as provided by Section 59 of Law No. 2016017 of 14 December 2016 instituting the Mining Code. PRESIDENCE DE LA REPUBLIQUE VISA 0001 AVR 2022 PRESIDENCY Or THE REPUBLIC⁴ Creditor refers to any natural or legal person, national or international financial institution, export credit agency, any credit insurer or any other body which granted SINOSTEEL CAM S.A. a merchant credit, a loan, obligations or any financing or refinancing related to the Project. Product refers to the iron ore extracted within the framework of this agreement. Third Party refers to any person other than a party to the agreement, an entity designated by the State, a subsidiary, a shareholder or any other entity subrogated to the rights of SINOSTEEL CAM S.A.

ARTICLE 4. DURATION OF THE AGREEMENT¹ This agreement shall be valid for a duration equal to that of the mining permit in accordance with Section 56 1 of Law No. 2016017 of 14 December 2016 instituting the Mining Code. It shall have an initial duration of 20 twenty years as from the date of granting of the mining permit.² The renewal of the mining permit shall lead to the

renewal of the mining agreement.

ARTICLE 5. SCOPE OF THE AGREEMENT

1 Economic significance of the project
 The PROJECT seeks to strengthen the existing industrial fabric while strongly boosting Cameroons balance of trade.
 b SINOSTEEL CAM SA plans to create at least 600 direct jobs and more than 1000 indirect jobs.
 c The project seeks to encourage other industries using IRON as raw material to establish themselves in Cameroon.

2 Sociocultural significance of the project
 the project comprises a programme to construct various sociocultural infrastructures .sports centres leisure centres cultural centres etc. which will favour the wellbeing of both the employees and the local communities.

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Technological significance
 Staff working with SINOSTEEL CAM S.A. its cocontractors and subcontractors acquire technology and knowhow through the Learning by doing principle.

4 Technical and financial conditions of the project.

a Technical conditions of the project
 To execute the project and its different components power generation unit mining terminal etc. SINOSTEEL CAM S.A. shall sign with support of the state special agreements within a period of 6 six months as from the date of the signing of this mining agreement.

b Financial conditions of the project
 The project will be financed out of SINOSTEEL CAM S.As own funds up to 30 and bank loans up to 70.

ARTICLE 6. OWNERSHIP OF PRODUCTS AND MARKETING CONDITIONS

1 of Section 52 of the Mining Code.

1 The products shall be owned by SINOSTEEL CAM S.A. pursuant to the provisions
 The products shall be marketed in compliance with national and international market rules.

2 However during the period of the project SINOSTEEL CAM S.A commits to avail
 1 at least 15 fifteen per cent of produced iron ore concentrates for the local market at standard international market price with a discount which takes into account free expenses.

3 The availability of 15 fifteen per cent of iron ore concentrates destined for local processing shall comply with the rules of demand and supply. Nonetheless partial absence on the local market the Minister in charge of Mines may authorize SINOSTEEL CAM S.A. after verification to export part or all of the 15 fifteen per cent.

ARTICLE 7. REGIME OF MOVABLE AND IMMOVABLE PROPERTIES NECESSARY FOR THE REALIZATION OF THE PROJECT

1 The movable property needed for the

execution of the project is the exclusive property of SINOSTEEL CAM S.A.² The constructed immovable property needed for the execution of the project is the exclusive property of SINOSTEEL CAM S.A. Yet at the end of mining the State shall have a right of preference on the acquisition of the said assets. Some assets like roads can be handed over to the State.³ The bare land covered by the exploitation permit shall be registered in the name of the State and made available to SINOSTEEL CAM S.A according to the conditions and modalities defined by the mining code.

PRESIDENCE DE LA REPUBLIQUE² 1 AVR 2022 200 PRESIDENCY OF THE REPUBLIC⁶ PART II RIGHTS AND OBLIGATIONS OF PARTIES ARTICLE TRANSPARENCY⁸. RECIPROCAL OBLIGATIONS GOVERNANCE AND¹ The Parties commit to cooperate to achieve the objectives of this agreement. Each party shall have the obligation to respect its commitments responsibilities and obligations under this its annexes as well as its amendments in accordance with the law and mining agreement regulation in force.⁴ The Parties must comply with international commitment taken by the State and applicable to their activities to improve governance in the mining sector especially those related to the Extractive Industries Transparency Initiative EITI.

SECTION 1 RIGHTS AND OBLIGATIONS OF SINOSTEEL CAM S.A. ARTICLE 9. LOCAL 1 Employment and training of national foreign staff a SINOSTEEL CAM S.A. shall be free to hire and fire in accordance with the Mining Code and the labor code. b However where skills are equal SINOSTEEL CAM S.A. shall give preference of employment to Cameroonian staff. Information on the workforce number level of qualification etc. needed to execute project work will be provided by any individual or body mandated by the State. d For the duration of this agreement SINOSTEEL CAM S.A. shall comply with the labour law and regulation as stipulated in the texts in force especially on safety occupational health and social security.

2 Type of jobs or skills required for the project a Job concerns the components of SINOSTEEL CAM S.A.s activities such as construction ore extraction ore enrichment transportation power generation setting up the mining terminal. b Further clarification on the mapping of positions and jobs at SINOSTEEL CAM S.A. are well detailed and annexed to ent.

PRESIDENCE DE LA REPUBLIQUE AV an ESIDENG Y THE REPUBLIC⁷³ Training and Technology transfer a

SINOSTEEL CAM S.A. commits to offer throughout the project or instruct the main co contractors and/or main subcontractors to offer in-service vocational training programmes on health safety risk management and skills needed for the operational phase of the project with the aim of maximizing the Cameroonization of the workforce and overall to protect local jobs.

b SINOSTEEL CAM S.A. commits to provide or instruct the main co contractors and/or in close collaboration with the relevant State services to provide main subcontractors vocational training structures and programmes for its workforce.

c SINOSTEEL CAM S.A. undertakes to agree with the state of the technical requirements serving as indicators of recognition of the quality of qualified professional in order to help the main co contractors to implement the planned training programs.

4 Recruitment plan

SINOSTEEL CAM S.A. undertakes to achieve during the operation phase and to demand this same objective from main co contractors and main subcontractors the minimum quotas of Cameroonian nationals among their employees who are in the Cameroon and are working on the Project as follows:

- for managerial positions at least 50 fifty per cent of nationals;
- for supervisory positions at least 60 sixty per cent of nationals ;
- for unskilled positions at least 90 ninety per cent of nationals.

o Cb Data on jobs created shall be forwarded to the relevant Government services.

5 Training program

SINOSTEEL CAM S.A. shall forward to the Ministry in charge of mines the job descriptions and the job reference in order to anticipate the training and upgrading programs.

6 Participation in the development of local SMEs

a SINOSTEEL CAM S.A. commits to hire in priority for subcontracting under the Project national SMEs with the necessary capacity to provide goods products materials equipment and services.

7 Social development programme for the local communities

a Within the framework of this project SINOSTEEL CAM S.A. commits in close collaboration with local authorities and all other stakeholder

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8 local communities by implementing its community development programme found in the annex.

b The terms for the management and followup of this programme will be subject to a co management protocol signed between the Ministry in charge of Mines any institution mandated to the effect the

representatives of the population and SINOSTEEL CAM S.A. SINOSTEEL CAM S.A. undertakes to construct within the framework of its operations appropriate lodging facilities as well as medical school sports and recreational facilities for its employees.

ARTICLE 10. LAND AND MINING GUARANTEES

1 The State guarantees to SINOSTEEL CAM S.A. the tenure of the land subject of the mining permit in accordance with the provisions of the mining Code.

2 Pursuant to the provisions of the mining Code SINOSTEEL CAM S.A. shall have movable rights over the resources and property rights over the land.

3 The State guarantees SINOSTEEL CAM S.A. its cocontractors and subcontractors that all administrative permits and procedures to facilitate the mining operations shall be granted in compliance with the regulatory deadlines and conditions.

4 SINOSTEEL CAM S.A. shall under strict respect of the regulation in force have the right to use blasting materials and the elements found within the authorized perimeter.

ARTICLE 11. EXPROPRIATION DAMAGES AND COMPENSATION OF LOCAL COMMUNITIES

1 The conditions for expropriation damages and compensation of local communities shall be those stipulated by the Mining Code.

2 Fees allowances and overall all charges resulting from the execution of procedures to liberate and assign tenure of land shall be borne by SINOSTEEL CAM S.A.

3 The communities concerned by 1 above are those identified by Sections 116 and 118 of Law No. 2016017 of 14 December 2016 instituting the Mining Code.

ARTICLE 12. COMPENSATION IN CASE OF ASSIGNMENT OF THE ASSETS OF SINOSTEEL CAM S.A.

1 The State guarantees that the company SINOSTEEL CAM S.A. and other affiliated companies that their mining facilities the mine and mineral substances from mining the fields and other immovable assets shall not be subject to expropriation.

PRESIDENCE DE LA REPUBLIQUE 0000952 1 AVR 2022 **PRESIDENCY OF THE REPUBLIC** 92 However if circumstances or a particular situation require such measures the State commits in accordance with the law and regulation in force to pay fair compensation for damaged interests as agreed between the parties.

ARTICLE ENVIRONMENTAL PROTECTION 13... **HEALTH HYGIENE OCCUPATIONAL SAFETY AND**

1 General provisions Any harmful health hygiene safety and environmental CAM S.A. shall concern the latter. injury accountable to SINOSTEEL

2 Environment

and Sustainable development.the environment and foster sustainableSINOSTEEL CAM S.A. undertakes to protectto protect living things and local communities within the framework of thisdevelopmentProject as per the regulation in force codes of good practices as well as recognizedinternational standards in this area especially forsoil protection;air emissions;sewage disposal water crossings or water body management;management of tailings solid and liquid waste;noise;spills.As such SINOSTEEL CAM S.A. undertakes in particular to comply with the Environmentaland Social Management Plan of the Project.3 Occupational Hygiene Health and Safetya SINOSTEEL CAM S.A. undertakes to elaborate adopt and comply with rules onoccupational hygiene health and safety as per the law and regulation in force and to instructcocontractors and subcontractors to comply with Quality Hygiene Safety andallEnvironmental plan of the Project.b The rules mentioned in 3 above shall extend to general conditions for theconstruction use and maintenance of project facilities and infrastructure.c SINOSTEEL CAM S.A. shallforward to the State the reports of preventivemaintenance of facilities in accordance with the regulation in force and the provisions of thiagreement.PRESIDENCE DE LA REPUBLIQUE00021AVR 202RESIDENCY OF THE REPUBLIC104 Obligations pertaining to abandonment of facilities and rehabilitation ofaffected sitesSINOSTEEL CAM S.A. undertakes to respect the regulation pertaining to the abandonment offacilities and the rehabilitation of affected sites notably in accordance withSection 9 d of Framework Law No. 96112 of 5 August 1996 relating to EnvironmentalManagement and subsequent texts Section 136 of Law No. 2016017 of 14 December 2016 instituting the mining Code.ARTICLE 14. CONTRIBUTION TO THE MINING POLICY IMPLEMENTATIONFUND1 SINOSTEEL CAM S.A. will be subjected to the payments of amounts owed forabthe Mining Sector Development Fund whose annual contribution is fixed at 2 francsCFA per tone of the gross production of SINOSTEEL CAM S.A.the Mining Site and Quarry Restoration Rehabilitation and Closure Fund whose annualcontribution is fixed according to estimated costs of executing the environmentalpreservation and rehabilitation programme drawn up and approved by mutual agreementby the parties and attached as an annex.Restoration costs are

annual and spread over the life of the mine. The rehabilitation and closure costs are paid into an escrow account provided for this purpose. the Special Account to Develop Local Capacities whose amount of annual contributions agreed between the parties is fixed at 0.5 zero point five per cent of turnover excluding taxes.

c2 The terms for the recovery and management of the contribution to the Special Account to Develop Local Capacities shall be subject to a co-management protocol signed between the Ministry in charge of mines any institution mandated to this effect the representative of the local community and SINOSTEEL CAM S.A.

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ARTICLE 15. PAYMENT OF DUTIES TAXES AND ROYALTIES

1 In addition to ordinary duties and taxes under the tax law in force SINOSTEEL CAM S.A. shall be subjected to the payment of nonrefundable survey and exploration fees the following duties taxes and royalties provided under the Mining Code:

- fixed duties;
- a nonrefundable survey and exploration fees;
- bc Area based royalties;
- d Value based royalties.

2 The amount and the terms of payment of the fixed duties taxes and royalties due are those provided for by Law No. 2016017 of December 14 2016 on the mining Code

ARTICLE 16. MINING PERMIT RIGHTS

1 SINOSTEEL CAM S.A. shall inter alia have the right to access and occupy the land subject of the permit for industrial mining pursuant to the provisions of Section 106 107 and 113 of the Mining Code in a bid to carry out activities relating to the mining title;

- to extract from the earth or below the earth's surface mineral substances by any processor method which complies with the proper rules to extract useful substances;
- to build a beneficiation plant on the land under consideration;
- to process specific minerals subject of the permit for industrial mining on the said field or elsewhere and to declare the other associated substances;
- to erect any other structure necessary for the processing of piles and tailings;
- to remove and pick rocks ground and minerals from the earth before or after processing;
- to withdraw and use water found on or flowing through the field in question needed for mining and beneficiation activities in accordance with the law in force;

ONacDD q0Ozusto carry out any other appropriate action for the execution of mining or beneficiation activities on the field under consideration. to exclusively carry out mining activities on the land subject of the

permit for extraction and all activities thereto related and to only possess ores subject of the said permit.² Notwithstanding the provisions of paragraph 1 above SINOSTEEL CAM S.A. undertakes not to carry on any activity other than that covered by the said mining permit.³ It is agreed that the mining permit shall grant to SINOSTEEL CAM S.A. the exclusive right to occupy and use the sites and infrastructure subject of the project leases to concession or to ownership title for the duration of the mining permit.

ARTICLE 17. INSURANCE¹ SINOSTEEL CAM S.A. commits to subscribe to insurance policies which cover the risks listed in this agreement in accordance with all laws applicable to insurance and the acquisition of appropriate coverage.¹²

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TEEL CAM S.A. shall be ²The subrequired to subscribe to insurance which notably covers the following risks: prejudice or damages caused to the Project facilities and other facilities equipment existing or completed elements within the occupied Project area; professional civil liability for business executives;

ARTICLE 18. ACCOUNTING¹ Accounting provisions SINOSTEEL CAM S.A. undertakes to keep its accounts in accordance with OHADA accounting principles as well as the provisions of article 189 of the Mining Code.² Accounting reports SINOSTEEL CAM S.A. undertakes to send annually to the Minister in charge of mines with a copy to the Minister in charge of finance a financial report including the income statement and the balance sheet.³ Depreciation of investments a SINOSTEEL CAM SA recognizes that the State has the right to carry out at its expense via a body approved by the State a second opinion audit of the total amount of investments during the research phase previously audited by the firm PRICE WATER HOUSE directly mandated by SINOSTEEL CAM SA .b The new amount obtained from the audit will be approved by joint order of the Ministers responsible for mines and finance and then mentioned in this agreement as an amendment to the agreement.c SINOSTEEL CAM SA acknowledges having waived the list of fixed assets eligible for accelerated depreciation.d SINOSTEEL CAM SA can benefit from the reimbursement of VAT on the elements necessary for its activity under the conditions set by the General Tax Code.⁴ Procedure to open hold and close bank accounts in Cameroon in foreign currencies a Within the framework of implementation and operation

of the Project subject of this agreement SINOSTEEL CAM S.A. shall have the right to open accounts in local currency within credit institutions of their choice duly approved by the State.^b The opening of bank accounts on the national territory in foreign currencies by SINOSTEEL CAM S.A. shall be subjected to the principle of freedom of choice stated in above provided that it however complies with the conditions thereof.

13VISA1 AVhoce fixed by the bankingc The terms and cond PRES DENCY.conditions of credit institutions where the said accounts are lodged the relevant provisions ofthe aforementioned Regulation and its subsequent amendments.THE REPUB5 Indexing according to business environment of mineral substancesSINOSTEEL undertakes to negotiate with the State the conditions for the implementation ofindexation clauses to the economic environment of mineral substances in the event of a changein the conditions which would significantly affect the interests of the Parties duly noted by thelatter.

ARTICLE 19. ARCHAEOLOGICAL EXCAVATIONS AND TREASURES¹ Any archaeological wealth treasures or other elements deemed valuable discovered duringthe execution of works are and remain the property of the State. These discoveries shallimmediately be declared by SINOSTEEL CAM S.A. to the Ministry in charge of Culture.² When the perimeter undergoes archaeological excavations SINOSTEEL CAM S.A.undertakes to work in a way that does not hamper continuation or conduct of excavation.³ SINOSTEEL CAM S.A. also undertakes to preserve the cultural heritage of the indigenouspeoples and local communities within the framework of implementation of its project.

SECTION 2RIGHTS AND OBLIGATIONSS OF THE STATEARTICLE 20. STATE HOLDING¹Mining permit subject of this agreement compulsorily awards to the State 10ten per cent of the shares of SINOSTEEL CAM S.A.. free of charge. The states stake cannotbe diluted in the event of an increase in the share capital of Sinosteel Cam S.A.²In addition to the 10 free shares allocated under paragraph 1 above,the parties agree at the express request of the State of Cameroon on a productionsharing mechanism by allocating to the State one percent 1 of the ironconcentrate produced by SINOSTEEL CAM S.A. as from the first productionunder the conditions and according to the modalities to be defined by agreementbetween the parties.³ Notwithstanding the provisions of 1 above the State

may at its own cost and after agreement by the Parties increase its holding in the social capital which shares shall not exceed the additional 25 twenty five per cent in accordance with Section 592 of the Mining Code.⁴ At the time of its integration in the share capital of SINOSTEEL CAM SA the State or the public body duly mandated by the State shall sign with SINOSTEEL CAM as shareholders agreement which shall specify in particular the rules relating to the share capital the exercise of voting rights and the conditions of participation in the organization and functioning of SINOSTEEL CAM. SA.¹⁴⁰⁰⁰⁰⁹⁵ CYDENCY1 AVR 2022 REPUB Cent institution and the 5 Rules of association for commercial companies Parties to the agreement When during SINOSTEEL CAM S.A.s evolution mentioned in 1 above there is a transfer of shares from another shareholder the State or Government institution designated to this effect shall have priority over the said shares. In this case the State or designated Government institution may transfer the said shares to private operators or to a new strategic partner within a maximum period of 5 five years. The transfer shall be approved by decree of the President of the Republic.

ARTICLE 21. GENERAL GUARANTEES¹ Under this agreement SINOSTEEL CAM S.A. shall benefit guarantees and advantages stipulated by the law instituting by Mining Code. from general As such the State shall provide its support towards achieving the purpose of this agreement. It shall guarantee that all the obligations stipulated under its responsibility will be executed according to legislative and regulatory provisions and this agreement either by itself or any institution mandated by it thereof.² In the line of their professional activities foreign employers and workers of SINOSTEEL CAM .A. for any reason under this agreement or the execution of their activities shall be subject without discrimination to the law and regulation in force.³ Subject to the law and regulation in force and international agreements SINOSTEEL CAM S.A. as well as all natural and corporate bodies linked to the Project for any reason and established lawfully shall benefit from the right to dispose freely of their property and to organize their business in their own way; the freedom to hire and to fire; the free choice of suppliers and service providers; the free access to raw materials and inputs; the free movement within the territory of their semifinished and finished products.

ARTICLE 22. LEGAL FISCAL AND CUSTOMS STABILITY¹ The State shall

guarantee SINOSTEEL CAM S.A. the legal fiscal and customs stability under the conditions fixed by Law No. 2016017 of 14 December 2016 instituting the Mining Code notably Sections 177 et seq. and 190 of the above law. This includes the stability of rates and rules for tax base duties and fees applicable to SINOSTEEL CAM S.A. under this agreement; the stability of the legal fiscal customs and exchange regime; the stability of the terms and conditions of this agreement; tax incentives and customs exemptions;¹⁵² The period of stability enjoyed by SINOSTEEL CAM S.A is the mining period that enables her to reach a fifteen percent 15 internal rate return as indicated in the feasibility study and entered in the mining convention. In any case SINOSTEEL CAM S.A cannot claim legal and fiscal customs stability for a period exceeding fifteen 15 years of operation.³ No modification to the legal and fiscal and customs regime currently in force in Cameroon likely to have a negative effect on the rights and obligations of SINOSTEEL CAM S.A as it results from this agreement will be applicable to SINOSTEEL CAM S.A.

ARTICLE 23. CUSTOMS INCENTIVES In the operating phase covered by an operating permit SINOSTEEL CAM S.A is subject to the common law customs regime with the exception of the following specific customs advantages during the period of installation or construction of the mine: exemption from taxes and customs duties on equipment materials inputs and capital goods necessary for production as well as on the first batch of spare parts which should accompany the startup equipment with the exception of passenger vehicles office equipment and supplies; exemption from taxes and customs duties on replacement of equipment in the event of a technical incident and on equipment to be used for expending the mining operation; exemption from taxes and customs duties on the importation of inputs materials and equipment needed for the construction of buildings as well as on specific lubricants up to the date of the first commercial production established by a joint order of the Minister in charge of mines and the Minister in charge of finance. The above customs exemptions shall not exclude taxes on services provided.

ARTICLE 24. TAX INCENTIVES¹ In the operating phase covered by an operating permit SINOSTEEL CAM S.A is subject to the common law tax regime with the exception of the following specific tax advantages during the period of installation or construction of the mine:

Payment of registration fees on corporation company duration extension and capital increase deeds spread out over a period of one (01) year. Such fees may be split and paid as follows: The first third upon submission of incorporation deed; The second third and final third semiannually.

b Extension of four (04) years.

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16 Products intended for export shall be liable to a zero (0) VAT rate where such products are liable to this tax. However products meant for consumption on the domestic market shall be liable to the duties and taxes levied on similar imported products.

2 SINOSTEEL CAM S.A. deeds shall be exempt from payment of registration fees and stamp duty up to the date of the first commercial production with the exception of deeds on leasing and renting of accommodation premises.

ARTICLE 25. EXCHANGE GUARANTEES

1 It is acknowledged that under this agreement the freedom to transfer capital and income shall be guaranteed to foreign natural and corporate bodies carrying out mining investment financed by currency contribution.

2 Foreigners may carry out mining investments or be employed at SINOSTEEL CAM S.A. They would have the right pursuant to the relevant exchange regulation to transfer in the currency exchanged during the deployment of the said investments dividends products of all nature invested capital products from the liquidation or closure of assets salaries as well as social contributions and pension funds.

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ARTICLE 26. NONDISCRIMINATION

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1 Through the duration of this agreement Cameroon benefits from one or several conditions which on the whole are considered by SINOSTEEL CAM S.A. as more favourable than those in this agreement the beneficial conditions may be granted to SINOSTEEL CAM S.A. at its request.

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2 The guarantees granted under this agreement to SINOSTEEL CAM S.A. and to third party beneficiaries shall remain valid without consideration of any other less favourable conditions applicable to other companies engaged in similar activities even though such conditions may result from amendments to Cameroon law.

ARTICLE 27. MINING INFORMATION AND CONFIDENTIALITY

1 The State hereby acknowledges that the agreement its annexes and all information on the execution of this agreement all reports results of analysis order

books geological and mining data maps and all other information received from SINOSTEEL CAM S.A. either through inspection or otherwise shall be subject visavis third parties to confidential handling by the Parties. They shall constitute Industrial Secrets.¹⁷² The State guarantees SINOSTEEL CAM S.A. that none of its agents or workers should communicate these industrial secrets to third parties without the prior written agreement of SINOSTEEL CAM S.A. The latter shall claim compensation for damage resulting from noncompliance by the State of its commitment not to disclose industrial secrets during the validity of the mining permit.³ However this obligation of confidentiality stated in 1 above shall not contain information in the public domain; previously known by one Party before communicating it under this agreement; lawfully obtained from third parties who themselves obtained them lawfully and are neither subject to any restriction to disclose nor obligation of confidentiality; or Local as stipulated in this agreement.⁴ Without prejudice to the provisions of 1 above the Parties shall have the possibility to forward the report of activities relating to mining information and data collection in accordance with regulatory provisions in force notably to the following persons: the authorities in charge of regulation and surveillance and their affiliated companies as well as stock market authorities if themselves or their affiliated companies are lawfully required to do so; legal or arbitral bodies in the case of pending proceedings; their affiliated companies on the understanding that the Party which communicates this information to an affiliated company guarantees to the other Party that the said affiliated beneficiary of the information shall comply with the obligation of confidentiality; to their subcontractors and workers of subcontractors for mining activities; counsellors and consultants to direct or indirect potential buyers of all or part of the social capital as well as their counsellors still on the understanding that the beneficiaries of this information must have signed a prior confidentiality agreement or be subjected to an obligation of confidentiality by virtue of their duties; to workers executives leaders agents of the liquidator or an affiliated company subject to respecting the confidentiality agreement on the understanding that the disclosing Party shall assume the responsibility of any violation of this article by these persons; or to creditors and to its investors within the framework of financing mining operations subject to the

signing of a prior confidentiality agreement.ePRESIDENCE DE LA
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ADMINISTRATIVESURVEILLANCEAND TECHNICALARTICLECONTROLS1 During the
operational phase SINOSTEEL CAM S.A. shall be subjected toadministrative surveillance and
technical controls provided by the administration in charge ofmines other relevant Government
services or any duly mandated institution under theconditions provided by the regulation in force.2
Administrative surveillance and technical controls may be subject to administrativesanctions and
punishment of offences as per the provisions of PART X of Law No. 2016017of 14 December 2016
instituting the Mining Code.ARTICLE 29. RIGHTS AND OBLIGATIONS OF INSTITUTIONS
MANDATED BYTHE STATE TO MANAGE ITS COMMERCIAL INTERESTS1 The State shall have
the right to mandate institutions in charge of managing itscommercial interests resulting from this
agreement. In the case where the State uses this rightit shall notify the mandate to SINOSTEEL
CAM S.A. and all other companies involved in theproject if necessary.2 The notification should
present inter alia the exact identification of the mandatedinstitution the person authorized to
represent the institution the scope and duration of itspowers. The notification must be made prior to
the exercise of the mandate.However the State shall] act as a guarantor of the execution of allits
obligations and beaccountable for all actions taken by the mandated institution within the framework
of managingits commercial interests.PART IIMISCELLANEOUS AND FINAL PROVISIONSARTICLE
30. TERMS AND CONDITIONS FOR THE AWARD RENEWAL ANDWITHDRAWAL OF LICENCES
AND PERMITS NEEDED FOR THE EXECUTIONOF PROJECTS1 The Parties acknowledge that
the different activities related to the subject of thisagreement shall be subordinated where relevant
to the obtainment of each prior administrativein accordance with legislative or regulatory
instrumentslicence or the issues of Permitgoverning the sector of the project concerned.In this
respect SINOSTEEL CAM S.A. undertakes to comply with the terms andconditions for the award
renewal and withdrawal of the said licences and permits as the casVISAPRESIDENCE DE LA
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legislative or regulatory instruments governing each of the activities subjects of this mining agreement.² The State through the Ministry in charge of mines shall take all necessary measures to ensure issuance by the Government services concerned of the necessary licences and permits for the execution of the said projects within deadlines fixed by the regulation in force.

ARTICLE 31. THIRD PARTY ACCESS RIGHTS¹ Any other operator requesting the use of the infrastructure constructed by in addition to complying with the SINOSTEEL CAM S.A. within the project perimeter conditions fixed by SINOSTEEL CAM S.A. shall be required to comply with the law in force notably Sections 129 to 132 of the Mining Code.² The access of third parties to facilities and infrastructure dedicated to project purpose of this agreement shall be subject to the prior authorization of SINOSTEEL CAM S.A. as appropriate.

ARTICLE 32. AMENDMENT OF THE AGREEMENT This agreement can be amended only by written agreement between the parties.

ARTICLE 33. SUSPENSION OF OPERATIONS¹ When SINOSTEEL CAM S.A. will envisage a suspension of operations for inform the Minister in charge of mines in writing with supporting whatever reason; documents. The Parties to this agreement will meet to discuss on the relevance of the measure without prior interruption to mining activities. it shall² Beyond a period of 45 days without reply from the Minister in charge of mines as from the date of reception of the letter from the mining company the latter may halt its activities. In case of force majeure the suspension shall run from the date of occurrence of³ the said force majeure.

ARTICLE 34. NONWAIVER OF RIGHTS¹ Each Party shall have the obligation to comply with the commitments responsibilities and duties assigned to them by this agreement

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PRESIDENCY OF THE REPUBLIC² The fact that one of the Parties shall not require the other Party to strictly execute the terms and conditions of this agreement or that it takes the necessary measures at its disposal to ensure execution shall not be considered as a waiver to whatever rights are assigned to it within the framework of this agreement.

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ARTICLE 35. SETTLEMENT OF DISPUTES00009

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settlementa The Parties undertake to amicably settle any conflict or research programmesb Where the conflictthe interpretation or application of this agreement within a period of 90 ninety days as fromthe date of notification to the other party of the intention to amicably settle the said conflict.issues notably work and expenditureis on purely technicalfeasibility studies handling operations and safety measures the Parties shall refer it to an independent expert reputed for its technical skillsjointly chosen on the basis of its technical and professional skills.c When the Parties do not agree on the designation of the expert each of the Partieshall designate an expert; both experts shall then include a third one who they shall jointlydesignate. In case of disagreement by the first two experts on the designation of the third expertthe latter shall be subject to a designation by the President of the High Court of the place ofoperation of the mining title.d The findings of the experts shall be presented within a maximum period of 60sixty days as from the date of the designation of the expert or the third expert. It shall be final The fees of the experts shall be borne by both Parties whose allocation shall be In case of no amicable settlement the Parties agree to resort to the provisions of 2subject to special agreement.and binding.below to resolve their conflicts.diligent Party.2 Litigationa Any dispute between the Parties to this agreement shall permanently be settled byarbitration in accordance with arbitration rules Arbitration Rules of the Arbitration Centreof the OHADA Common Court of Justice and Arbitration at Abidjan at the request of the moreb The Parties to arbitration shall take care of their own arbitration fees and shall sharec The State within the framework of arbitration by virtue of this article shall waive in equal parts the fees of arbitrators and the panel.right to claim immunity from the jurisdiction of the arbitration tribunal.21d Until the final ruling the Parties commit to take interim measures which they deemnecessary for the protection of people goods and this agreement.However no substituted entity shall have the right to agree to amendments or modifications ofthis agreement.ARTICLE 36. ASSIGNMENT AND TRANSFER OF RIGHTSREPLACEMENT OFCREDITORS1 The duties and obligations resulting from this agreement may be assigned pledgedto any lender or creditor as well as theirleased by SINOSTEEL CAM S.A.transferredsuccessors and assigns.2 The assignment the

enforcement of a pledge or the transfer of rights resulting from this agreement shall automatically carry unless otherwise specified in the deed of assignment the transfer of all buildings structures and facilities belonging to transfer or pledge SINOSTEEL CAM S.A. as well as the advantage of allotment for tenure of access rights to lands as stipulated by the Mining Code and the provisions of this agreement.³ Any transfer of rights conferred by this agreement shall be subject to the approval of the Minister in charge of mines.⁴ The shares of the companies likely to be created under the mining agreement shall be subscribed held and ceded in accordance with the regulation in force notably the revised OHADA Uniform Act on Commercial Companies and Economic Interest Groups and the Mining Code.

ARTICLE 37. LANGUAGE OF THE AGREEMENT This agreement shall be drafted in English and in French and the two versions shall have equal value.

ARTICLE 38. FORCE MAJEURE¹ Under this agreement force majeure should be considered as defined in Article 1 of this agreement.² If one party finds it impossible to full or partially fulfil its obligations arising from this agreement due to a case of force majeure as defined above it must inform the other party in writing within 20 days following the occurrence of the event by indicating the reasons except for material impossibility.³ The performance of assigned obligations shall be subject to a suspension for PRESIDENCE DE LA REPUBLIQUE VISA 00009 m a AVR PRESIDENCY OF THE REPUBLIC 910922 In case of the resumption of activities the mining permit and the agreement shall⁴ be extended for a period equal to that of the suspension.

ARTICLE 39. RIGHTS AND OBLIGATIONS AT THE END OF THE AGREEMENT¹ Upon expiry of the mining permit and this agreement SINOSTEEL CAM S.A. shall according to a prior validated and approved timetable by the Minister in charge of Mines dismantle according to standard practice all facilities of the project found on the land subject of the mining title. SINOSTEEL CAM S.A. may export all these equipment in accordance with the conditions in force.² SINOSTEEL CAM S.A. shall have the right to assign its assets to any individual or company of its choice. However if the State wishes to acquire them it must react to the sale offer within a period of not more than 120 one hundred and twenty days as from the notification by SINOSTEEL CAM S.A. of a sale offer including prices. Beyond this

period SINOSTEEL CAM S.A. shall be free to sell its assets while excluding the State.³ The assets shall be assigned to the State in exchange of a price corresponding to their exact market value if it is the lone potential buyer or to the price of the highest bidder in case of many potential buyers. In case of assignment to the State as provided for in 3 above the price of assignment to the State shall not be lower than market value. Assets purchased by the State will be transferred in exchange for payment.⁴ In case of non-dismantling within the deadlines fixed by the Minister in charge of mines the latter will take measures for the facilities of the project to be auctioned publicly or by public call to tender. The proceeds from the sale shall be paid into the public treasury.⁵ When upon expiry of the mining title and mining agreement SINOSTEEL CAM S.A. does not retrieve the other extracted ores; they shall become the property of the State.⁶ SINOSTEEL is required to pay the duties and taxes still payable and to comply with the obligations incumbent on it with regard to the environment and the rehabilitation of mined sites.⁷ All social and leisure centres and remote infrastructures such as health centres and school sites created by SINOSTEEL CAM S.A. under this project shall belong to the State as of right at the end of the project.

ARTICLE 40. END OF CONVENTION¹ This agreement terminates either before term or at term. By termination by agreement of the Parties when the Parties deem it to be mutually beneficial.

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REPUBLIC^{23b} By waiver or termination of SINOSTEEL CAM SA in the event of the State's failure to meet its obligations. In this case SINOSTEEL CAM SA undertakes to seize by correspondence against discharge the State by identifying the alleged breach indicating the time limits within which the company wishes the State to remedy the breaches and possibly specifying the measures required. It advocates in order putting an end to the alleged breaches in the best operational and security conditions; When at the end of this period the State has not remedied the said breach SINOSTEEL CAM SA can either pronounce without recourse to the judge and without prejudice to the compensation by the State of the damage suffered the termination of the corresponding agreement or request payment by the State of damages in compensation for the damages suffered.

c By withdrawal of the operating license of SINOSTEEL CAM SA in the event

of breaches of its obligations and after an unsuccessful formal notice within a period not exceeding ninety 90 clear days or without justification by SINOSTEEL CAM SA for the reasons why it cannot implement the measures recommended in said formal notice in accordance with the provisions of articles 57 4 211 and 213 of the Mining Code. d By expiration of the initial duration of the operating license of SINOSTEEL CAMSA or by exceeding the renewal deadlines or by the States refusal to renew said license in the event of noncompliance with the renewal conditions in accordance with the provisions of article 212 of the Mining Code. 2 Withdrawal and renunciation also imply the termination of the lease after payment of the rent due.

ARTICLE 41. CONFLICT OF INTEREST

1 Executives and workers of SINOSTEEL CAM S.A. may not under threat of interests in the direct or indirect subcontracting sanctions have direct or indirect financial companies and other companies with any financial interest in SINOSTEEL CAM S.A.

2 Civil servants within public administration and staff of public institutions attached or under the supervision of the Ministry in charge of mines may not have direct or indirect financial interests in SINOSTEEL CAM S.A. and in the direct and indirect subcontractors of SINOSTEEL CAM S.A.

3 Without prejudice to 2 above these civil servants and public workers mentioned above shall be required under threat of sanction provided in the regulation in force to declare their interest and/or decline jurisdiction in any decision making with a direct or indirect influence on their interests within SINOSTEEL CAM S.A.

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ARTICLE 42. APPLICABLE LAW

This agreement and any dispute or claim arising from its or training or thereto related shall be governed and interpreted in accordance with the legislation and principles of Cameroon law including international treaties and commitments to which Cameroon is a party.

ARTICLE 43. ANNEXES AND TO THE AGREEMENT

The and annexes attached to this agreement shall form an integral part of the agreement.

ARTICLE 44. SPECIAL AGREEMENTS

This agreement shall be subject to special agreements signed between the Parties to handle specific issues with the concerned Government services.

ARTICLE 45. MONITORING THE IMPLEMENTATION OF THE CONVENTION

The Parties agree to the establishment of an interministerial committee by the Minister in charge of mines to

monitor the implementation of this convention. The local or indigenous populations near the mine as well as civil society participate in the monitoring activities of the said Committee.

ARTICLE 46. ENTRY INTO FORCE

This agreement signed between the State and SINOSTEEL CAM S.A shall enter into force as from the date of notification and availability of the mining permit to SINOSTEEL CAM S.A.

ARTICLE 47. REGISTRATION

This agreement shall be drafted printed and registered at the expense of SINOSTEEL CAM S.A.

ARTICLE 48. NOTIFICATIONS

1 Means of issuance

All communication or notification to Parties provided under this agreement shall be drafted in English or in French and shall be done by any means that leaves a written record.

2 Addressees

a The notifications to the State shall be sent to the address below or to any other address provided as a replacement in compliance with this Agreement

PRESIDENCE DE LA REPUBLIQUE
VISA 000091
AVR 2022
PRESIDENCY OF THE REPUBLIC
REPUBLIC OF CAMEROON
Ministry in charge of Mines
Yaounde Republic of Cameroon
and copy sent to SINOSTEEL CAM S.A.
To Mr Managing Director of SINOSTEEL CAM S.A
Street 1828 Bastos Ekoudou
P. O. Box 252 YAOUNDE CAMEROON

b The notifications to SINOSTEEL CAM S.A. shall be sent to the address below or to any other address provided as a replacement in compliance with this Agreement

SINOSTEEL CAM S.A.
To Mr Managing Director of SINOSTEEL CAM S.A
Street 1828 Bastos Ekoudou
P. O. Box 252 YAOUNDE CAMEROON

ANNEXES

Geographical and cadastral map of the mining site and its location with the area and the geographical coordinates;
Reserves certification report
Powers given by the Investor to the signatory of this agreement;
Detailed layout plan ;
Mapping of positions and jobs.

PRESIDENCE DE LA REPUBLIQUE
000 09 5 12 AVR 022
PRESIDENCY OF THE REPUBLIC
26
DONE IN YAOUNDE ON FOR SINOSTEEL CAM S.A.
FOR THE
REPUBLIC OF CAMEROON
QONCELC 2
apias
The Managing Director
MINISTER OF MINES
INDUSTRY AND TECHNOLOGICAL DEVELOPMENT
PRESIDENCE DE LA REPUBLIQUE
VISA 000091 AVR 022
ESIDENCY OF THE REPUBLIC
27
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SHARING CONTRACT This Contract is made this day of 2014 among THE PRESIDENT OF THE
REPUBLIC OF TRINIDAD AND TOBAGO His Excellency Anthony Thomas Aquinas Carmona
Intendant of State Lands hereinafter referred to as the President of the FIRST PART The MINISTER
OF ENERGY AND ENERGY AFFAIRS Senator the Honourable Kevin Ramnarine hereinafter
referred to as the Minister of the SECOND PART and with limited liability organised and registered
in the United Kingdom and registered as an External Company under the Companies Act Chap.
8101 of the Laws of the Republic of Trinidad and Tobago with its principal office in Trinidad and
Tobago situate at in the City of Port of Spain in the Island of Trinidad hereinafter referred to as
Contractor of the THIRD PART. WHEREAS Section 3 of the Petroleum Act Chapter 6201 of the
Laws of the Republic of Trinidad and Tobago hereinafter referred to as the Act provides that Public
Petroleum Rights as defined in the Act are vested in the State and are exercisable by the President
on behalf of the State. AND WHEREAS pursuant to Section 63 of the Act the Minister is authorized
to enter into Production Sharing Contracts for the carrying out of Petroleum Operations upon such
terms and conditions as the Cabinet may approve. AND WHEREAS the Commissioner of State
Lands has the 9 PRODUCTION SHARING CONTRACT BLOCK requisite authority to sign this
Contract on behalf of the President of the Republic of Trinidad and Tobago pursuant to Section 42
of the State Lands Act Chapter 5701 of the Laws of the Republic of Trinidad and Tobago. AND
WHEREAS the Minister acting as the agent of the Government is responsible for the collection of
revenues accruing under this Contract. AND WHEREAS the Minister under Regulation 4 of the
Petroleum Regulations made under the Act issued on the 14th day of August 2013 the Petroleum
Regulations Deep Water Competitive Bidding Order 2013 published as Legal Notice No.164 of 2013
by which bids were invited for certain submarine areas described in the First Schedule therein. AND

WHEREAS Contractor submitted a bid on the day of 2013 in accordance with and pursuant to the said Order. AND WHEREAS Contractor has represented to the Minister that it has the requisite technical and financial capabilities to carry out Petroleum Operations and wishes to assist the Government in thoroughly evaluating the Petroleum potential and promptly and efficiently developing Petroleum discovered in the Contract Area. AND WHEREAS on the day of 2014 Cabinet approved this Contract. NOW therefore in consideration of the premises mutual covenants and conditions herein contained it is hereby agreed as follows

10 PRODUCTION SHARING CONTRACT BLOCK ARTICLE 1 DEFINITIONS The following words and terms used in this Contract shall unless otherwise expressly specified in the Contract have the following respective meanings

1.1 Procedure set out in Annex C hereto. Accounting Procedure means the Accounting

1.2 the Laws of the Republic of Trinidad and Tobago. Act means The Petroleum Act Chapter 6201 of 1.3 within the meaning of this Article

1.3. Affiliate means an affiliated body corporate

1 For the purposes of this Contract a one body corporate is affiliated with another body corporate if one of them is the subsidiary of the other or both are subsidiaries of the same body corporate or each of them is controlled by the same person; and if two bodies corporate are affiliated with the same body corporate at the same time they are affiliated with each other.

11 PRODUCTION SHARING CONTRACT BLOCK 2 For the purposes of this Contract

aa body corporate is the holding body corporate of another if that other body corporate is its subsidiary; and

ba body corporate is a subsidiary of another body corporate if it is controlled by that other body corporate.

3 For the purpose of this definition control in relation to a body corporate means the power of a person to ensure by the holding of shares or the possession of voting power in relation to that body corporate; or by any other power conferred by the articles of incorporation or other document regulating the body corporate that the business and affairs of the body corporate are conducted in accordance with the wishes of that person. Appraisal or Appraisal Programme means all

1.4 works carried out by Contractor following a Discovery of Petroleum in the Contract Area for the purpose of delineating one or more Petroleum reservoirs to which that Discovery relates in terms of thickness and lateral

extent and in order to further define the quantity of recoverable Petroleum therein. 1.5 Appraisal Area means that area surrounding a Discovery encompassing the geological structure or 12 PRODUCTION SHARING CONTRACT BLOCK feature of the Discovery and a reasonable margin not exceeding 0.5km as approved by the Minister from time to time. 1.6 Arms Length means the relationship that exists between two or more entities where neither of such entities exerts or is in a position to exert significant influence on any of the other entities having regard to all relevant factors. Assessment Plan means a plan submitted pursuant 1.7 to Article 13.3 for the purpose of evaluating a Natural Gas Discovery in sufficient detail to be able to seek a market or markets for the Natural Gas. 1.8 Associated Natural Gas means all Natural Gas produced from any reservoir the predominant production of which is Crude Oil and which is separated from Crude Oil in accordance with normal oilfield practice including free gas cap but shall exclude any liquid hydrocarbon extracted from such gas either by normal field separation dehydration or in a gas plant. Available Crude Oil means all Crude Oil 1.9 produced and saved from the Contract Area and not used in Petroleum Operations. Available Natural Gas means all Natural Gas 1.10 produced and saved from the Contract Area and not used in Petroleum Operations. 1.11 Oil and Available Natural Gas. Available Petroleum means all Available Crude Barrel means a unit of volume equal to forty1.12 two 42 United States gallons liquid measure corrected to a temperature of sixty 60 degrees Fahrenheit and 13 PRODUCTION SHARING CONTRACT BLOCK fourteen point seven 14.7 p.s.i.a. 1.13 Calendar Quarter means a period of three 3 consecutive Months beginning on the first day of January April July or October. 1.14 Calendar Year means a period of twelve 12 consecutive Months beginning on the first day of January and ending on the following thirtyfirst day of December in the same year. 1.15 Commercial Discovery means a Discovery that Contractor proposes to develop and produce under the terms of this Contract. 1.16 Commercial Production means regular and continuous production of Petroleum from a Production Area pursuant to an annual Development and Production Work Programme approved under Article 15. Condensate means the portion of Natural Gas of 1.17 such composition that is in the gaseous phase at temperature and pressure of the

reservoirs but that when produced is in the liquid phase at surface pressure and temperature. It is liquid at the standard conditions of temperature and pressure 60 degrees Fahrenheit and 14.7 p.s.i.a. at the point of measurement of its volume. 1.18 Contract or Production Sharing Contract means this Contract and any subsequent written amendments. 1.19. Contract Area means the area specified in Article 3 hereof and delineated on the map set out in Annex A as modified and reconfigured from time to time in accordance with the stipulations of this Contract. 1.20 Contractor means . and 14 PRODUCTION SHARING CONTRACT BLOCK includes its respective successors and permitted assignees. Contract Year means a period of twelve 12 1.21 consecutive months within the term of this Contract beginning on the Effective Date or any anniversary thereof. 1.22 Contractor Natural Gas is the share of the Natural Gas Production from the Contract Area that is represented by Contractor Cost Recovery Natural Gas and Contractors share of Profit Natural Gas. Contractor Party means an entity that is a 1.23. signatory to this Contract or an entity to which a working interest is assigned pursuant to this Contract. Coordination Committee means the committee 1.24. composed of representatives of the Minister and Contractor constituted in accordance with Article 9. 1.25 Cost Recovery means the recovery of costs and expenses in accordance with Article 18.7. 1.26 Crude Oil means any hydrocarbon produced from the Contract Area which at standard conditions of temperature and pressure 60 degrees Fahrenheit and 14.7 p.s.i.a. is in a liquid state at the wellhead or separator or distillate and Condensate which is extracted from gas or casinghead gas in a plant. 1.27 Development or Development Operations or Development Work shall include but not be limited to i all the operations and activities under the Contract with respect to the drilling of wells other than Exploration Wells and 15 PRODUCTION SHARING CONTRACT BLOCK the with together Appraisal wells the deepening plugging back completing and equipping of such wells design construction and installation of such equipment lines installations production units and all other systems relating to such wells as may be necessary in conformity with sound oilfield prevailing environmental practices in the international Petroleum industry; pipelines generally and or ii all operations and activities relative to the servicing and

maintenance of pipelines lines installations production units and all related activities for Production and management of wells. 1.28 Development Plan means the plan for the development of a Commercial Discovery as provided in Article 13.7ai and 13.8. 1.29 Discovery means any Petroleum not previously known to have existed which is recovered at the surface in a flow measurable by conventional Petroleum industry testing methods. 1.30 Contract has been signed by all Parties. Effective Date means the date on which this Energy Equivalent Basis means the equivalent of 1.31 Natural Gas in Barrels of Crude Oil with six thousand 6000 standard cubic feet of Natural Gas being equivalent to one 1 Barrel of Crude Oil. 1.32 Exploration or Exploration Operations means operations which shall include but not be limited to such 16 PRODUCTION SHARING CONTRACT BLOCK geological geophysical and other surveys and any interpretation of data relating thereto and the drilling of such shot holes core holes stratigraphic tests Exploration Wells for the Discovery of Petroleum Appraisal of Discoveries and other related operations. 1.33 Exploration Period means the period not exceeding nine 9 Contract Years from the Effective Date divided into up to three 3 phases as provided for in Article 4.1. 1.34 Exploration Well means any well drilled with the objective of confirming a geologic trap in which Petroleum has not been previously discovered. 1.35 export oriented markets including but not limited to Export Market means Natural Gas export and a exports of LNG and CNG; b energy use in LNG liquefaction and terminal facilities; c exports through a gas pipeline; d use for any GTL project. Fair Market Value means the price at which 1.36 Crude Oil or Natural Gas could be sold or machinery materials or services of similar quality could be supplied on similar terms at similar times and at a similar location by parties under no compulsion to buy or sell and are trading on an Arms Length basis. 1.37 Field means an area within the Contract Area consisting of a Petroleum reservoir or multiple Petroleum reservoirs all grouped on or related to the same 17 PRODUCTION SHARING CONTRACT BLOCK individual geological structural feature or stratigraphic conditions from which Petroleum may be produced commercially. 1.38 Force Majeure shall mean any event beyond the reasonable control of Contractor and includes war insurrection civil commotion storm tidal wave flood epidemic fire or earthquake. 1.39 Republic of Trinidad and

Tobago. Government shall mean the Government of the 1.40 Internal Market means the Natural Gas market in Trinidad and Tobago including without limitation Natural Gas sold to refineries electricity generating facilities petrochemical manufacturers and other industrial commercial and domestic customers in Trinidad and Tobago but expressly excludes Export Markets. consumption local for Local means the local component of 1.41 goods services and human resources employed in the conduct of Petroleum Operations under this Contract. 1.42 Local Policy means the policy of the Government with respect to Local as stated in this Contract and in the relevant policy documents. 1.43 Local Enterprise means a person firm or entity performing works services and/or supplying goods and materials to Contractor whether as a Subcontractor or otherwise whose business enterprise is incorporated or otherwise organised under the Laws of Trinidad and Tobago and whose principal place of business is in Trinidad and Tobago and which is effectively owned and controlled by nationals of Trinidad and Tobago. 18 PRODUCTION SHARING CONTRACT BLOCK Local Goods means materials and/or equipment 1.44 mined grown or produced in Trinidad and Tobago whether through manufacturing processing or assembly. An article which is produced by manufacturing processing or assembly must differ substantially in its basic characteristics purpose or utility from any of its imported components. Manufactured goods would be considered to be of local origin if the cost of the local materials labour and services used to produce the item constitute not less than fifty 50 per cent of the cost of the finished product. 1.45 performed or supplied by a Local Enterprise. Local Services means works or services 1.46 Measurement Point means the location specified in the approved Development Plan within or outside of the Contract Area where the Petroleum is metered and delivered to the Minister and Contractor. Minimum Exploration Work Programme means the 1.47 Exploration work to which Contractor has committed itself for each phase of the Exploration Period in accordance with Article 7. 1.48 Minister means the member of Cabinet to whom responsibility for matters related to Petroleum is assigned and his duly authorized delegates pursuant to Section 5 of the Act. Ministry means the ministry in the Government 1.49 to which responsibility for matters related to Petroleum is assigned. 1.50 twelve 12 months of the

Calendar Year. Month or Calendar Month means any of the 19 PRODUCTION SHARING CONTRACT BLOCK Natural Gas means all Petroleum which at 1.51 standard conditions of temperature and pressure 60 degrees Fahrenheit and 14.7 p.s.i.a. is in a gaseous state including wet gas dry gas and residue gas remaining after the extraction processing or separation of liquid Petroleum from wet gas as well as nonPetroleum gas or gases produced in association with liquid or gaseous Petroleum. 1.52 Natural Gas Field means a Field from which more than fifty per cent 50 of the estimated reserves on an Energy Equivalent Basis is Natural Gas at standard conditions of temperature and pressure 60 degrees Fahrenheit and 14.7 p.s.i.a.. 1.53 Nonassociated Natural Gas means all gaseous hydrocarbons produced from gas reservoirs and includes wet gas dry gas and residue gas remaining after the extraction of liquid hydrocarbons from wet gas. Operator means the Contractor Party which is in 1.54 charge of the day to day activities of Contractor under this Contract. The initial Operator shall be .. 1.55 Contractor and does not include any Subcontractors. Party or Parties means the Minister and 1.56 Petroleum means all natural organic substances composed of carbon and hydrogen. This includes Crude Oil and Natural Gas and all other mineral substances products byproducts and derivatives that are found in conjunction with such substances. 1.57 Petroleum Operations means the Exploration Operations the Development Operations the Production Operations and all other activities related thereto 20 PRODUCTION SHARING CONTRACT BLOCK carried out under this Contract but excludes mining operations involving the extraction of Petroleum from bituminous shales tar sands asphalt or other like deposits. 1.58 made pursuant to the Act. Petroleum Regulations means the regulations 1.59 Production or Production Operations shall include but not be limited to operations and all activities related thereto carried out for Petroleum production after the Ministers approval of the Development Plan such as extraction injection stimulation treatment transportation storage lifting and related operations but does not include any storage or transportation beyond the Measurement Point. Production Area means the portion of the 1.60 Contract Area specified in an approved Development Plan under Article 13.7a.ii. 1.61 Months. 1.62 Tobago. Quarter means a period of three 3 consecutive State means the

Republic of Trinidad and Subcontractor means a specialized person firm 1.63 or entity contracted by Contractor to carry out specific work relative to Petroleum Operations under the supervision of and for the account of Contractor. 1.64 Transfer shall include the following whether voluntary or involuntary and whether effected by operation of law or otherwise any transfer of ownership or any part thereof of any entity comprising Contractor by sale merger consolidation reorganisation or 21 PRODUCTION SHARING CONTRACT BLOCK liquidation or any change in ownership or voting rights in a company or legal entity. Where Contractor or any of the entities comprising Contractor is a publicly traded organisation registered on a stock exchange Transfer shall include the following whether voluntary or involuntary and whether effected by operation of law or otherwise any transfer of a controlling interest of the voting shares of any entity comprising Contractor by sale or liquidation. consolidation reorganisation merger 1.65 Transfer is made. Transferee shall mean any person to whom any 1.66 Work Programme means a programme itemizing the Petroleum Operations to be conducted with respect to the Contract Area and the time schedule for accomplishing such operations. 1.67 Work Unit means the numerical representation of the cost of the work obligations specified in the Work Programme under the Petroleum Regulations Deep Water Competitive Bidding Order 2013 issued on the 14th day of August 2013 and published as Legal Notice No. 164 of 2013 for one or more phases of this Contract or under an appraisal programme or relative to a retained exploration area as detailed in Annex E. 1.68 or USD or US Dollars or Dollars or dollars or any combination of these shall mean the lawful currency of the United States of America. 22 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 2 SCOPE This is a Production Sharing Contract the object 2.1 of which is the Exploration Appraisal Development and Production of Petroleum in the Contract Area and the provision of required infrastructure within and outside of the Contract Area up to the Measurement Point all at Contractors sole risk and expense. 2.2 a Subject to the terms and conditions of the Contract appoints Contractor as the exclusive agent to conduct Petroleum Operations in the Contract Area during the term of the Contract. Minister hereby the b The grant of this Contract confers upon Contractor the right in respect of the Contract

Area to search for drill and get Petroleum therein and dispose of Petroleum so obtained in accordance with the terms of this Production Sharing Contract but nothing in this Contract shall be taken to confer ownership of any Petroleum in strata or to confer any other rights in land within the Contract Area.

2.3 Contractor shall be responsible to the Minister for the execution of Petroleum Operations in accordance with the provisions of the Contract. Without prejudice to Contractor's position as an independent contractor hereunder the work to be done by Contractor shall be subject to the general supervision and review of the Minister in accordance with the Contract.

2.4 In performing Petroleum Operations Contractor shall provide the requisite financial resources and employ the industry standards scientific methods

23 PRODUCTION SHARING CONTRACT BLOCK . procedures technologies and equipment accepted in the international Petroleum industry.

2.5 Contractor shall comply with the Local Policy in effect as may be varied from time to time and stated in the relevant policy documents. In performing Petroleum Operations under the Contract Contractor shall provide for the maximum utilization of services and facilities available from Local Enterprises. Contractor shall employ with priority nationals in all aspects of Petroleum Operations.

2.6 Contractor shall receive no compensation for its services nor any reimbursement of its expenditures under the Contract except for the share of Petroleum from the Contract Area to which it may become entitled under Article 18. If there is no Commercial Discovery in the Contract Area or if Contractor's share of the Petroleum produced from Production Areas within the Contract Area developed by Contractor is insufficient to reimburse Contractor Contractor shall bear its own losses.

24 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 3 CONTRACT AREA The Contract Area as of the Effective Date of the

3.1 Contract comprises a total area of approximately hectares as described in Annex A attached hereto and delineated in the map which forms part thereof.

3.2 Except for the rights expressly provided by the Contract no right is granted in favour of Contractor to the surface area seabed subsoil or to any natural resources or aquatic resources.

25 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 4 CONTRACT TERM The Exploration Period shall be for a period not

4.1 exceeding nine 9 Contract Years from the Effective Date divided into a first phase of years

and an optional second phase of years an optional third phase of year Contractors right to enter the next phase is subject to it having fulfilled its obligations for the then current phase. Contractor shall notify the Minister of its 4.2 election to enter the next phase at least ninety 90 days prior to expiration of the then current phase. If Contractor does not so elect to enter the next phase this Contract shall terminate as provided herein under terms and conditions to be agreed by the Minister and Contractor at the end of the then current phase with respect to any portion of the Contract Area not included in a a Production Area; b Appraisal Areas subject to an extension pursuant to Article 4.3; c areas retained for a market development phase pursuant to Article 16.1; d areas retained for Exploration pursuant to Article 6.1; 26 PRODUCTION SHARING CONTRACT BLOCK . e any areas then pending approval by the Minister; or f any area that is the subject of a dispute and said dispute is being resolved pursuant to Article 33. Where insufficient time is available during the 4.3 Exploration Period to complete the commercialization determination under an Appraisal Programme approved under Articles 13.2 or 13.4 Contractor shall have the right upon written application to the Minister not less than ninety 90 days before the end of the Exploration Period to an extension of the term with respect to the Appraisal Area until the date on which the evaluation report on such Discovery is due under Article 13.2d or 13.4d. In the event of a Commercial Discovery the term 4.4 of the Contract shall be thirty 30 years from the Effective Date with respect to the Production Area corresponding to such Commercial Discovery; provided however if the Commercial Discovery relates to a Natural Gas Field the term of the Contract shall be thirty 30 years from the Effective Date plus the period of any market development phase granted and utilized in accordance with Article 16.1 and any extension granted in accordance with Article 16.6 with respect to the Production Area corresponding to such Natural Gas Field. 4.5 Contractor may request by notice to the Minister at least one 1 year prior to the end of the term of the Contract to extend the duration of the Contract with respect to any Production Area for periods of five 5 years or more on terms and conditions to be mutually agreed between the Minister and Contractor. 4.6 The Minister may grant further extensions in the 27 same manner as has been laid down in Article 4.5. PRODUCTION SHARING CONTRACT

BLOCK . 28 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 5 RELINQUISHMENTS 5.1

be reduced by Subject to Article 5.2 the Contract Area shall a at least thirty per cent 30 of the original Contract Area not later than the end of the first phase of the Exploration Period; b at least fifty per cent 50 of the original Contract Area inclusive of areas previously relinquished not later than the end of the second phase of the Exploration Period; c all portions of the original Contract Area not later than the end of the Exploration Period under Article 4.1 with the exception of i Production Areas; ii Appraisal Areas subject to an extension under Article 4.3; iii Natural Gas Discovery areas retained for a market development phase under Article 16.1; iv Exploration areas retained in accordance with Article 6.1; v any areas then pending approval by the Minister; and vi any area that is the subject of a dispute and said dispute is being resolved pursuant to Article 33. 29

PRODUCTION SHARING CONTRACT BLOCK . d any Appraisal Area subject to an extension under Article 4.3 that is not declared a Commercial Discovery by the end of the extension under Article 4.3; e any Natural Gas Discovery area retained pursuant to Article 16.1 that is not declared a Commercial Discovery by the end of the market development phase granted under Article 16.1; f any Production Area not in Commercial Production by the end of seven7 years after declaration of Commercial Discovery for such area within thirty 30 days after the Ministers request for such relinquishment; and g any Exploration area retained pursuant to Article 6.1 for which no approved Exploration Work Programme for such area is committed. Subject only to Articles 5.1f and 5.6 5.2 Contractor shall not be required pursuant to Article 5.1 to relinquish any portion of the Contract Area designated as a Production Area. 5.3 Unless the Contract Area is earlier surrendered or the Contract is terminated Contractor shall furnish the Minister with a description of the boundaries of the part to be relinquished not less than ninety 90 days in advance of the deadline for the relinquishment prescribed in Article 5.1. 5.4 The area designated under Article 5.3 for relinquishment shall be as far as practicable rectangular bounded by lines running due north and south and due east and west having the longer side no more than three 3 times the shorter side. Unless the Minister specifically 30 PRODUCTION SHARING CONTRACT BLOCK . consents no individual

rectangular area relinquished shall be less than thirty per cent 30 of the total area being relinquished at such time. 5.5 voluntarily surrenders a part of the Contract Area. Article 5.4 shall also apply where a Contractor Contractor shall relinquish rights to conduct 5.6 Petroleum Operations in a Production Area upon request of the Minister where for reasons other than Force Majeure cases which are approved by the Minister or scheduled maintenance under an approved Work Programme and budget Contractor has ceased voluntarily or intentionally normal Production of such Production Area for more than one hundred and eighty 180 consecutive days. 5.7 No relinquishment shall relieve Contractor of accrued but unfulfilled obligations under the Contract. In the event that Contractor desires to relinquish its rights hereunder in all of the Contract Area without having fulfilled all accrued obligations Contractor or its guarantor shall pay the Minister prior to the date of such proposed total relinquishment an amount equal to the remaining amount of the nondischarged guarantees under Article 8 corresponding to such accrued but unfulfilled obligations. 5.8 Prior to relinquishment of any area Contractor shall perform all necessary abandonment programme activities in accordance with the sound and current international Petroleum industry practices to restore such area as nearly as possible to the condition in which it existed on the Effective Date including removal of such facilities equipment or installations as the Minister may instruct and shall take action necessary to prevent hazards to human life property and the environment which may be caused by its facilities equipment or installations. 31 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 6 RETAINED EXPLORATION AREA Where Contractor declares a Commercial Discovery 6.1 in the Contract Area during the Exploration Period specified in Article 4.1 or any extension as provided for under Article 4.3 Contractor shall have the option exercisable by notice to the Minister at least one hundred and twenty 120 days before the relinquishment required under Article 5.1c to retain up to thirty per cent 30 of the original Contract Area or an area to be mutually agreed by the Minister and Contractor if justified by Contractors Work Programme for ongoing Exploration. The notice to the Minister a shall specify the coordinates of the Exploration area selected for retention which shall be comprised of no more than two 2 separate rectangular blocks

that comply with the specifications stated in Article 5.4; and b shall contain Contractors proposed Exploration Work Programme and budget corresponding to such area for the balance of the current Calendar Year and the next two 2 Calendar Years. Provided the Minister approves the Exploration Work Programme and budget submitted with the aforementioned notice Contractor shall have the right to conduct Petroleum Operations in the retained Exploration area for the approved period. 6.2 If Contractor wishes to retain any portion of the Exploration area selected under Article 6.1 beyond the date for which an agreed programme is committed Contractor shall propose for the Ministers approval an Exploration Work Programme and budget for the next two 32 PRODUCTION SHARING CONTRACT BLOCK . 2 Calendar Year periods. Such proposal shall be presented to the Minister at least ninety 90 days before the end of the period for which an Exploration Work Programme has been approved. 33 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 7 MINIMUM EXPLORATION WORK PROGRAMME Contractor shall commence Exploration Operations 7.1 hereunder within ninety 90 days after the Effective Date. Such Exploration Operations shall be diligently and continuously carried out in accordance with sound and current international Petroleum industry practices for the duration of the Exploration Period. During the first phase of the Exploration Period 7.2 Contractor shall carry out to the value of United States Dollars US..... at least the following Minimum Exploration Work Programme consisting of Work Units a Geological i Evaluate integrate and map all data related to the Contract Area; ii Acquire geological data and conduct studies in accordance with Annex G to the value of approximately United States Dollars US..... equivalent to Work Units. These will include the following elements i. Sedimentology; ii. Sequence Stratigraphy; iii. Geochemistry including Fluid Analysis; iv. Maturation and Migration Studies; v. Biostratigraphy; vi. Structural Analysis; and vii. Other Studies. 34 PRODUCTION SHARING CONTRACT BLOCK . b Geophysical i Acquire and process to industry standards at least square kilometres of full fold 3D seismic to the value of approximately United States Dollars US..... equivalent to Work Units with shooting to commence within Months after the Effective Date; ii Evaluate integrate and map all seismic data related to the Contract Area; iii Acquire at least line

kilometres of Gravity and Magnetic data within the of approximately United States Dollars US..... equivalent to Work Units. Contract value Area the to c Drilling Drilling of at least Exploration Wells i to a depth of at least metres true vertical depth below mudline to the value of approximately United States Dollars US.....00 equivalent to. Work Units; ii to a depth of at least. metres true vertical depth below mudline to the value of approximately United States Dollars US.....00 equivalent to.. Work Units; with spudding of the first such well to be not later than 35 PRODUCTION SHARING CONTRACT BLOCK . Months after the Effective Date. d During the first phase of the Exploration Period Contractor may propose to the Minister to alter the programme described under paragraphs a b and c and the Minister shall approve of such change where the revised programme has an equal or larger number of Work Units and the revision is technically justified. 7.3 During the optional second phase of the Exploration Period Contractor shall carry out to the value of approximately United States Dollars US..... at least the following Minimum Exploration Work Programme consisting of Work Units a Geological i Evaluate integrate and map all data related to the Contract Area; ii Undertake geological studies to the value of approximately United States Dollars US..... equivalent to Work Units. b Geophysical i Acquire and process to industry standards at least square kilometres of full fold 3D seismic to the value of approximately United States Dollars US..... equivalent to Work Units; ii Evaluate integrate and map all seismic data related to the Contract Area; 36 PRODUCTION SHARING CONTRACT BLOCK . c Drilling Drilling of at least Exploration Wells to a depth of at least metres true vertical depth below mudline to the value of approximately United States Dollars US..... equivalent to Work Units. b During the second phase of the Exploration Period Contractor may propose to the Minister to alter the programme described under paragraphs a b and c and the Minister shall approve of such change where the revised programme has an equal or larger number of Work Units and the revision is technically justified. 7.4 During the optional third phase of the Exploration Period Contractor shall carry out to the value of approximately United States Dollars US..... at least the following Minimum Exploration Work Programme consisting of Work Units a Geological i Evaluate integrate and map all data related to the Contract Area; ii

Undertake geological studies to the value of approximately United States Dollars US..... equivalent to Work Units. b Geophysical i Acquire and process to industry standards at least square kilometres of full fold 3D seismic to the value of States approximately United 37 PRODUCTION SHARING CONTRACT BLOCK . Dollars US..... equivalent to Work Units; ii Evaluate integrate and map all seismic data related to the Contract Area; c Drilling Drilling of at least Exploration Wells to a depth of at least metres true vertical depth below mudline to the value of approximately United States Dollars US..... equivalent to Work Units. b During the third phase of the Exploration Period Contractor may propose to the Minister to alter the programme described under paragraphs a b and c and the Minister shall approve of such change where the revised programme has an equal or larger number of Work Units and the revision is technically justified. 7.5 Programme under Articles 7.2 through Article 7.4 For purposes of the Minimum Exploration Work a The obligations related to the second phase or third phase of the Exploration Period will accrue only if Contractor elects to enter such subsequent phase by notice pursuant to Article 4.2. b In the event that an Exploration Well attains the minimum depth requirement in a prospective zone Contractor shall be required to continue drilling to a depth which will ensure penetration of and allow for the proper evaluation of the entire prospective zone provided such further drilling is operationally 38 PRODUCTION SHARING CONTRACT BLOCK . and technically feasible. Such further drilling shall be credited against any other outstanding Work Units on a dollar for dollar basis. c Additional line kilometres of seismic and additional Exploration Wells beyond the minimum required for any phase of the Exploration Period may be carried forward to satisfy the respective work obligations of a subsequent phase of the Exploration Period. Neither Appraisal wells seismic surveys nor any 7.6 other Petroleum Operations carried out as part of an Appraisal Programme or Assessment Plan approved under Article 13 shall discharge Contractor of obligations in respect of the Minimum Exploration Work Programme. 7.7 If in the course of drilling an exploration well Contractor in its reasonable opinion and after consultation with the Minister dees that drilling to the depth specified is impossible or imprudent in accordance with accepted petroleum industry drilling and engineering practice Contractor may discontinue such

operation. Such shortage of drilling depth shall not relieve Contractor of the obligation to carry out the committed Work Units. Where the Minister concurs that further drilling is impossible or imprudent and where Contractor is otherwise unable to carry out the Work Units committed to the Minister may consider accepting a payment in cash in substitution for the remaining Work Units committed and therefore Contractor would retain the option to enter into the next phase where applicable. 39

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 8 GUARANTEES On the Effective Date upon commencement of each 8.1 subsequent phase of the Exploration Period entered into under Article 4 and upon the approval being granted for an Exploration Work Programme under Article 6 or for any Appraisal Work Programme pursuant to Article 13.2c and 13.4c Contractor shall provide the Minister with irrevocable guarantees from a guarantor of financial substance acceptable to the Minister for an amount equal to a the value of the Work Units committed to for the relevant Work Programme or phase; b the sum of Four Hundred Thousand United States Dollars US400000.00 for the performance of any obligation under the Contract other than those covered by the guarantees under a above. Such guarantees shall be in a form and substance acceptable to the Minister. 8.2 The respective amounts of the guarantees for obligations arising out of Work Programmes referred to in Article 8.1 shall be a For the first phase of the Exploration Period United States Dollars US.....00; b For the second phase of the Exploration Period United States Dollars US.....00; c For the third phase of the Exploration Period 40 PRODUCTION SHARING CONTRACT BLOCK .

United States Dollars US.....00. 8.3 Upon delivery to the issuing guarantor of a certificate from Contractor countersigned on behalf of the Minister by a duly authorized official that the corresponding Work Units have been completed in accordance with the Contract and that all technical data related thereto have been delivered to the Minister the guarantees shall be reduced by the value of the Work Units that were committed to the applicable phase or programme. 8.4 Where Contractor has failed to perform in accordance with this Contract all or any part of accrued Work Programmes a at the end of any phase of the Exploration Period; b at the end of an approved period in respect of a retained Exploration area pursuant to Article 6; c at the end of an approved

period in respect of an Appraisal Work Programme pursuant to Article 13.2 and 13.4 and upon termination of this Contract Contractor or its guarantor shall on demand from the Minister pay the Minister the entire remaining amount of such outstanding guarantee or guarantees within two weeks of receipt of a written notice from the Minister indicating the amount due to be paid.

8.5 On the Effective Date Contractor shall deliver to 41 PRODUCTION SHARING CONTRACT BLOCK . the Minister in a form acceptable to the Minister an undertaking from a financially technically and legally competent parent company that such parent company shall provide all technical and financial resources that its subsidiary may require to meet on a timely basis Contractors obligations under the Contract.

42 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 9 COORDINATION COMMITTEE

Within ten 10 days after the Effective Date a 9.1 Coordination Committee composed of four 4 members two 2 of whom shall be appointed by the Minister and two 2 by Contractor shall be established. A Party by at least ten 10 days notice to the other Party may replace one or more of its members on the Coordination Committee. The chairman of the Coordination Committee shall be appointed by the Minister from the members appointed by him and the secretary shall be named by Contractor from among its appointees. Additional representatives of either Party may attend meetings as observers or alternate members.

9.2 The mandate of the Coordination Committee is to assist Contractor in its activities under this Contract by providing a forum for continuous dialogue and flow of information between Contractor and the Minister regarding Contractors planned activities and progress related to the Contract Area. The Coordination Committee shall review proposals for revisions to agreed Work Programmes and budgets and periodically evaluate Contractors progress in respect of approved Work Programmes budgets local initiatives and other matters related to Petroleum Operations under this Contract.

9.3 Ordinary meetings of the Coordination Committee shall be held quarterly in Port of Spain or any other location agreed by the Parties. Special meetings of the Coordination Committee may be called on reasonable notice by either Party for the purpose of considering any major development or problems in Petroleum Operations.

9.4 The secretarys minutes of a meeting shall be prepared circulated approved and signed by a 43 PRODUCTION

SHARING CONTRACT BLOCK . representative of each Party within fourteen 14 days after adjournment of the meeting. A copy of such minutes shall be delivered to each of the Parties for information and appropriate action. 9.5 The Coordination Committee may from time to time designate one or more technical committees composed of specialists appointed by the Parties to assist as required. 44 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 10 UNDERTAKING BY CONTRACTOR Resident Representative Within thirty 30 days 10.1 after the Effective Date Contractor shall designate a representative residing in Trinidad and Tobago who shall have full authority to represent it in respect of matters related to the Contract and to receive notices addressed to Contractor. Office Within ninety 90 days after the 10.2 Effective Date Contractor shall establish and maintain an office in Trinidad and Tobago with sufficient competence and capacity to conduct and perform Petroleum Operations in accordance with the terms of this Contract. 10.3 Conduct of Petroleum Operations Contractor shall conduct Petroleum Operations hereunder in a continuous diligent and workmanlike manner in accordance with applicable law and the Contract and sound and current international Petroleum industry practices and environmental standards applicable from time to time in similar circumstances all designed to achieve efficient and safe Exploration and Production of Petroleum and to maximize the ultimate economic recovery of Petroleum from the Contract Area. In this regard Contractor shall ensure that all materials equipment technologies and facilities used in Petroleum Operations comply with sound and current engineering and environmental standards accepted in the international petroleum industry and are kept in good working order. 10.4 Local Commitment Contractor shall comply with the Local Policy in effect from time to time. In performing Petroleum Operations under the Contract Contractor shall provide for the maximum utilization of Local Goods Local Services and local 45 PRODUCTION SHARING CONTRACT BLOCK . facilities available in Trinidad and Tobago in accordance with the provisions of Article 25.2. Contractor shall employ with priority nationals in all aspects of Petroleum Operations and shall undertake the training and development of such personnel in accordance with the provisions of Article 25.6. The Work Programmes and budgets submitted and reported pursuant

to Articles 14 and 15 should indicate Contractor's estimate of the Local component of ongoing Petroleum Operations. 10.5 Notification of Work Contractor shall provide the Minister with regular and complete information concerning all Petroleum Operations and shall present to the Minister prior to execution of specific work information relative thereto. 10.6 Records Contractor shall prepare and maintain in Trinidad and Tobago at all times during the term of the Contract accurate and current records of its Petroleum Operations hereunder. Reports In accordance with Annex B Contractor 10.7 shall submit to the Minister detailed daily drilling reports and monthly physical progress reports covering in reasonable detail all the activities carried out under this Contract as well as all other reports as may be required by the Minister. and Technical Comprehensive Commercial 10.8 Evaluation Within ninety 90 days after completion of the Minimum Exploration Work Programme under Articles 7.2 7.3 and 7.4 respectively and Work Programme under Article 6 and Appraisal Programme under Article 13 Contractor shall prepare and present to the Minister a comprehensive technical and commercial evaluation of the Petroleum potential of those portions of the Contract Area for which Exploration Operations and other activities have been performed or evaluated by the work 46 PRODUCTION SHARING CONTRACT BLOCK . conducted. 10.9 Data Contractor shall provide to the Minister in accordance with Annex B any and all data reports samples information interpretation of such data and all other information or work product pertaining to the Contract Area including in particular all data for which the cost was recorded by Contractor as a cost of Petroleum Operations. Contractor may retain for use in Petroleum Operations hereunder copies of technical data. All original data shall be delivered by Contractor to the Minister not later than the end of the term of the Contract. Subject to the prior approval of the Minister Contractor may a export original data; b retain for use in Petroleum Operations hereunder original technical data; and c export for processing or laboratory examination or analysis samples or other original materials provided that samples equivalent in size and quality or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Minister. 10.10 Inspection by the Minister a Contractor shall enable at all reasonable times the duly authorized representatives of the Minister

and other agencies of the Government to inspect any part of Petroleum Operations and all facilities installations offices records books or data related to Petroleum Operations. b All duly authorized representatives of the 47 PRODUCTION SHARING CONTRACT BLOCK . Minister and other agencies of the Government agree to abide by the posted or published safety rules of Contractor during such inspections. Use of Facilities Contractor shall provide 10.11 facilities to a reasonable number of duly authorized representatives of the Minister and other agencies of the Government to perform their duties and obligations in relation to this Contract including in the case of field operations transportation lodging food and other amenities at equal conditions as those supplied by Contractor to its own staff. or Loss Damage 10.12 bear responsibility in accordance with applicable law for any loss or damage to third parties caused by its employees or Subcontractors wrongful or negligent acts or omissions and indemnify the Minister and the Government against all claims and liabilities in respect thereof. Contractor shall 10.13 Legal Proceedings Each Party shall inform the other Party as soon as is reasonably possible of any legal proceedings initiated by or against a Party in relation to this Contract. The relevant Party shall also provide to the other Party details of the claims made and quarterly reports of these proceedings. 10.14 Environment Pollution Safety While conducting Petroleum Operations and in accordance with the sound and current international Petroleum industry practices Contractor shall take and ensure that its Subcontractors and agents take necessary measures for safety of life; conservation of property crops fish wildlife; safety of navigation; protection of the environment; prevention of pollution; and safety and health of personnel including but not limited to a ensuring security areas around all machinery and 48 PRODUCTION SHARING CONTRACT BLOCK . equipment; b with respect to onshore support facilities erecting of fences if applicable at a distance of not less than fifty 50 metres from any drilling rig generator or other equipment of a dangerous nature; c providing secure storage areas for all explosives detonators and similar dangerous materials used in Petroleum Operations; d preventing pollution or damage to any waterbearing formations and other natural resources; e containing any blowout fire or other emergency situation that would result in loss of reserves or damage to the reservoir; f

preventing unintentional entrance of fluids into Petroleum formations and the Production of Crude Oil or Natural Gas from reservoirs at higher rates than consistent with good Petroleum industry practice; g taking all necessary precautions to prevent pollution of or damage to the environment including the undertaking of remedial measures within a reasonable period to repair or offset damage to the environment in cases where the Minister or installations erected by Contractor or any operations conducted by or on behalf of Contractor endanger third party property or cause pollution or harm to wildlife or the environment including where pollution occurs promptly to treat or disperse it in an environmentally acceptable manner; determines works that any 49 PRODUCTION SHARING CONTRACT BLOCK . h reporting to the Minister within twentyfour 24 hours in cases of death or serious injury to workers in the performance of duties connected with Petroleum Operations; i arranging an adequate supply of firstaid medicines and equipment in each area and maintaining a healthy environment for the workers; j providing safety and firefighting equipment and training of personnel in the use of such equipment in each work area; and k participating in the National Oil Spill Contingency Plan as is in force from time to time and in addition and without prejudice to its obligations thereunder preparing and submitting to Minister for approval prior to commencing any drilling activities an oil spill and fire contingency plan which plan shall be implemented in the event of such a catastrophe. 10.15 Joint Operating Agreement In the event there is more than one 1 Contractor Party a joint operating agreement between the entities shall be executed within ninety 90 days of the Effective Date and submitted to the Minister for his information. Contractor shall also supply to the Minister for his information any other agreements executed by the entities comprising Contractor relating to the conduct of Petroleum Operations under this Contract within ten 10 days of execution of such agreements. Changes made to any of these agreements shall be submitted to the Minister for his information within ten 10 days of the execution of such changes. 10.16 No change in the Operator shall take effect unless it has been approved by the Minister. 50 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 11 ANCILLARY RIGHTS OF CONTRACTOR 11.1 Contractor shall for the efficient conduct of Petroleum Operations have the right subject to

appropriate arrangements with other operators and/or relevant authorities and as approved by the Minister a to access to and from the Contract Area and to and from facilities pertaining to Petroleum Operations hereunder wherever located at all times and to use of the land sea and seabed required; and b to use in Petroleum Operations sand gravel and water belonging to the public domain in accordance with the relevant laws and on payment of the generally prevailing charge for such resources in the locality of use.

51 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 12 ASSISTANCE BY MINISTER To enable Contractor to implement the Contract 12.1 expeditiously and efficiently the Minister shall use best efforts when specifically requested by Contractor to assist Contractor among other things in a obtaining rights to use land rights of way permits and/or easements as may be required for the conduct of Petroleum Operations; b obtaining licences or permits for transportation and communication facilities; c complying with import/export controls and regulations and custom formalities and where applicable obtaining exemptions from customs and other duties; d obtaining entry and exit visas for the foreign of employees Subcontractors who may come to Trinidad and Tobago for the implementation of the Contract and members of their families; Contractor foreign and e obtaining relevant work permits; f obtaining access to all geological geophysical drilling well and Production information in the Contract Area; and g transacting business with Government authorities in general.

12.2 Upon presentation of appropriate documentation to Contractor the Minister shall be promptly reimbursed by

52 PRODUCTION SHARING CONTRACT BLOCK . Contractor for all reasonable expenses incurred in providing the assistance requested by Contractor in accordance with this Article 12.

53 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 13 DISCOVERY COMMERCIALIZATION PROCEDURE 13.1 Contractor shall If a Discovery is made in an Exploration Well a immediately notify the Minister of such Discovery; b within thirty 30 days thereafter provide the information Minister regarding the Discovery including a preliminary classification of the Discovery as Crude Oil or Natural Gas; and available with all c within ninety 90 days after such Discovery also notify the Minister whether or not it considers the Discovery of Crude Oil or Natural Gas to have commercial potential.

13.2 Evaluation of Commercial Potential

of Discovery of Crude Oil a If Contractor pursuant to Article 13.1c notifies the Minister that a Discovery of Crude Oil has commercial potential it shall within thirty 30 days after such notice present to the Minister for approval an Appraisal Programme. The Appraisal Programme shall be deemed approved as submitted if the Minister does not respond in writing within sixty 60 days of receipt of the Appraisal Programme. b The Appraisal Programme shall i identify the Appraisal Area; and 54 PRODUCTION SHARING CONTRACT BLOCK . ii specify in reasonable detail the Appraisal work including but not limited to seismic drilling of wells and studies to be carried out the estimated cost of these works the Work Units related to these works and the time frame within which Contractor shall commence and complete the programme. c Contractor shall carry out the approved Appraisal Programme under Article 13.2a within the time frame specified therein. Contractor may amend the Appraisal Programme subject to the Ministers prior approval. d Within ninety 90 days after completion of the Appraisal Programme Contractor shall submit to the Minister a comprehensive evaluation report on the Appraisal Programme. Such evaluation report shall include but not be limited to the following information geological conditions such as structural configuration; physical properties and extent of reservoir rocks; pressure volume and temperature analysis of the reservoir characteristics including gravity and composition of liquid and gaseous percentage sediment and water percentage and product yield pattern; Production forecasts per well and per Field; and estimates of recoverable reserves projected delivery rate and pressure quality specifications and other relevant technical and economic factors including economic feasibility studies carried out by Contractor in respect of its declaration made under Article 13.6. hydrocarbons sulphur fluid; fluid 55 PRODUCTION SHARING CONTRACT BLOCK . 13.3 Evaluation of Commercial Potential of Discovery of Natural Gas a If Contractor pursuant to Article 13.1c notifies the Minister that a Discovery of Natural Gas has commercial potential it shall within ninety 90 days after such notice present to the Minister for approval an Assessment Plan. The Assessment Plan shall be deemed approved as submitted if the Minister does not respond within sixty 60 days of receipt thereof. b The Assessment Plan shall i identify the Assessment Plan area which shall not

exceed the area encompassing the geological structure or feature in which the Discovery is made and a reasonable margin surrounding such structure or feature to be mutually agreed by the Minister and Contractor; ii specify in reasonable detail the work that is needed to assess the Discovery which may include but not be limited to seismic drilling of wells and studies to be carried out the estimated cost of these works and the time frame within which Contractor shall commence and complete such works; iii identify and evaluate potential marketing options for all Available Natural Gas including the options provided for in Article 2.1 of Annex D; and iv incorporate marketing opportunities identified in discussions potential 56 PRODUCTION SHARING CONTRACT BLOCK . between the Minister and Contractor. c Contractor shall carry out the approved Assessment Plan under Article 13.3a within the time frame specified therein. d Contractor may amend the Assessment Plan subject to the Ministers prior approval. e Within ninety 90 days after completion of the works included in the approved Assessment Plan Contractor shall submit to the Minister a comprehensive evaluation report including all available commercial and technical information relevant to the determination of a market for Available Natural Gas. Such evaluation report shall also contain the Marketing Plan referred to in Annex D as well as an evaluation of the marketing options for all Available Natural Gas including the options provided for in Article 2.1 of Annex D. f Within ninety 90 days after the evaluation report under Article 13.3e has been submitted the Minister shall notify Contractor of the marketing arrangements which the Minister has decided to elect pursuant to Article 2.1 of Annex D. g Within sixty 60 days of such notification by the Minister Contractor shall notify the Minister whether or not it wishes to i retain the Natural Gas Discovery for a market development phase in accordance with Article 16.1; ii declare that the Discovery is a Commercial 57 PRODUCTION SHARING CONTRACT BLOCK . Discovery; or iii declare that the Discovery is not a Commercial event Contractor shall be required to relinquish the areas pursuant to Article 5. Discovery which in 13.4 Optional Further Appraisal of a Natural Gas Discovery during Market Development Phase a Within the term of the Contract including any market development phase granted under Article 16.1 Contractor may apply to the Minister for approval and upon approval being granted promptly carry

out an Appraisal Programme of the Natural Gas Discovery or may directly present an evaluation report based on the Assessment Plan or the market development phase pursuant to Article 16.1 hereof. b The Appraisal Programme shall i identify the Appraisal Area; and ii specify in reasonable detail the Appraisal work including but not limited to seismic drilling of wells and studies to be carried out the estimated cost of these works and the Work Units related to these works and the time frame within which Contractor shall commence and complete the programme. c Contractor shall carry out the approved Appraisal Programme under Article 13.4a within the time frame specified therein. Contractor may amend the Appraisal Programme subject to the Ministers prior approval. 58 PRODUCTION SHARING CONTRACT BLOCK . d Within ninety 90 days after completion of the Appraisal Programme Contractor shall submit to the Minister a comprehensive evaluation report on the Appraisal Programme. Such evaluation report shall include but not be limited to the following information geological conditions such as structural configuration; physical properties and extent of reservoir rocks; pressure volume and temperature analysis of the reservoir fluid; fluid characteristics including gravity and composition of liquid and gaseous hydrocarbons sulphur percentage sediment and water percentage and product yield pattern; production forecasts per well and per Field; and estimates of recoverable reserves projected delivery quality specifications and other relevant technical and economic factors including economic feasibility studies carried out by Contractor in respect of its declaration made under Article 13.6. Such report shall also include an analysis of marketing options in the Internal Market of Trinidad and Tobago. pressure rate and If Contractor fails to present an Appraisal 13.5 Programme under Article 13.2a or Assessment Plan under Article 13.3 that is acceptable to the Minister Contractor shall upon the request of the Minister at any time thereafter relinquish an area which shall contain as a minimum the geological structure or feature in which the Discovery was made. Either Party shall have the right to refer this matter to dispute resolution in accordance with the terms of Article 33 in which case Contractor shall not be obliged to relinquish as aforesaid unless and until a determination to this effect is made pursuant to the dispute resolution process. 59 PRODUCTION SHARING CONTRACT BLOCK . 13.6 Declaration of

Commercial Discovery Pursuant To 13.2 For Oil or 13.4 After Further Appraisal of a Natural Gas Discovery With the submission of the applicable evaluation report pursuant to Articles 13.2 and 13.4 or on or before the end of the market development phase of the Natural Gas Discovery Contractor shall submit a written declaration to the Minister indicating that it has determined the Discovery is either a a Commercial Discovery; or b not a Commercial Discovery in which event Contractor shall be required to relinquish the areas pursuant to Article 5. 13.7 a If Contractor declares pursuant to Article 13.3 gii or 13.6a that a Discovery is a Commercial Discovery Contractor shall submit to the Minister for approval within ninety 90 days of such declaration the following i a proposed Development Plan; ii a proposed designation of the Production Area; iiia comprehensive environmental impact study covering the proposed Development and any related facilities or infrastructure inside or outside of the Contract Area; and iv evidence that Contractor is complying with the applicable legislation respecting approvals environmental authorities. required by 60 PRODUCTION SHARING CONTRACT BLOCK . The proposed Development Plan Production Area and environmental impact study shall be deemed approved as submitted if the Minister does not respond within ninety 90 days of receipt thereof. b In the event the Minister and Contractor are unable to reach agreement on any objections raised or changes proposed by the Minister Contractor or the Minister shall have the right to request determination of the disputed issues pursuant to Article 33 in which case the decision shall be binding on both the Minister and Contractor. c Upon approval being granted Contractor shall proceed promptly and diligently and in accordance with sound and current international Petroleum industry practices to develop the Discovery to install all necessary facilities to commence Commercial Production and to produce the Field in a manner that will achieve maximum economic recovery of the reserves. Production shall continue without interruption unless the Minister is satisfied that the interruption is justified for technical or other reasons. 13.8 Contractors proposed Development Plan under Article 13.7 shall detail Contractors proposals for Development and operation of the Production Area and of any facilities and infrastructure up to the Measurement Point required outside of the Production Area.

Such Development Plan shall set forth i production parameters; ii number and spacing of wells; 61 PRODUCTION SHARING CONTRACT BLOCK . iii the facilities and infrastructure including proposed locations to be installed for Production storage transportation and loading of Petroleum; iv an estimate of the overall cost of the Development and estimates of the time required to complete each phase of the Development Plan; a Production forecast and an estimate of v ongoing capital and operating expenses involved to achieve the Production profile marketing arrangements for all Available Petroleum and any other factor which would affect the economic or technical feasibility of the proposed Development; vi profitability estimates; vii safety measures to be adopted; viii a description of the organisation to be established in Trinidad and Tobago; ix measures to be implemented for the employment of nationals and the utilization of Local Goods and Local Services; x the proposed abandonment plan; and xi such other particulars as Minister may direct. 13.9 Any significant changes to an approved Development Plan or proposals related to extension of a Field or for enhanced recovery projects shall be discussed among the Parties and if agreed shall be submitted in writing to the Minister for his prior 62 PRODUCTION SHARING CONTRACT BLOCK . approval. Such changes shall be deemed approved as submitted if the Minister does not respond within sixty 60 days of receipt thereof. 63 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 14 EXPLORATION WORK PROGRAMME 14.1 a Contractor shall present to the Minister for approval with respect to each Calendar Year during the Exploration Period an annual Work Programme and budget for the Contract Area. The Work Programme and budget shall be deemed approved as submitted if the Minister does not respond within sixty 60 days of receipt. The first such Work Programme and budget shall be submitted within thirty 30 days after the Effective Date and each subsequent Work Programme and budget at least sixty 60 days before the beginning of the relevant Calendar Year. b Within thirty 30 days following the end of each Quarter of the Calendar Year Contractor shall provide to the Minister a status report specifying the work and Work Units carried out during that Quarter the approximate costs incurred during such period and any changes that Contractor plans to make to the Work Programme and budget as a result of operations to date

in that report corresponding to the fourth Quarter of each Calendar Year shall also contain an annual summary of the quarterly reports for that Calendar Year. Calendar status Year. The In respect of the retained Exploration area 14.2 approved under Article 6 and the Appraisal Area under Article 13 the provisions of 14.1b shall apply. 14.3 Subject to Contractors obligations under Article 7 and the Ministers prior approval Contractor may amend the Work Programme and budget approved under Article 64 14.1. PRODUCTION SHARING CONTRACT BLOCK . 65 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 15 DEVELOPMENT AND PRODUCTION WORK PROGRAMMES AND BUDGETS Commencing in the Calendar Year in which the 15.1 Minister approves the first Development Plan for the Contract Area Contractor shall prepare and submit to the Minister for approval in such form as the Minister may direct an annual Development and Production Work Programme and budget detailing by Calendar Quarter all aspects of the proposed Petroleum Operations to be carried out in relation to each Production Area and related facilities and infrastructure the estimated cost thereof duration and location of each operation and where applicable the estimated monthly rate of Production for each Production Area. Each proposed Work Programme and budget shall also include a forecast of yearly Development and Production activity and expenditure for the ensuing period of four 4 Calendar Years or the period up to the end of the term of the Contract whichever is shorter. 15.2 The first Development and Production Work Programme and budget covering the balance of the Calendar Year in which the first Development Plan is approved shall be submitted within thirty 30 days after the date of approval of such Development Plan. Thereafter Contractor shall submit its proposed annual Work Programme and budget at least one hundred and twenty 120 days before the beginning of the relevant Calendar Year. 15.3 Contractors proposed Work Programme and budget shall be deemed approved as submitted if the Minister does not respond in writing within sixty 60 days after receipt. 15.4 If the Minister objects to any part of 66 PRODUCTION SHARING CONTRACT BLOCK . Contractors proposal he shall notify Contractor within the period specified in Article 15.3. The Ministers notice shall specify the modifications required by the Minister and the reasons for same. If Contractor

considers that any revision required by the Minister renders the Work Programme and budget unacceptable to Contractor Contractor shall within twentyfive 25 days after receipt notify and substantiate to the Minister its reasons for that decision. Forthwith the Minister and Contractor shall meet with a view to resolving any differences. If they fail to resolve their differences by the beginning of the Calendar Year for which the Work Programme is to apply Contractor shall incorporate the modifications requested by the Minister into the proposed Work Programme and budget submitted under Article 15.2 to the extent such changes a do not increase or decrease any line item of such proposed Work Programme and budget by more than ten per cent 10; and b do not materially alter the Development Plan as approved by the Minister provided that the Development and Production Work Programme and budget is consistent with such Development Plan. 15.5 The Minister may for good reason direct Contractor to modify the proposed rate of Production from any Field from which more than fifty per cent 50 of the Production on an Energy Equivalent Basis is Crude Oil provided always that such changes in Production levels shall not significantly alter the Production levels agreed to between the Minister and Contractor in the then current Development Plan. Notwithstanding the above provisions the Minister reserves the right to modify Production levels for safety considerations. 67 PRODUCTION SHARING CONTRACT BLOCK . 15.6 Contractor shall deliver to the Minister within twentyone 21 days after each Calendar Quarter a status report on the operations conducted and costs incurred under the approved Development and Production Work Programme and budget during such Calendar Quarter. The status report shall forecast any significant changes to such approved Work Programme and budget that Contractor anticipates may be necessary during the balance of the Calendar Year. The report corresponding to the last Quarter of each Calendar Year shall also include a yearend summary of operations and costs during such Calendar Year. 68 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 16 NATURAL GAS Where Contractor pursuant to Article 13.3gi 16.1 hereof has notified the Minister of intent to enter into a market development phase for the Discovery Contractor and the Minister shall within sixty 60 days after the election define by mutual agreement the portion of the Contract Area to be subject to

the market development phase. Such portion shall not exceed the area encompassing the geological structure or feature in which the Discovery was made and a reasonable margin surrounding such structure or feature to be mutually agreed by the Minister and Contractor. 16.2 Subject to Articles 16.1 and 16.3 the duration of such market development phase shall not exceed seven 7 years from the date of Contractors notice under Article 13.3gi. The market development phase shall end on the first to occur of a the date following that on which the Natural Gas Discovery is declared a Commercial Discovery; b the date that Contractor voluntarily surrenders the market development area; or c seven 7 years after the date of Contractors notice under Article 13.3gi. Contractor shall be deemed to have relinquished all rights to the Natural Gas Discovery if it does not declare the Discovery a Commercial Discovery by the end of the market development phase. 16.3 During the market development phase Contractor shall pay to the Minister at the end of each year of the 69 PRODUCTION SHARING CONTRACT BLOCK . market development phase or upon earlier termination an annual holding fee of Two Million United States Dollars US2000000.00 reduced by duly verified amounts that Contractor has expended during such year under specific programmes approved by the Minister on activities or projects directly attributable to the market development area. Expenditures for the following types of activities will be eligible as credits against the holding fee a further geochemical geophysical or geological surveys in the market development area; b the drilling and testing of any well in the market development area; c consulting feasibility and marketing studies; and d market development for projects approved by the Minister. Amounts expended in a particular year in excess of the holding fee may be carried forward as a credit against the following years holding fees if agreed by the Minister in his approval of the programme under which the expenditure was made. The holding fee shall be applied on a pro rata daily basis in the event Contractor relinquishes the market development area or declares such Natural Gas Discovery to be a Commercial Discovery prior to the end of such year. Where the Minister elects the options stated in 16.4 Article 2.1be and f of Annex D Contractor shall have primary responsibility for identification of a market for all Available Natural Gas from the market development area and the marketing

procedures of Annex D shall apply to such Governments share of Profit Natural Gas. 70

16.5a Where the Minister elects the option stated in PRODUCTION SHARING CONTRACT BLOCK . area Article 2.1a of Annex D Contractor shall have primary responsibility for developing a market for all Available Natural Gas from the market of development arrangements for the sale thereof on a joint dedicated basis at prices and terms common to both the Minister and Contractor. Contractor shall provide of active representatives of the Minister in all such market development activities and related negotiations. participation negotiation for for and the b Where the Minister elects either of the options stated in Articles 2.1c and d of Annex D Contractor shall have primary responsibility for developing a market for all Available Natural Gas from the market development area and for negotiation of arrangements for the sale thereof. c The marketing arrangements for any Natural Gas sales contract pursuant to a and b above shall be subject to approval by the Minister. In applying for such approval Contractor shall demonstrate to the Minister that the price of such Natural Gas at the Measurement Point represents the Fair Market Value obtainable for such Natural Gas. The approval of any export project shall be at the discretion of the Minister. 16.6 Contractor may apply to the Minister for the granting of an additional period to be added to the term of this Contract to facilitate the sale of Natural Gas under a gas sales contract as contemplated under Articles 16.4 and 16.5. The Minister shall subject to the execution of such gas sales contract extend the term of this Contract with respect to the Natural Gas Production Area corresponding to such gas sales contract for a period which will allow for the supply of Natural Gas 71 PRODUCTION SHARING CONTRACT BLOCK . under the terms of the gas sales contract. 16.7 Contractor shall apply to the Minister for such licences as may be required for operations in Trinidad and Tobago beyond the Measurement Point. Costs incurred in this regard shall not be subject to Cost Recovery under this Contract. 16.8 Contractor shall use with priority in Petroleum Operations Associated Natural Gas including use for reinjection for pressure maintenance or recycling operations to effect maximum economic recovery of Crude Oil. The Minister may at any time call upon Contractor 16.9 to deliver to the Minister at the Field separator without compensation any quantity of Natural Gas produced in association with

Crude Oil not being required by Contractor for Petroleum Operations or for sale which may be needed in the public interest provided that delivery with Contractors Petroleum Operations. Government shall at its own cost provide and maintain any facilities beyond the delivery point required in connection with gathering transport processing or utilization of such Associated Natural Gas. unreasonably interfere does not 16.10 Contractor shall minimize flaring of any remaining Associated Natural Gas by reinjecting such Natural Gas into suitable strata or underground storage in accordance with sound and current international Petroleum industry practices. Contractor shall seek the Ministers approval to flare any such Natural Gas which cannot be reinjected due to specific reservoir considerations or for other reasons that are in line with best practice employed in the petroleum industry. The decision to grant or refuse approval shall be at the Ministers sole discretion. Any approval shall be subject 72 PRODUCTION SHARING CONTRACT BLOCK . to terms and conditions to be determined by the Minister in light of the prevailing circumstances. Before flaring Contractor shall take reasonable measures to ensure the extraction of natural gasoline and other liquids contained in the Associated Natural Gas if the Minister and Contractor agree that such extraction is economically justifiable. Notwithstanding anything in this Article to the contrary Associated Natural Gas may be flared at any time if necessary for the conducting of well and production tests and during any emergency. 73 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 17 BOOKS OF ACCOUNT FINANCIAL REPORTING AUDIT AND COST VERIFICATION

17.1 Contractor shall maintain in Trinidad and Tobago in accordance with the Accounting Procedure in Annex C and accepted accounting practices generally used in the international Petroleum industry books of account and such other books and records as may be necessary to show the work performed under the Contract the costs incurred and the quantity and value of all Petroleum produced and saved from the Contract Area and not used in Petroleum Operations. 17.2 Contractor shall prepare for each Calendar Year financial statements including a balance sheet and profit and loss statement reflecting its operations under the Contract. Accounting methods rules and practices applied for determining revenue and expense shall be consistent with sound and current

international Petroleum industry practices and the Laws of Trinidad and Tobago. Each Contractor Party shall also provide the Minister with financial statements for each Calendar Year. Each financial statement shall be certified by an independent certified firm of chartered accountants acceptable to the Minister and shall be submitted along with the auditors report to the Minister and the minister to whom responsibility for matters related to finance is assigned within ninety 90 days after the end of the Calendar Year to which it pertains. 17.3 Contractor shall also provide the Minister with the various other financial reports required by Annex C. 17.4 The Minister and/or the minister to whom responsibility for matters related to finance is assigned 74 PRODUCTION SHARING CONTRACT BLOCK . shall have the right to inspect and audit Contractors books accounts and records relating to Petroleum Operations under the Contract for the purpose of verifying Contractors compliance with the terms and conditions hereof. Upon reasonable advance notice such books accounts and records shall be available in Trinidad and Tobago at all reasonable times for inspection and audit by duly authorized representatives of the Government including independent auditors that may be employed by it. Fiscal audits shall be carried out within the period allowed under the Petroleum Taxes Act Chapter 7504. 17.5 The Minister and/or the minister to whom responsibility for matters related to finance is assigned may require Contractor to engage the auditors of any of the entities comprising Contractor to examine at Contractors cost and in accordance with generally accepted auditing standards the books and records of an Affiliate to verify the accuracy and compliance with the terms of the Contract insofar as a charge from the Affiliate of Contractor or of any entity comprising Contractor is included directly or through Contractor as a reimbursable cost under the Contract. Whenever audit of an Affiliates books is requested the Minister shall specify in writing the item or items for which it requires verification from such independent audit. A copy of the independent auditors findings shall be delivered to the Minister and the minister to whom responsibility for matters related to finance is assigned within thirty 30 days after completion of such audit. 17.6 Subject to the Accounting Procedure and the auditing provisions of the Contract the following procedure shall be implemented with respect to each Calendar Month to verify and establish

promptly Contractors costs that qualify for Cost Recovery under Article 18. 75 PRODUCTION SHARING CONTRACT BLOCK . a Contractor shall submit a statement of expenditure in accordance with the procedure detailed in Annex C to the Minister who shall verify that i claimed costs qualify for Cost Recovery under the terms of the Contract and the Accounting Procedure; and ii the claimed amount of a qualifying cost is based on documentation made correct available at Contractors office in Trinidad and Tobago. b The statement of expenditure shall be deemed approved as submitted if the Minister does not respond within ninety 90 days of receipt. If the Minister takes written exception thereto such written exception shall identify the particular cost or costs being contested and the reason for the query. c Contractor shall submit to the Minister within thirty 30 days after receipt of the Ministers exception notice such additional information in written form as the Minister may require or Contractor considers appropriate to support the correctness and/or recoverability of the contested cost or costs. If Contractor does not make a written submission within such time supporting the charge the cost or costs shall be deemed disallowed for purposes of Cost Recovery. d If additional written information supporting the contested cost or costs is submitted by Contractor within the prescribed period the Minister shall notify Contractor of his decision 76 PRODUCTION SHARING CONTRACT BLOCK . within thirty 30 days after receipt of such information. e If the Minister notifies Contractor that the exception remains the charge shall be deemed disallowed for purposes of Cost Recovery under the Contract subject to the right of Contractor to request within thirty 30 days after the receipt of such notice that the final determination as to recoverability of the disputed cost or costs be made by an expert pursuant to Article 33.8. f Contractor shall promptly correct its books of account to reflect any changes resulting from the cost verification procedure. 17.7 Except as otherwise agreed in writing between the Minister and Contractor all transactions giving rise to revenues costs or expenses which will be credited or charged to the books accounts records and reports prepared maintained or submitted hereunder shall be conducted at ArmsLength or on such a basis as will assure that all such revenues will not be lower and costs or expenses will not be higher than would result from a transaction conducted at

ArmsLength on a competitive basis with third parties. 17.8 a Audit Process All audits by the Minister shall be completed within thirtysix 36 Months after the termination of the Contract Year to which such audits apply. Auditors may examine all books and accounts and records of Contractor for a specific period of time or may examine only a specific aspect of such records. 77 PRODUCTION SHARING CONTRACT BLOCK . The Minister shall give at least thirty 30 days notice to Contractor of its intention to conduct an audit. In carrying out such audit the Minister shall not interfere unreasonably with the conduct of operations under the Contract. The Minister may at its sole discretion engage third parties to assist with or execute any or all aspects of the audit. Contractor necessary facilities for auditors appointed hereunder by the Minister including working space and access to all relevant personnel records files and other materials and the required codes to the management information system. provide shall all 17.8 b Final Statements Subject to any adjustments resulting from such audits or notification of a dispute by the Minister reports and statements shall be considered final and not subject to further audit after the end of the period provided for under Article 17.8a. Notwithstanding any provision herein or in the Contract to the contrary if in a subsequent period an issue or error is identified which relates to another period or to fraud or wilful misconduct alleged to have occurred at any time the Minister shall have the right to reexamine reports and statements otherwise considered final or not previously audited. 17.8 c Audit Resolution Process Within ninety 90 days after the end of audit fieldwork the Minister shall present to Contractor audit exceptions claims and queries. Contractor shall allow or deny in writing all exceptions setting report out a 78 PRODUCTION SHARING CONTRACT BLOCK . claims and queries set out in the report within ninety 90 days of the presentation of the report the Review Period. All denials shall be accompanied by a detailed statement of Contractors reasons and supporting evidence. All exceptions claims or queries that are not denied within the Review Period will be deemed allowed. The Minister and Contractor shall have up to ninety 90 days from the end of the Review Period to reach final resolution on exceptions claims and queries which have been denied. If outstanding exceptions claims and queries are not resolved during this period either Party

may initiate dispute resolution procedures in accordance with Article 33 hereof. 17.8 d Affiliates and Subcontractors Contractor shall be required to include in Contractors contracts with Affiliates and Subcontractors audit and record retention provisions which allow the Minister to audit the books and records of the Affiliates or Subcontractors to the extent that they relate to this Contract and to retain records all in accordance with the requirements of this Accounting Procedure. 17.8 e Audits by Contractor Party If any Contractor Party conducts an audit of the books and records of Operator or any other Contractor Party pertaining to the Contract it shall provide to the Minister a copy of the audit results a report setting out the audit exceptions claims and queries and the manner in which these exceptions claims and queries were finally allowed or denied by Operator. 79 PRODUCTION SHARING CONTRACT BLOCK . 17.8 f Retention Subject to the delivery of books records and documents to the Minister in accordance with the Contract upon termination of the Contract all books records and documents must be maintained by Contractor Contractors Affiliates and Subcontractors and made available for inspection until the later of i seventytwo after termination of each Contract Year; or Months 72 the iiif any cost amount or issue is under dispute the date by which that dispute is resolved. 80 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 18 ALLOCATION OF PRODUCTION RECOVERY OF COSTS AND EXPENSES PRODUCTION SHARING AND RIGHT OF EXPORT 18.1 Contractor shall have the right to use free of charge Petroleum produced from the Contract Area to the extent reasonably required for Petroleum Operations under the Contract. All Available Petroleum shall be measured at the 18.2 applicable Measurement Points and allocated as set forth hereinafter. Test or experimental Production to the extent not required for Petroleum Operations hereunder shall be deemed Profit Petroleum and shall be allocated between the Minister and Contractor in accordance with Article 18.14. 18.3 Contractor and the Minister shall review annually Contractors Production programme from each Production Area having due regard to ensuring compliance with Contractors obligations under Article 10. Contractor shall prepare and provide Minister not 18.4 less than ninety 90 days prior to the beginning of each Calendar Quarter following commencement of Commercial Production a written

forecast setting out the total quantity of Petroleum that it estimates can be produced and saved hereunder during each Month for the next four 4 Calendar Quarters in accordance with prevailing Petroleum industry practice and the Production programme established in accordance with Article 18.3. Contractor shall endeavour to produce each Calendar Month the forecast quantity. 81

PRODUCTION SHARING CONTRACT BLOCK . 18.5 aAll Available Crude Oil shall be transported if applicable to storage tanks constructed maintained and operated at the Measurement Point where it shall be measured for purposes of this Contract and delivered to the Minister and each Contractor Party who shall each take in kind assume risk of loss and separately dispose of their respective entitlement. bPrior to commencement of Commercial Production of Crude Oil from the Contract Area the Minister and Contractor shall agree on a procedure for taking volumes of Crude Oil corresponding to their respective entitlements on a regular basis and in a manner that is appropriate having regard to the respective destinations and uses of the Crude Oil. 18.6 aAll Available Natural Gas shall be measured at the Measurement Point where it shall be valued and delivered to the Minister and each Contractor Party who shall each take in kind assumes risk of loss and separately dispose of their respective entitlement. bAll Available Natural Gas shall be disposed of in accordance with the marketing arrangements developed pursuant to Articles 16.4 and 16.5. Cost Recovery Subject to the Accounting Procedure and the 18.7 auditing provisions of the Contract Contractor shall recover costs and expenses duly verified in accordance with Article 17 of the Contract in respect of the Petroleum Operations hereunder to the extent of and out of eighty per cent 80of all Available Crude Oil andor all Available Natural Gas from the Contract Area hereinafter referred to as Cost Recovery Crude Oil andor Cost Recovery Natural Gas and collectively as Cost Recovery Petroleum. 82

PRODUCTION SHARING CONTRACT BLOCK . 18.8 Subject to Article 18.9 such costs and expenses shall be allocated to the applicable recoverable Crude Oil cost account or recoverable Natural Gas cost account and shall be recovered from the relevant account on a first in first out basis subject to the following a costs incurred in respect of Exploration Operations may be recovered on an expensed basis; b capital costs incurred in respect of

Development and Production Operations may be recovered on an expensed basis commencing in the year in which such expenditure is incurred; c annual operating costs may be recovered in the year in which they are incurred; and d annual administrative overhead costs up to the limits established in Article 21 of the Accounting Procedure may be recovered in the year incurred. 18.9 To the extent that in a Calendar Year the recoverable costs or expenses related to the Contract Area exceed the amount allowable for Cost Recovery Crude Oil or Cost Recovery Natural Gas from the Contract Area for such Calendar Year then the excess shall be carried forward for recovery in the next succeeding Calendar Years until fully recovered but in no case after termination of this Contract. To the extent that the amount of Cost Recovery 18.10 Crude Oil or Cost Recovery Natural Gas received by Contractor from the Contract Area during a Calendar Month is greater or less than the amount Contractor was entitled to receive for that Month an appropriate adjustment shall be made in accordance with internationally accepted accounting principles. 83 PRODUCTION SHARING CONTRACT BLOCK . Profit Petroleum 18.11 The remaining Available Petroleum including any portion of Cost Recovery Crude Oil or Cost Recovery Natural Gas not required to cover costs hereinafter referred to as Profit Crude Oil and/or Profit Natural Gas and collectively as Profit Petroleum shall be allocated between the Government and Contractor. 18.12 Contractors share of Profit Petroleum shall be the remaining portion after deducting the Governments share in accordance with the provisions of Article 18.14. 18.13 Subject only to Article 16.5c and Article 26 Contractor may export any Available Petroleum received by Contractor under Article 18. 18.14 The Governments share of Profit Crude Oil and/or Profit Natural Gas for a Calendar Month from the Contract Area shall be determined separately for Crude Oil and Natural Gas by reference to the applicable price class in the relevant tables detailed hereunder. The relevant price class shall be determined using the value of Profit Crude Oil and Profit Natural Gas calculated in accordance with Article 20 herein. The average daily Production rates referred to in the Production tiers set out in the tables hereunder shall be calculated for each Calendar Month by dividing the respective volumes of Available Crude Oil and Available Natural Gas produced from the Contract Area during that Month

by the number of days in such Month. 84 PRODUCTION SHARING CONTRACT BLOCK .

aGovernments share of Profit Crude Oil per cent The Governments share of Profit Crude Oil shall be determined each Month based on each of the percentages in the table below. The Governments share shall be determined on an incremental basis. Production Tier Crude Oil Price Class A B C D

Production up to 75000 BD Production in excess of 75000 BD and up to 100000 BD Production in excess of 100000 BD and up to 150000 BD Production in excess of 150000 BD and up to 200000 BD Production greater than 200000 BD Where Price Class A refers to Governments share for a Crude Oil price less than or equal to Fifty United States Dollars US\$50.00 per Barrel. Price Class B refers to Governments share for a Crude Oil price greater than Fifty United States Dollars US\$50.00 per Barrel but less than or equal to SeventyFive United States Dollars US\$75.00 per Barrel. 85 PRODUCTION SHARING CONTRACT BLOCK . Price Class C refers to Governments share for a Crude Oil price greater than SeventyFive United States Dollars US\$75.00 per barrel but less than or equal to One Hundred United States Dollars US\$100.00 per Barrel. Price Class D Crude Oil price greater than One Hundred United States Dollars US\$100.00 per Barrel the Governments share of Profit Crude Oil is equal to $BR \cdot 70 \left[\frac{P - US\$100}{P} \right]$ 1BR where BR refers to the Base Rates set out in Price Class D and P is the Crude Oil price. 86 PRODUCTION SHARING CONTRACT BLOCK .

bGovernments share of Profit Natural Gas per cent The Governments share of Profit Natural Gas shall be determined each Month based on each of the percentages in the table below. The Governments share shall be determined on an incremental basis. Production Tier Natural Gas Price Class A B C D

Production up to 200 MMcfd Production in excess Of 200 MMcfd and to 350 MMcfd Production in excess of 350 MMcfd and up to 500 MMcfd Production in excess of 500 MMcfd and up to 750 MMcfd Production in excess of 750 MMcfd and up to 1000 MMcfd Production in excess Of 1000 MMcfd Where Price Class A refers to Governments share for a Natural Gas price less than or equal to Four United States Dollars US\$4.00 per Mcf. 87 PRODUCTION SHARING CONTRACT BLOCK . Price Class B refers to Governments share for a Natural Gas price greater than Four United States Dollars US\$4.00 per Mcf but less than or equal to Six United States Dollars and Fifty

Cents US6.50 per Mcf. Price Class C refers to Governments share for a Natural Gas price greater than Six United States Dollars and Fifty Cents US6.50 per Mcf but less than or equal to Nine United States Dollars US9.00 per Mcf. Price Class D Natural Gas price greater than Nine United States Dollars US9.00 per Mcf the Governments share of Profit Natural Gas is equal to $BR \cdot 70 \cdot [P - US9.00]$ 1BR where BR refers to the Base Rates set out in Price Class D and P is the Natural Gas price. 88

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 19 MEASUREMENT OF PETROLEUM

All Petroleum produced saved and not used in 19.1 Petroleum Operations shall be measured at the Measurement Points approved in the Development Plan. 19.2 The Measurement Point shall be at the end of the facilities for which the cost is included as a recoverable cost of Petroleum Operations under the Contract. 19.3 The Production shall be measured in accordance with the sound and current practices and standards generally accepted in the international Petroleum industry. All measurement equipment shall be installed maintained and operated by Contractor. The Minister shall have the right to inspect the measuring equipment installed by Contractor and all charts and other measurement or test data at all reasonable times. The accuracy of Contractors measuring equipment shall be verified by tests at regular intervals and upon the request of the Minister using sound and current means and methods generally accepted in the international Petroleum industry. 19.4 Upon discovery of a meter malfunction Contractor shall immediately have the meter repaired adjusted and corrected and following such repairs adjustment or correction shall have it tested or calibrated to establish its accuracy. Upon the discovery of a metering error Contractor shall have the meter tested immediately and shall take the necessary steps to correct any error that may be discovered. 19.5 In the event a measuring error is discovered Contractor shall use its best efforts to determine the correct Production figures for the period during which there was a measuring error and the corrected figures shall be used. In determining the correction Contractor shall use where required the information from other measurements made inside or outside the Production Area. Contractor shall submit for the Ministers approval a report detailing the source and nature of the measuring error and the corrections to be

applied. If it proves impossible to determine when the measuring error first occurred the commencement of the error shall be deemed to be that point in time halfway between the date of the last previous test and the date on which the existence of the measuring error was first discovered. All measurements for all purposes in this 19.6 Contract shall be adjusted to standard conditions of pressure and temperature sixty 60 degrees Fahrenheit and 14.7 p.s.i.a.. 90

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 20 VALUATION The value of Crude Oil from each Production Area 20.1 shall be the Fair Market Value of such Crude Oil at the Measurement Point. 20.2 The Fair Market Value of Crude Oil shall be determined taking into account the quality volume cost of transportation terms of payment and any other relevant conditions including the then prevailing market conditions for Crude Oil. Where different grades of Crude Oil are being 20.3 produced from the Contract Area the value shall be determined and applied for each grade of such Crude Oil. However in the event that different grades of such Crude Oil are blended together for sale then the value of such a blend shall prevail. 20.4 a Contractor shall present to the Minister within ten 10 days after the end of each Calendar Month during which Crude Oil is produced and measured from a Production Area its proposal as to the Fair Market Value of the particular Crude Oil for the preceding Month. Such proposal shall be accompanied by information supporting Contractors proposal including Free On Board FOB sales prices for the particular Crude Oil and/or comparable crude oils delivered during such preceding Calendar Month by Contractor or other producers from Trinidad and Tobago or other producing countries or from publications evidencing such sale prices. b The proposals shall be deemed approved as submitted under Article 20.4a if the Minister 91 PRODUCTION SHARING CONTRACT BLOCK . fails to respond within thirty 30 days of receipt. c If the Minister takes written exception to Contractors proposal the Minister shall include with such notice a counterproposal for the value of the particular Crude Oil. d If Contractor accepts the Ministers counterproposal or does not take written exception thereto within ten 10 days after receipt the Ministers counterproposal shall be the value for the Calendar Month for which the price is being determined. e If Contractor takes written exception to the Ministers counterproposal

within the prescribed period authorized representatives of the Minister and Contractor shall meet to establish the value for the Calendar Month for which the determination is being made in accordance with the principles outlined under Article 20.5.

20.5 For the resolution of matters pursuant to Article 20.4e the following principles shall apply in determining the value of Crude Oil

a a basket of widely traded reference crude oils similar in quality to the Crude Oil to be valued shall be selected and the international market prices of the crude oils selected shall be used as the base value for the Crude Oil to be valued;

b an appropriate pricesetting market where substantial quantities of the reference crude oils are traded at Arms Length and on an ongoing basis shall be chosen;

92 PRODUCTION SHARING CONTRACT BLOCK . c the Crude Oils to be included in the basket shall be proposed by Contractor as part of the Development Plan under Article 13.7 to be approved by the Minister;

d in the event that one or more of the crude oils comprising an agreed basket no longer meets the requirements of Article 20.5a a replacement crude oil shall be determined by agreement between the Minister and Contractor;

e transportation differential shall be taken into account that is to say the difference between the cost of transporting to the pricesetting market the reference crude oils and the Crude Oil to be valued;

f interest charges on the value of the inventory in transit may be considered in determining transportation costs; and

g other relevant considerations.

The Fair Market Value of Natural Gas determined 20.6 at the Measurement Point shall be the price in United States Dollars at which an independent third party would be prepared to buy at the particular time such Natural Gas on an Arms Length basis taking into account the quality volume cost of transportation terms of payment and any other relevant conditions including the then prevailing market conditions for Natural Gas at the final sales destination and shall be based on the higher of actual realized prices or the prices calculated under the marketing arrangements for Natural Gas approved by the Minister under Article 16.5 for deliveries of Natural Gas during the Calendar Month.

93 PRODUCTION SHARING CONTRACT BLOCK . For Natural Gas sales transactions that are non20.7 Arms Length the following considerations shall apply in determining the value of Natural Gas

a the market destination of the Natural Gas;

b the price of the Natural Gas at the final

destination; c regasification costs; d shipping costs; e liquefaction costs; f pipeline transport costs; g publicly available values outside Trinidad and Tobago; and h other relevant considerations. 20.8 Subject to the provisions of this Article 20 in the event of any dispute between the Minister and Contractor concerning the Fair Market Value of Crude Oil or Fair Market Value of Natural Gas such dispute may be referred by either Party for final determination in accordance with Article 33. 94

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 21 FINANCIAL OBLIGATIONS

Contractors financial obligations towards the 21.1 Minister which it shall satisfy at its own expense shall consist of the following payments a Minimum payment in respect of each hectare of the Contract Area retained by Contractor from time to time throughout the period of this Contract at the following rates USD per hectare per annum During the 1st Contract Year During the 2nd Contract Year During the 3rd Contract Year During the 4th Contract Year During the 5th Contract Year During the 6th Contract Year 6.00 6.50 7.00 7.50 8.00 8.50 Thereafter minimum payment shall increase annually at a rate of six per cent 6 for the unexpired term of the Contract. Minimum payment shall be payable quarterly in advance within the first ten 10 days of January April July and October. No refund shall become due if before the end of a quarterly period a part of the area has been surrendered. b Annual charges payable within ten 10 days of the Effective Date of this Contract and thereafter within the first ten 10 days of each Contract Year in respect of the following items i An administrative charge of Three Hundred Thousand United States Dollars US300000.00 95

PRODUCTION SHARING CONTRACT BLOCK . during the first year of this Contract increasing annually at a rate of four per cent 4 for the unexpired term of the Contract. No refund shall be due if Contractor ceases operation prior to the end of a Contract Year. ii A training contribution to the University of Trinidad and Tobago and/or the University of the West Indies and/or such institution as the Minister may direct for the financing of training of nationals in appropriate fields of study associated with the energy sector as follows United 1. a payment of One Hundred and Twenty Thousand Dollars US120000.00 for the first year of the Contract and increasing annually at a rate of four per cent 4 until Commercial Discovery; States 2. in the event of a Commercial Discovery the

amount shall increase to One Hundred and Fifty Thousand United States Dollars US150000.00 in the year following Commercial Discovery increasing annually at a rate of four per cent⁴ until Production commences from the first Production Area under the Contract; and 3. where the first Production Area under the Contract has initiated Production the payments under Article 21.1bi shall become one quarter of one per cent 0.25 of the value of Contractors share of Profit Petroleum on a monthly basis.

96 PRODUCTION SHARING CONTRACT BLOCK . iiiA research and development contribution for the financing of Petroleum related research and development activity as follows

United 1. a payment of One Hundred and Twenty Thousand Dollars US120000.00 for the first year of the Contract and increasing annually at a rate of four per cent⁴ until Commercial Discovery; States 2. in the event of a Commercial Discovery the amount shall increase to One Hundred and Fifty Thousand United States Dollars US150000.00 in the year following Commercial Discovery increasing annually at a rate of four per cent⁴ until Production commences from the first Production Area under the Contract; and 3. where the first Production Area under the Contract has initiated Production the payments under Article 21.1biii shall become one quarter of one per cent 0.25 of the value of Contractors share of Profit Petroleum on a monthly basis. c Production bonuses payable on first attainment of a sixty 60 consecutive day average at or in excess of the Production levels detailed hereunder Petroleum production in Barrels per day BOPD Production bonus payments in USD

25000	50000	75000	100000	1500000.00	2000000.00	3000000.00	4000000.00
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97 PRODUCTION SHARING CONTRACT BLOCK . thereafter for every 50000 BOPD exceeding 100000 BOPD 1000000.00 In computing the Production levels referred to above Natural Gas Production shall be added to Crude Oil production after converting to Barrels of Crude Oil on an Energy Equivalent Basis. d A technical assistanceequipment bonus of Three Hundred Dollars US300000.00 payable as directed by the Minister either Thousand United States i in cash within ten 10 days of the Effective Date of this Contract; or ii in technical assistance andor equipment to a total delivered cost of Three Hundred Thousand United States Dollars US300000.00. Such technical assistance andor equipment shall be delivered to the Minister within three 3 months of the date that

a list of such technical assistance and/or equipment is agreed between the Minister and Contractor.

e Fund the award of scholarships for the training of nationals of Trinidad and Tobago in appropriate fields of study associated with the energy industry. The value of such funding shall be One Hundred Dollars US\$100,000.00 per annum for the first year of the Contract and increasing annually at a rate of four per cent (4%) for the unexpired term of the Contract.

Thousand United States

21.2 The Contractor shall be subject to and must observe the laws in force from time to time in Trinidad and Tobago and nothing herein contained shall be construed as exempting the Contractor from complying with the laws imposing taxes, duties, levies, fees, royalties, charges or similar impositions or contributions which the Contractor would be liable to pay or may be called upon to pay under such laws by virtue of its conduct of Petroleum Operations hereunder.

21.3 Contractor shall be subject to payment of assessment or contributions assessed on employees by generally applicable law on labour costs. Contractor shall also guarantee the payment of any Trinidad and Tobago income tax due from its foreign employees. The Contractor and its Subcontractors and their respective personnel shall be obliged to pay stamp duties or any such transfer tax as may be in effect from time to time at the rates which are generally applicable to all persons or entities in Trinidad and Tobago. The Minister shall pay on behalf of the Contractor out of the Government's share of Profit Petroleum referred to in Article 18.11 the Contractor's liability under applicable law for royalty, petroleum impost, petroleum profits tax, supplemental petroleum tax, petroleum production levy, green fund levy, unemployment levy and any other taxes or impositions whatsoever measured upon income or profits arising directly from the Petroleum Operations under this Contract.

21.6 The Contractor's taxable income under this Contract shall be gross income as set out under Article 21.8 less the deductions allowed in connection with Petroleum Operations under the tax laws of Trinidad and Tobago including any losses carried forward from previous financial years.

Contractor's Taxable Income.

The Minister shall cause the appropriate tax authority of Trinidad and Tobago to furnish the Contractor with the proper official receipts evidencing such payments. The value of the Petroleum to be used in

98 PRODUCTION SHARING CONTRACT BLOCK

99 PRODUCTION SHARING CONTRACT BLOCK

making the application to the Contractors said liability shall be the same as the value used in the computation of the amount of the income giving rise to such liability. 21.7 Notwithstanding the provisions of Article 21.5 Contractor shall discharge its liability for withholding tax in accordance with applicable law. 21.8 For the purpose of applying Article 21.6 the gross income of the Contractor in respect of any financial year shall be calculated as the total of a the sums received by Contractor from the sale or other disposition of all Petroleum acquired by Contractor pursuant to Article 18; and b an amount equal to Contractors Grossup Value calculated in the manner shown in Annex C Article 13. 21.9 Subject only to Articles 21.1 21.3 21.4 21.7 and 23 and notwithstanding Article 21.2 the Minister shall save the Contractor harmless from all other payments to or levies by the treasury or the Government whether or not existing at the date of this Contract including but not limited to royalty petroleum impost petroleum profits tax supplemental petroleum tax petroleum production levy green fund levy and unemployment levy. 21.10 The Parties agree that for the purposes of determining Contractors Taxable Income in Trinidad and Tobago profits andor losses resulting from Petroleum 100 PRODUCTION SHARING CONTRACT BLOCK . Operations carried out under this Contract shall not at any time be consolidated with profits andor losses resulting from any of the Contractors other operations in Trinidad and Tobago outside the Contract Area. 21.11 The Contractor shall maintain financial books and records with respect to Petroleum Operations in the Contract Area and shall enable authorised persons to inspect and review such books. 101 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 22 PAYMENT AND CURRENCY All payments which the Contract requires Contractor 22.1 to make to the Minister or the Government under this Contract shall be made to the recipient bank account in United States Dollars at a bank designated by the recipient. Contractor may make payment in other currencies if acceptable to the recipient. Conversion of all payments made by Contractor in 22.2 Trinidad and Tobago into United States Dollars or any other currency acceptable to the recipient shall be effected at the generally prevailing rate of exchange at the time of payment. 22.3 All payments due to Contractor from Minister shall be made in United States Dollars or any other currency acceptable to Contractor at a

bank to be designated by Contractor. 22.4 Contractor shall have the right to receive retain abroad and use without restriction the entirety of proceeds received from its sales of its share of Petroleum from the Contract Area subject to Contractor satisfying completely its then accrued financial obligations under this Contract. Contractor shall during the term of the Contract 22.5 have the right without the imposition of any control except as otherwise imposed by the terms of the Contract to make any payments and to maintain and operate bank accounts outside Trinidad and Tobago in whatsoever currency. Contractor may also operate and maintain United States Dollar or other foreign currency bank accounts within Trinidad and Tobago subject to applicable law. 102

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 23 MATERIALS AND EQUIPMENT

IMPORT DUTIES Contractor equipment 23.1 machinery tools spare parts and any other goods of a similar nature Materials required for Petroleum Operations under this Contract. provide shall all 23.2

Such Materials shall be provided by Contractor in accordance with Work Programmes and budgets under Articles 14 and 15 and shall be acquired pursuant to procurement procedures specified by Contractor under Article 1.7 of the Accounting Procedure. 23.3 Contractor shall give preference to the use of locally manufactured or locally available Materials when such are comparable with the competing imported Material in quality and availability and the price thereof does not exceed the c.i.f. price including import duties where applicable of the imported Material delivered to the Contract Area. In this regard Contractor shall maintain records and accounts and provide reports in accordance with the provisions of Article 12 of the Accounting Procedure. 23.4 Subject to Article

23.3 Contractor shall have the right to import any Materials required for Petroleum Operations. In this regard Contractor shall comply with generally applicable importation formalities and pay import and excise duties to the extent not exempt therefrom by generally applicable law. 103

PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 24 OWNERSHIP OF ASSETS Subject

to Article 24.3 ownership of any asset 24.1 whether fixed or moveable acquired and owned by Contractor in connection with Petroleum Operations hereunder shall pass to the Minister without consideration when the part of the Contract Area in which the asset is located is relinquished or at

the end of the term of this Contract whichever first occurs except in cases where the Minister notifies Contractor that he does not accept the particular asset. Where the ownership of any asset passes to the Minister from the date of such transfer Contractor shall have no further rights in and shall be released from all responsibility and liability for the asset unless it can be proven that liability arises from a defect that existed at the date of the passing of such ownership. Where the Minister elects not to take a particular asset Contractor shall carry out the approved abandonment programme under Article 37 and shall be free to dispose of the asset in accordance with applicable law. Where Production from a Production Area is 24.2 possible beyond the term of the Contract and any extensions granted in respect thereof Contractor shall hand over to the Minister without consideration such Production Area and all facilities required for carrying out existing operations in good working order normal wear and tear excepted. Upon the transfer of said Production Area and related facilities the Minister shall assume all responsibility for the facilities and their abandonment and hold Contractor harmless against any liability with respect thereto accruing after the date of such transfer to the Minister. 24.3 Subject to Article 24.2 whenever Contractor 104 PRODUCTION SHARING CONTRACT BLOCK . relinquishes any part of the Contract Area all moveable property located within the part of the Contract Area so relinquished may be removed to any part of the Contract Area that has been retained. 24.4 The provisions of Articles 24.1 and 24.2 shall not apply to Materials facilities or other property that are rented or leased to Contractor or which belong to employees of Contractor provided that the ownership of any such item by other than Contractor is clearly documented with the Minister at the time of entry into Trinidad and Tobago or of local acquisition. 24.5 In the event Contractor desires to move property located on the Contract Area but no longer used in Petroleum Operations to another location within Trinidad and Tobago for further use prior approval of the Minister shall be required. Upon receipt of such approval Contractor shall pay to the Minister either a an amount equal to a transfer price mutually agreed upon by the Parties; or b if no price is agreed and Contractor still desires to move the property as provided herein an amount equal to the percentage of the cost of such property that has been costrecovered under this

Contract as of the date such property is moved multiplied by the depreciated value of the property with applicable law. determined accordance in 24.6 In the event Contractor desires to use property located within the Contract Area for Petroleum Operations not related to the Contract Area the prior approval of the Minister shall be required. The terms and conditions under which the facilities shall be used for such purpose shall be subject to the approval of the Minister. 105 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 25 SUBCONTRACTORS PERSONNEL AND TRAINING Contractor has the right to use qualified 25.1 Subcontractors to provide specialized equipment or services. 25.2 Contractor shall provide Local Enterprises opportunities in competition with foreign entities to provide any services or equipment required in connection with Petroleum Operations. The procurement procedures submitted pursuant to Article 1.7 of the Accounting Procedure shall contain appropriate measures in accordance with the provisions of Article 39 to ensure Contractors compliance in this regard. Contractor shall give preference to Local Enterprises as Subcontractors where bids placed by such are competitive with foreign bids in skills resources availability and price and meet the technical and financial requirements of Contractor. 25.3 Prior to the commencement of any contract Contractor shall provide the Minister with all necessary information covering each Subcontractor including upon the Ministers request an executed copy of any contract and related agreements and changes thereto. Contractor undertakes to employ and ensure that 25.4 its Subcontractors employ with priority nationals of Trinidad and Tobago in all aspects of Petroleum Operations to the extent that these nationals with the requisite qualifications and experience can be found. Contractor shall minimize and ensure that its 25.5 Subcontractors minimize the employment of foreign personnel but may subject to the provisions of this Contract and applicable law employ foreign nationals 106 PRODUCTION SHARING CONTRACT BLOCK . a to the extent that qualified nationals cannot be found to fill the positions required; b to fill a limited number of specialist technical or managerial positions provided that there are clearly national understudies comprehensive programmes for their development in accordance with the provisions of Article 25.6; and counterpart identified together with c to provide shortterm specialist expertise.

Contractor shall undertake the development and 25.6 training of nationals including training for the specific purpose of taking over positions held by expatriate personnel for all positions including administrative technical and executive management positions. Contractor shall together with its annual Work Programme and budget prepare and submit annually to Minister for approval programmes for such development and training. Contractor shall include a status report on these programmes with its submission of the quarterly status report required under Articles 14.1b and 15.6. 25.7 Contractor shall at its own expense as part of Petroleum Operations provide a reasonable number of personnel of the Ministry with onthejob training and where appropriate and practicable with overseas training based on a mutually agreed programme. Onthejob of representatives of Minister on project teams responsible for various aspects of Petroleum Operations under this Contract. inclusion training involve shall the 25.8 Contractor shall also submit to the Minister together with its submission of the annual Work Programme and budget the details of all the payments benefits and privileges accorded for each classified category of Contractors personnel both expatriate and local. 107 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 26 STATES RIGHT OF REQUISITION In case of war or imminent expectation of war or 26.1 grave national emergency as provided for in Section 36 of the Act the President may requisition all or a part of the Petroleum Production from the Contract Area and require Contractor to increase such Production to the extent required. In such event the price to be paid by the President for the Petroleum shall be the value determined in accordance with Article 20 of the Contract and payment shall be made within thirty 30 days after delivery in US Dollars at a bank outside of Trinidad and Tobago designated by Contractor. 26.2 In the event of any requisition as provided above the President shall indemnify Contractor in full for the period during which the requisition is maintained including all reasonable damages if any which result from such requisition. 108 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 27 UNITIZATION If a Petroleum Discovery in the Contract Area 27.1 extends beyond the boundaries of the Contract Area Minister may require that the Development of the Discovery and the Production of Petroleum therefrom be carried out in

collaboration with the entity or entities that have the right to conduct Petroleum Operations in the areas into which the Discovery extends. 27.2 In such case a collective proposal for common Development and Production of the deposit of Petroleum shall be proposed by Contractor and such other entity or entities for approval by the Minister. If such proposal is not approved the Minister may prepare or cause to be prepared for the account of Contractor and the other entities involved a reasonable plan for common Development and Production. Where one or more of the entities object to the 27.3 programme prepared by the Minister under Article 27.2 it or they may within twentyeight 28 days of receipt of the programme submit the matter for determination in accordance with Article 33.

109 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 28 CONFIDENTIALITY Any and all data reports samples information 28.1 interpretation of such data and all other information or work product pertaining to the Contract Area including in particular all data for which the cost was recorded by Contractor as a cost of Petroleum Operations shall be the property of the State. Except as provided in Articles 28.3 28.4 and 28.5 all data shall be maintained by the Parties as strictly confidential and shall not be divulged by either Party during the term of the Contract without prior written consent of the other Party except to the extent required to comply with applicable law unless such data become part of the public domain. 28.2 Such confidentiality undertaking shall continue to apply to Contractor for a period of five 5 years after the termination of the Contract. Contractor shall not trade sell or publish data pertaining to the Contract Area at any time without the prior written consent of the Minister. A Party may disclose such information to its 28.3 employees Affiliates consultants banks financial institutions auditors Subcontractors and prospective assignees to the extent required for the efficient conduct of Petroleum Operations. Prior to making any such disclosures to its consultants banks financial institutions auditors Subcontractors or prospective assignees such Party shall obtain from such individuals or entities a written confidentiality undertaking to keep the data and information strictly confidential. Contractor may also upon written notice to the Minister make such disclosures as may be required by applicable law or the rules of a recognized stock exchange and such notice shall include copies of the information to be 110

PRODUCTION SHARING CONTRACT BLOCK . disclosed. 28.4 a All data furnished under this Contract shall subject to the exemptions in Article 28.4b below be treated as strictly confidential for the term of this Contract or any extension or renewal hereof except that the Minister and Contractor shall have the right to use such data for the purpose of any arbitration or litigation between the Minister and Contractor. bi Data related to Petroleum Operations in areas which have been relinquished by Contractor may be released by the Minister immediately on relinquishment. ii Data related to the Petroleum Operations in areas not relinquished in accordance with the terms of this Contract may be released by the Minister at the end of the first phase of the Contract as specified in Article 4.1 or one 1 year after acquisition whichever period is later. The Minister shall be entitled at any time to 28.5 prepare and publish reports or studies using information derived from any information or data related to the Contract Area. 111 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 29 PIPELINES Sections 26 and 27 of the Petroleum Regulations 29.1 shall apply to any pipeline outside of the Contract Area but which is included as a part of Petroleum Operations hereunder. 29.2 In the event of usage of such pipeline by third parties the tariff collected by Contractor shall be credited to the Cost Recovery account. In consultation with the Minister such tariff shall be negotiated by Contractor at the time of usage. 112 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 30 INSURANCE Contractor shall provide all insurance required 30.1 by applicable law and such other insurance as may be agreed with the Minister from time to time in conformity with generally accepted practices in the international Petroleum industry. Contractor shall insure with a reputable insurance company that shall repay claims in convertible currency. 30.2 All such policies of insurance with respect to the operations of Contractor shall name the Minister as an additional named insured or loss payee and shall contain an express waiver of subrogation against the Government and the Minister. 30.3 Minister with copies of all policies of insurance. Contractor shall upon request provide the Contractor shall actively pursue any claims 30.4 against insurers. Any amount received from insurance settlements shall be applied and accounted for in accordance with the Accounting Procedure. 30.5 Contractor shall not selfinsure or

insure through Affiliates without the specific prior approval of the Minister. 30.6 Contractor may utilize its normal worldwide insurance programmes and coverage to satisfy these insurance requirements with the prior approval of the Minister.

113 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 31 ASSIGNMENT AND TRANSFER Any entity or entities comprising Contractor may 31.1 with prior approval of the Minister assign or Transfer all or an undivided percentage interest in its rights and obligations under the Contract to any of its Affiliates provided that a such entity demonstrates to the Ministers satisfaction that the Affiliate to which the assignment or Transfer is proposed to be made is as qualified as the assignor or transferor with respect to its technical and financial competence; b such entity at the time of such notice provides the Minister with an undertaking from the financially technically and legally competent ultimate parent company of the Affiliate to which the assignment or Transfer is proposed to be made like that which is required by Article 8.5; c the instrument of assignment or Transfer states precisely that the assignee or Transferee is bound by all covenants contained in the Contract; and d the assignor or transferor submits a valuation and all material terms of the assignment. 31.2 Subject to the prior written approval of the Minister any of the entities comprising Contractor may assign all or an undivided percentage interest in its rights and obligations under the Contract to a third party that is not an Affiliate of Contractor. For 114 consideration to be given to any such request PRODUCTION SHARING CONTRACT BLOCK . a all accrued obligations of the assignor derived from the Contract must have been duly fulfilled as of the date such request is made or assignor and assignee must jointly and severally guarantee fulfilment of any unfulfilled accrued obligations of assignor; b the proposed assignee or assignees must produce reasonable evidence to the Minister of its or their financial and technical competence; c the instruments of assignment shall be submitted to the Minister for scrutiny and approval and shall include provisions stating precisely that the assignee is bound by all covenants contained in the Contract; and d the assignor submits a valuation and all material terms of the assignment. 31.3 No assignment shall in any way absolve the assignor from the obligations undertaken by it under the Contract except to the extent such obligations are in fact

performed by the assignee. 31.4 Any entity or entities comprising Contractor shall apply for consent at least ninety 90 calendar days before the proposed effective date of the Transfer; which application shall include evidence to the Minister of the financial and technical competence of the Transferee together with a valuation and all material terms of the Transfer. 31.5 Each assignee or Transferee shall within thirty 30 days after the effective date of the assignment or Transfer comply with the requirements of Articles 10.1 115 PRODUCTION SHARING CONTRACT BLOCK . and 10.2. 31.6 For each assignment or Transfer made by any entity or entities comprising Contractor the following rates shall apply to the amounts or value of the consideration a For every dollar of the first One Hundred Million United States Dollars US100000000.00 1 b For every dollar of the next One Hundred Million United States Dollars US100000000.00 1.5 c For every dollar thereafter 2 The Minister reserves the right to waive this payment or any part thereof. 31.7 The Minister reserves the right to employ the services of an independent consultant at the cost of Contractor or any of the entities comprising Contractor to be mutually agreed by the Minister and such entity to carry out an independent valuation of the transaction. The final determination of the valuation shall remain with the Minister and will be subject to the applicable rates stated in Article 31.6 above. 31.8 No assignment or Transfer amount payable under Article 31.6 shall be chargeable on any assignment or Transfer made under this Article 31 where stamp duty on such assignment or Transfer is paid by any entity comprising Contractor. If an amount which has been paid on an assignment or Transfer subsequently becomes subject to stamp duty such amount shall be refunded. 31.9 Should an assignment or Transfer referred to under this Article occur without such entity first obtaining the required consent of the Minister it may result in the forfeiture of this Contract at the sole discretion of the Minister. 116 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 32 APPLICABLE LAW The validity interpretation and implementation 32.1 of this Contract shall be governed by the Laws of the Republic of Trinidad and Tobago. 117 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 33 CONSULTATION EXPERT DETERMINATION AND ARBITRATION 33.1 The Parties shall apply their best efforts to settle amicably through consultation any dispute arising in connection

with the performance or interpretation of any provision hereof. 33.2 If any dispute referred to under this Article has not been settled through such consultation within ninety 90 days after the dispute arises either Party may by written notice to the other Party propose that the dispute be referred either for determination by a sole expert or to arbitration in accordance with the provisions of this Article. Following the submission of written notice under 33.3 Article 33.2 the Parties may by mutual agreement refer the dispute for determination by a sole expert to be appointed by agreement between the Parties. Such sole expert shall be an internationally recognized specialist in the interpretation of the subject under dispute. If the Parties are unable to agree on designation of the expert within thirty 30 days following the submission of written notice under Article 33.2 the expert shall be named by an internationally recognized organisation to be agreed to by the Parties. 33.4 As an alternative to the procedure described in Article 33.3 and if agreed upon by the Parties such dispute shall be referred to arbitration by an agreed sole arbitrator. 33.5 a If the Parties fail to refer such dispute to a sole expert under Article 33.3 or to a sole arbitrator under Article 33.4 within sixty 60 118 PRODUCTION SHARING CONTRACT BLOCK . days of the submission of notice under Article 33.2 the dispute shall be referred to arbitration. The arbitration shall be conducted by three 3 arbitrators in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law UNCITRAL Rules in effect on the Effective Date of the Contract. b Where arbitration is resorted to either by the sole arbitrator under Article 33.4 or arbitral tribunal the UNCITRAL Rules in effect on the Effective Date of the Contract shall be used. The English language shall be the language used 33.6 in the expert or arbitral proceedings. All hearing materials statements of claim or defence award and the reasons supporting them shall be in English. 33.7 arbitration shall be in Trinidad and Tobago. The place of the expert determination or 33.8 In the case of a request by Contractor pursuant to Article 17.6 e for final determination by an expert of whether a disputed charge is subject to Cost Recovery such expert shall be an internationally recognized specialist in interpretation of Petroleum contracts with experience in verifying costs of Petroleum Operations. If the Parties are unable to agree on designation of the expert within thirty 30

days after Contractors request under Article 17.6 e for the expert determination the expert shall be named by the International Chamber of Commerce. The ninety 90 day period required by Article 33.2 shall not apply to this type of expert determination. 33.9 a Any decision by the expert sole arbitrator or arbitral tribunal shall be final and binding upon 119 PRODUCTION SHARING CONTRACT BLOCK . the Parties. Such decision shall be rendered within sixty 60 days after the completion of the arbitration proceedings. determination expert or b Judgment for execution of any award rendered by the expert determination sole arbitrator or arbitral tribunal may be entered by any court of competent jurisdiction without review of the merits of such award. 120 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 34 FORCE MAJEURE No delay default failure or omission by either 34.1 Party in the performance of any obligation under this Contract shall be considered as a breach of the Contract if such delay default failure or omission is due to Force Majeure. The Party claiming Force Majeure shall notify the other in writing as soon as possible and take all reasonable and necessary measures to resume full execution of performance hereunder as soon as possible. Notwithstanding anything in Article 34.1 and 34.2 without prejudice to the generality thereof the following events or circumstances shall not be treated as being Force Majeure or caused thereby a failure by either Party to pay money when due or fulfil any financial obligation under this Contract; b the insolvency of Contractor or any entity constituting Contractor. 34.3 If the Petroleum Operations are partially or totally suspended as a result of Force Majeure this Contract shall be extended by a period corresponding to the duration of the Force Majeure event provided however that any such extension shall not exceed three 3 years unless otherwise agreed by the Parties. 34.4 Contractor may terminate this Contract upon a three 3 month written notice to the Minister if the fulfilment of the obligation of either Party under this Contract is affected by Force Majeure during the Exploration Period or any extension thereof for a continuous period exceeding 121 PRODUCTION SHARING CONTRACT BLOCK . three 3 years without further obligation and liabilities of any kind. 122 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 35 NOTICES Any notice report and other communications 35.1 required or given under this Contract shall be

deemed given when delivered in writing either by hand in person or through the registered mail courier service or fax transmission appropriately addressed as follows TO MINISTER i By Hand or Mail Ministry of Energy and Energy Affairs Level 26 Tower C Energy Trinidad and Tobago International Waterfront Centre 1 Wrightson Road Port of Spain Trinidad and Tobago Attn Permanent Secretary Telefax No. 868 625 0306 TO CONTRACTOR i By Hand or mail Port of Spain Trinidad and Tobago Attn 123 PRODUCTION SHARING CONTRACT BLOCK . Telefax No. 868

35.2 Each of the Parties may change its address or addresses or representative for purpose of receiving notices by giving at least ten 10 days prior written notice of the change to the other Party.

124 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 36 TERMINATION The Minister shall have the right to terminate 36.1 the Contract and to take without consideration all property of whatever nature belonging to Contractor in Trinidad and Tobago related to the Contract Area if Contractor fails a to fulfil the obligations provided for in Articles 7 or 14 hereof; or b to conform to the provision of an arbitration award or expert determination under Article 33 hereof. 36.2 Contractor shall have the right to terminate this Contract by electing to relinquish the entire Contract Area pursuant to the conditions specified in Article 5. Upon such election any guarantees provided with respect to Contractors obligations shall automatically terminate except with regard to any accrued but unfulfilled obligations existing as of the date of termination. 36.3 If either Party to the Contract commits a material breach of Contract the other Party shall have the right to terminate the Contract using the following procedure a the Party claiming the right to terminate shall give notice to the other Party specifying the particular material breach complained of and requiring the other Party within ninety 90 days of such notice to remedy the same or make reasonable compensation to the complaining Party as the case may be; and 125 PRODUCTION SHARING CONTRACT BLOCK . b if the Party receiving the notice fails to comply with said notice the complaining Party may after the expiration of the ninety 90 days notice forthwith terminate this Contract provided that in the event the issue of whether there has been a material breach has been referred to arbitration or expert determination under Article 33 the complaining Party may not exercise its power of termination until

the result of arbitration or expert determination is known. The Party which elects to refer the dispute to arbitration or expert determination must be diligent in pursuing its claim in such proceedings. Failure to pursue such claim diligently will entitle the complaining Party to exercise its right to terminate in spite of the referral to arbitration or expert determination. Contractor shall have the right to terminate this 36.4 Contract in accordance with the provisions of Article 34.4. 36.5 This Contract may be terminated prior to the end of the Contract term by express agreement of the Parties or in accordance with the provisions of Article 4.2. 36.6 Upon the termination of this Contract by either Party all rights granted to Contractor and all obligations imposed on Contractor hereunder shall terminate subject and without prejudice to any rights which may have accrued to the Minister or to Contractor under this Contract.

126 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 37

ABANDONMENT PROGRAMME BUDGET AND ESCROW ACCOUNT Within sixty 60 days after cessation of 37.1 Production or the sooner relinquishment of some or all of the Contract Area Contractor shall carry out to the Ministers satisfaction an abandonment programme agreed with the Minister for all installations and pipelines provided by Contractor under this Contract that the Minister elects not to have delivered up to him in accordance with Article 24.1. With respect to the area being relinquished and/or facilities thereon such abandonment programme shall comply with sound and current international Petroleum industry practices. 37.2 Contractor shall establish an interest bearing escrow account in the name of the Minister at a financial institution approved by the Minister to accumulate cash reserves for use to fund against possible pollution and eventual abandonment of wells and decommissioning of facilities related to Petroleum Operations in the Contract Area. Contractor shall pay twenty five 25 cents in 37.3 the currency of the United States of America per Barrel of oil equivalent produced into said escrow account. All amounts paid into such escrow account by the Contractor shall be cost recoverable subject to the Accounting Procedure and the auditing provisions of the Contract. The Minister may at his sole discretion access 37.4 funds from the escrow account in the event that Contractor i fails to effect environmental cleanup during the term of this Contract or ii fails to properly abandon wells or decommission facilities to the satisfaction

of the Minister upon termination of this Contract. Where the Minister accesses the escrow account

127 PRODUCTION SHARING CONTRACT BLOCK . as aforementioned Contractor shall be required to pay into the account the sum used for said purposes within sixty 60 days. 37.5 of Not later than five 5 years before the earlier a the scheduled expiry of the term of the Contract; or b Contractors of Production of a Field or of operation of a pipeline anticipated termination Contractor shall submit for the Ministers approval a proposed abandonment programme and budget covering all such installations and pipelines provided by Contractor under this Contract. 37.6 The Minister shall act without unreasonable delay in reaching a decision on Contractors proposal under Article 37.5 and may approve or modify or impose conditions thereon. Before modifying or imposing conditions on the proposal the Minister shall notify Contractor of the proposed modification or conditions and give Contractor the opportunity to make written representations within sixty 60 days thereafter about the proposed modifications or conditions. After taking into consideration such representations the Minister and Contractor shall make their best efforts to mutually agree on the proposed modifications or conditions of the abandonment programme and budget. In the event that the Minister and Contractor cannot mutually agree on the proposed abandonment programme and budget either Party may by written notice to the other Party propose that the dispute be referred for determination in accordance with the provisions of Article 33. Until such time that the determination has been made Contractor shall make 128 PRODUCTION SHARING CONTRACT BLOCK . payments into the escrow account referred to in Article 37.2 based on its proposed abandonment programme and budget. After the determination is made Contractor shall adjust the payments to such escrow account to reflect the abandonment programme and budget so determined. 37.7 In the event that Contractor does not present a timely proposal to the Minister under Article 37.5 the Minister after giving thirty 30 days notice to Contractor of his intention to do so may prepare an abandonment programme and budget for the Contract Area if Contractor does not present a proposal by the end of the thirty 30 day period. When the Minister has so prepared the abandonment programme and budget it shall have the same effect as if it had been submitted by

Contractor and approved by the Minister. 37.8 The approved budget for carrying out the approved abandonment programme shall be provided for by monies paid into the escrow account established under Article 37.2. In addition to the payments made under Articles 37.3 and 37.4 Contractor shall also pay into the account a per unit of Production assessment. If the approved budget is more than the value of the escrow account Contractor shall pay the difference based on a per unit of Production assessment. The assessment shall be calculated dividing the difference between the approved budget and the value in the escrow account by the estimated units of Production to be produced and saved by Contractor between the date of the Ministers approval and the anticipated date of the abandonment. 37.9 a Upon determination of the Contract where Contractor fulfils all obligations in respect of environmental remediation abandonment of wells and decommissioning of facilities to the satisfaction of the Minister all existing funds in the escrow account shall remain with the 129 PRODUCTION SHARING CONTRACT BLOCK . Minister. b If the escrow amount is insufficient to complete the approved programme Contractor shall pay all such additional required costs. c In the event the Minister elects to have the facility delivered up to him the escrow account shall be transferred to the Minister who shall assume all responsibility for the facility and its abandonment and hold Contractor harmless against any liability with respect thereto accruing after the date of such transfer to the Minister. 130 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 38 THE PETROLEUM ACT AND REGULATIONS Pursuant to Section 64 of the Act the Parties 38.1 have agreed that this Contract sets out comprehensively the rights and obligations of the Parties with regard to matters otherwise covered by the Act and the Petroleum Regulations provided that any provisions regarding safety incorporated in the Regulations Rules and/or Orders as the Minister may issue from time to time shall apply to Contractor. 38.2 So much only of the Act and the Regulations as are not excluded by the Contract shall apply to Contractor and where any provision of the Act or the Regulations is modified by this Contract for the purposes of this Contract the Act and the Regulations shall be read and construed accordingly and where there is any conflict or variance with reference to any matter between the provisions of this Contract and the Act or the

Regulations the provisions of this Contract shall prevail. 131 PRODUCTION SHARING CONTRACT BLOCK . ARTICLE 39 LOCAL Contractor shall comply with the Governments 39.1 Local Policy in force and as modified from time to time. 39.2 Contractor shall maximize to the satisfaction of the Minister the level of usage of Local Goods and Local Services businesses financing and the employment of nationals of the Republic of Trinidad and Tobago. 39.3 Contractor shall ensure that subcontracts are sized as far as it is economically feasible and practical to match the capability time finance and manpower of Local Enterprises and shall manage the risk to allow their participation. 39.4 Contractor shall provide to the Minister together with the annual Work Programme and budgets required under Articles 14 and 15 a list of all projects to be undertaken as well as all goods and services that are required for the conduct of Petroleum Operations. The Minister and Contractor shall agree on a list of those projects and goods and services which shall be published in at least two local newspapers and on the Ministrys website. 39.5 All tenders are to be advertised evaluated and awarded in Trinidad and Tobago. Contractor shall apply to the Minister for prior approval where the circumstances warrant that any part of the tender process be conducted outside of Trinidad and Tobago. 39.6 Contractor shall give equal treatment to Local Enterprises by ensuring access to all tender invitations and by including high weighting on local value added in 132 PRODUCTION SHARING CONTRACT BLOCK . the tender evaluation criteria. 39.7 Contractor shall give assurance to Local Enterprises in respect of prompt payment for goods and services actually provided to Contractor and its Subcontractors both foreign and local. Contractor shall ensure the development of people 39.8 by imparting to nationals technology and business expertise in all areas of energy sector activity including but not limited to i fabrication; ii information technology support including seismic data acquisition processing and interpretation support; iii operations and maintenance support; iv maritime services; v business support services including accounting human resource services contract consulting negotiations; marketing and vi financing; and vii trading. Contractor shall ensure that nationals are 39.9 selected and trained consistent with Contractors performance standards in relation to activities referred at Article 39.8. 39.10 In addition to the requirements in

Article 39.8 Contractor shall ensure that the development of people in 133 PRODUCTION SHARING CONTRACT BLOCK . key areas allows nationals to take more valueadded analytical and decisionmaking roles in areas of a a technical or professional nature including general management design engineering project management seismic data processing human resource development legal; and b business strategic skills including leadership business development executive management commercial analytical negotiating strategy development and trading knowhow and acumen. 39.11 In accordance with its obligations under Article 10.4 Contractor shall maintain records to facilitate the determination of the Local of expenditure incurred in respect of Petroleum Operations. These records shall include supporting documentation certifying the cost of Local Goods labour and Local Services used and shall be subject to audit by the Minister. Pursuant to Article 12 of Annex C Contractor 39.12 shall prepare and submit reports to the Minister in accordance with the specified timeframe. 134 PRODUCTION SHARING CONTRACT BLOCK .

ARTICLE 40 MISCELLANEOUS This Contract may not be amended or any 40.1 provision hereto waived except by a written amendment executed with the same formality as this Contract by the Parties hereto and expressly stated to be a modification or waiver of this Contract. The headings of this Contract are for convenience 40.2 of reference only and shall not be taken into account in interpreting the terms of this Contract. A reference to the singular in this Contract includes a reference to the plural and vice versa. 40.3 The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assignees and successors in interest. No waiver by any Party of any one or more 40.4 obligations or defaults by any other Party in the performance of the Contract shall operate or be construed as a waiver of any other obligations or defaults whether of a like or of a different character. 40.5 In case any one or more of the provisions contained in this Contract should be invalid illegal or unenforceable in any respect the validity legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby provided the invalid illegal or unenforceable provision or provisions are not fundamental to this Contract. 40.6 This Contract supersedes and replaces any previous

agreement or understanding between the Parties 135 PRODUCTION SHARING CONTRACT BLOCK . whether oral or written on the subject matter hereof prior to the date of this Contract. AS WITNESS WHEREOF the Commissioner of State Lands acting on behalf of HIS EXCELLENCY ANTHONY THOMAS AQUINAS CARMONA the President of the Republic of Trinidad and Tobago has hereunto set his hand this day of 2014 SENATOR THE HONOURABLE KEVIN RAMNARINE the Minister of Energy and Energy Affairs has hereunto set his hand this day of 2014 and the Common SealStamp of . was hereunto affixed this day of 2014. SIGNED AND DELIVERED by the withinnamed the Commissioner of State Lands as and for the act and deed of the President of the Republic of Trinidad and Tobago in the presence of And of me AttorneyatLaw 136 PRODUCTION SHARING CONTRACT BLOCK . SIGNED AND DELIVERED by the withinnamed Senator the Honourable KEVIN RAMNARINE Minister of Energy and Energy Affairs as and for his act and deed in the presence of Permanent Secretary Ministry of Energy and Energy Affairs Level 26 Tower C Energy Trinidad and Tobago International Waterfront Centre 1 Wrightson Road Port of Spain Trinidad and Tobago And of me AttorneyatLaw 137 PRODUCTION SHARING CONTRACT BLOCK . The Common SealStamp of was hereunto affixed by Director and signed by him in conformity with the Articles of Association of the said Company and as and for the act and Deed of the said Company in the presence of And of me AttorneyatLaw 138 TIMOR SEA DESIGNATED AUTHORITY FOR THE JOINT PETROLEUM DEVELOPMENT AREA PRODUCTION SHARING CONTRACT JPDA 0312 Date 2nd April 2003 1230PM 1 PRODUCTION SHARING CONTRACT JPDA 0312 This production sharing contract which has been approved by the Joint Commission established under the Timor Sea Treaty hereinafter called the Treaty is made and entered into on this 2 day of April 2003 by and between the Designated Authority established under the Treaty party of the first part and ConocoPhillips 9112 Pty Ltd ABN 73 064 963 346 a corporation organised and existing under the laws of Australia Santos JPDA 9112 Pty Ltd ABN 44 056 937 75 a corporation organised and existing under the laws of Australia Inpex Sahul Ltd ARBN 059 844 781 a corporation organised and existing under the laws of Japan Petroz Timor Sea Pty Ltd ABN 85 053 698 794 a

corporation organised and existing under the laws of Australia and Emet Pty Ltd ABN 49 050 134 908 a corporation organised and existing under the laws of Australia hereinafter collectively called the contractor parties of the second part both hereinafter sometimes referred to either individually as the Party or collectively as the Parties. WITNESSETH WHEREAS petroleum existing within the Joint Petroleum Development Area established by the Treaty is a resource to be exploited by the Contracting States; WHEREAS the Designated Authority with the approval of the Joint Commission has an exclusive authority to contract for petroleum activities in and throughout the area described in Appendix A of this contract and outlined on the map which is Appendix B of this contract which area is hereinafter referred to as the contract area; WHEREAS the Designated Authority wishes to promote petroleum activities in the contract area and the contractor desires to join and assist the Designated Authority in accelerating the exploration and development of the potential petroleum resources within the contract area; WHEREAS the contractor has the necessary financial capability and technical knowledge and ability to carry out the petroleum activities hereinafter described; WHEREAS in accordance with the Treaty including the Petroleum Mining Code as referred to in Article 7b of the Treaty a cooperative agreement in the form of a production sharing contract may be entered into between the Designated Authority and corporations for the purpose of petroleum activities; and WHEREAS by Annex F of the Treaty a contract shall be offered to those corporations holding immediately before entry into force of the Treaty contract numbered 9112 in the same terms as that contract modified to take into account the administrative structure under the Treaty or as otherwise agreed by TimorLeste and Australia and this is that first mentioned contract; NOW therefore in consideration of the mutual covenants herein contained it is agreed as follows Date 2nd April 2003 1230PM 2 SECTION 1 SCOPE AND DEFINITIONS SCOPE This contract is a production sharing contract subject to the Treaty including the 1.1 Petroleum Mining Code. The Designated Authority shall be responsible for the management of the activities contemplated hereunder in accordance with its management functions defined under the Treaty including the Petroleum Mining Code. The contractor appoints and authorises ConocoPhillips 9112 Pty Ltd being one of the

contracting corporations to be the contract operator who on behalf of the contractor shall be responsible to the Designated Authority for the execution of petroleum activities in accordance with the provisions of this contract and is hereby appointed and constituted as the exclusive corporation to conduct petroleum activities. The contractor shall provide all human financial and technical resources required for the performance of petroleum activities authorised by this contract and shall therefore have an economic interest in the development of the petroleum pools in the contract area and be entitled to share in petroleum produced from the contract area in accordance with the provisions of Section 7 of this contract. Except for expenditures on capital costs for the development of petroleum pools the 1.2 contractor shall not incur interest expenses to finance petroleum activities.

DEFINITIONS 1.3 Words and terms used in this contract shall have the same meaning as those defined in the Treaty including the Petroleum Mining Code as referred to in Article 7b to the Treaty except where a new definition is expressly provided for in this contract.

affiliated corporation or affiliate means a corporation or other entity that controls or is controlled by a Party to this contract it being understood that control shall mean ownership by one corporation or entity of at least fifty 50 per cent of i ii the voting stock if the other corporation is a corporation issuing stock; or the controlling rights or interests if the other entity is not a corporation.

barrel means a quantity or unit of oil having a volume of fortytwo 42 United States gallons at the temperature of sixty 60 degrees Fahrenheit.

contract area means the area not relinquished or surrendered constituted by the blocks which are the subject of this contract and which are specified in Appendices A and B of this contract.

Date 2nd April 2003 1230PM 3 **contract year** appearing before or in relation to a calendar year means the period commencing on 7 February of that calendar year and ending on 6 February of the following calendar year except that when appearing before or in relation to the calendar year 2002 it means the period commencing on 20 May 2002 and ending 6 February 2003.

crude oil means crude mineral oil and all liquid hydrocarbons in their natural state or obtained from natural gas by condensation or extraction.

the proposed petroleum reservoir development plan means a description of development and management program details of the production facilities the production profile

for the expected life of the project the estimated capital and noncapital expenditure covering the feasibility fabrication installation and preproduction stages of the project and an evaluation of the commerciality of the development of the petroleum from within a discovery area. and appraisal exploration the exploration geological play concepts for the extent to which the leads and prospects are identified in and the data reviews seismic surveys and exploration wells planned for the contract area. a brief description of strategy means first tranche petroleum means the quantity of petroleum production defined in subsection 9 of Section 7. force majeure means circumstances beyond the control and without the fault or negligence of the contract operator and the Designated Authority including but not restricted to acts of God or the public enemy perils of navigation fire hostilities war declared or undeclared blockade labor disturbances strikes riots insurrections civil commotion quarantine restrictions epidemics storms earthquakes or acent. natural gas means all gaseous hydrocarbons including wet mineral gas dry mineral gas casinghead gas and residue gas remaining after the extraction of liquid hydrocarbons from wet gas. previous contract means contract numbered 9112 as mentioned in the Recitals.

SECTION 2 TERM OF THIS CONTRACT

2.1 Subject to the provisions of this Section and Section 13 the term of this contract shall commence on the effective date of the Treaty being 20 May 2002 the effective date and shall expire on the last moment of 6 February 2022 the expiration date. Notwithstanding the foregoing all work programmes expenditures and approvals including but not limited to decisions notices returns and audits related thereto and all correspondence written or oral results and submissions in support of such work programmes expenditures approvals decisions notices returns and audits under the previous contract shall be deemed to have occurred under this contract and the contractor shall be entitled to rely upon such. Information supplied by the Contractor under the previous contract is deemed to have been supplied under this contract. Date 2nd April 2003 1230PM 4 [2.2 paragraph deliberately omitted] [2.3 paragraph deliberately omitted] If petroleum is discovered in any block or blocks of the contract area which the 2.4 Designated Authority and the contract operator agree can be produced commercially based on the consideration of all pertinent operating and financial data then as to that particular

block or blocks of the contract area the Designated Authority shall declare a discovery area and the contract operator shall commence development. In other blocks in the contract area the contract operator shall continue exploration. 2.5 If petroleum production has not ceased permanently in and from the contract area by the expiration date the Designated Authority shall give sympathetic consideration to extending the term of this contract until production ceases permanently. In the case of a natural gas project the contract term shall be automatically extended to the end of the term of the natural gas sales contract. 2.6 If petroleum production has ceased permanently in and from the contract area before the expiration date then this contract shall be terminated upon the permanent cessation of production. SECTION 3 RELINQUISHMENT OF BLOCKS [3.1 paragraph deliberately omitted] [3.2 paragraph deliberately omitted] [3.3 paragraph deliberately omitted] [3.4 paragraph deliberately omitted] 3.5 Upon thirty 30 days written notice to the Designated Authority prior to the end of any contract year the contract operator shall have the right to surrender some but not all of the blocks in the contract area provided the conditions of the contract have been met to the satisfaction of the Designated Authority. 3.6 The contract operator shall advise the Designated Authority in advance of the date of relinquishment of the blocks to be relinquished. For the purpose of relinquishments the contract operator and the Designated Authority shall consult with each other regarding which blocks are to be relinquished. So far as is reasonable such blocks shall form an area of sufficient size and convenient shape to enable petroleum activities to be conducted thereon. [3.7 paragraph deliberately omitted] SECTION 4 WORK PROGRAM AND EXPENDITURES Date 2nd April 2003 1230PM 5 The contract operator shall continue with petroleum activities being carried out on the 4.1 effective date. The Designated Authority and the contract operator shall agree to an exploration work program and expenditures for each contract year. [4.2 paragraph deliberately omitted] [4.3 paragraph deliberately omitted] [4.4 paragraph deliberately omitted] [4.5 paragraph deliberately omitted] [4.6 paragraph deliberately omitted] At least two 2 months prior to the beginning of each contract year the contract operator 4.7 shall prepare and submit for approval by the Designated Authority an exploration and appraisal strategy to be adopted for the ensuing

contract year for the contract area. At least one 1 month prior to the beginning of each calendar year the contract operator 4.8 shall prepare and submit for approval by the Designated Authority a work program and budget of operating costs to be carried out during the ensuing calendar year for the contract area. Before work can commence on the development of a petroleum discovery the contract 4.9 operator shall prepare and submit for approval by the Designated Authority a development plan. 4.10 Should the Designated Authority wish to propose a revision to specified aspects of the work program and budget of operating costs the Designated Authority shall specify its reasons for requesting those changes but shall not require the contract operator to undertake more petroleum activities than the minimum work program and expenditure commitments specified in this contract. The Parties shall reach agreement on any changes before they become effective. 4.11 It is recognised by the Designated Authority that the details of the work program and budget of operating costs and the development plan may require changes in the light of existing circumstances and nothing herein contained shall limit the rights of the contract operator to make such changes provided they do not change the general objective quantity and quality of the petroleum activities. 4.12 The Designated Authority shall ensure that every effort is made to avoid delays in approving the exploration and appraisal strategy the work program and budget of operating costs and the development plan.

SECTION 5 RIGHTS AND OBLIGATIONS OF THE PARTIES

The contract operator shall have the rights accorded to it under the Treaty including the 5.1 Petroleum Mining Code and the taxation code and in particular shall Date 2nd April 2003 1230PM 6 a b c subject to paragraph k of subsection 2 of this Section have the right to enter and leave the contract area and move to and from the contract operators facilities wherever located at all times; have the right to have access to and use all geological geophysical drilling well including well location maps production and other information held by the Designated Authority relating to the contract area; and in accordance with the provisions of the Petroleum Mining Code have the right to have access to and use all geological geophysical drilling well production and other information now or in the future held by the Designated Authority relating to the blocks in the Joint Petroleum Development Area

adjacent to the contract area. 5.2 The contract operator shall comply with all of the obligations imposed on it by the Treaty including the Petroleum Mining Code and the taxation code and the regulations and directions issued under the Petroleum Mining Code and in particular shall a b c d e f g h i provide all human financial and technical resources required for the performance of the petroleum activities; carry out petroleum activities in a proper and workmanlike manner and in accordance with good oilfield practice; take the necessary precautions to avoid interference with navigation and fishing; develop an environmental management plan to be approved by the Designated Authority prevent pollution of the marine environment and pay for the costs associated with cleanup of any pollution from any petroleum activities within the contract area; upon the termination of this contract cleanup the contract area and remove all structures equipment and other property brought into the contract area; submit to the Designated Authority copies of all original geological geophysical drilling well production and other data including cores cuttings and samples taken in connection with petroleum activities in the contract area and reports compiled during the term of this contract; appoint and authorise a person to represent the contract operator and communicate with the Designated Authority and that person shall have an office in either Dili or Darwin or both; give preference to goods and services which are produced in Australia or TimorLeste or provided by subcontractors operating out of Australia or TimorLeste provided they are offered on competitive terms and conditions compared with those available from other countries; give preference to the employment of TimorLeste nationals and permanent residents having due regard to safe and efficient activities and good oilfield practice; Date 2nd April 2003 1230PM 7 j k take out and maintain to the Designated Authoritys satisfaction from the effective date of this contract insurance cover to the value of not less than US40 million in accordance with Article 25 of the Petroleum Mining Code; except as otherwise approved by the Designated Authority ensure that all persons equipment and goods do not enter structures in the contract area without first entering Australia or TimorLeste and notify the Designated Authority of all persons vessels aircraft and structures entering or leaving the contract area and of movements within the contract area; and l

make secure and safe all structures in the contract area including the installation of warning lights radar and other appropriate equipment. The contractor shall have the rights accorded under the Treaty including the Petroleum 5.3 Mining Code and the taxation code and in particular shall a b c d have the right to appoint a new contract operator subject to prior approval by the Designated Authority; have the right to transfer all or part of its undivided participating interest in this contract to any affiliated corporation or any other corporation with the approval of the Designated Authority. Such approval shall not be unreasonably withheld provided the corporation taking up those rights and obligations under this contract has in the opinion of the Designated Authority the necessary financial capability and technical knowledge and ability in accordance with Article 11 of the Petroleum Mining Code. have the right during the term of this contract to lift dispose of and export its share of petroleum production subject to Section 7 of this contract and retain abroad the proceeds obtained therefrom; and have the right to retain ownership and control of all property purchased or leased for the purposes of complying with the conditions of this contract and be entitled to freely remove the same from the contract area Australia or TimorLeste provided the conditions of this contract have been met. 5.4 The contractor shall comply with all of the obligations imposed on it by the Treaty including the Petroleum Mining Code and the taxation code and the regulations and directions issued under the Petroleum Mining Code and in particular shall a b be jointly and severally liable to meet the obligations imposed on the contract operator; and be subject to the taxation law of the Contracting States in accordance with Article 5 of the Treaty and Annex G of the Treaty. 5.5 The Designated Authority shall comply with all of the obligations imposed on it by the Treaty including the Petroleum Mining Code and in particular shall be responsible for the management of the petroleum activities contemplated hereunder having regard to the contract operators responsibilities for undertaking the petroleum activities. Date 2nd April 2003 1230PM 8

SECTION 6 OPERATING COSTS GENERAL PROVISIONS The accounting procedures in this Section shall be followed and observed in the 6.1 performance of the contractors obligations under the contract. 6.2 The contractors books and accounts shall be prepared and maintained in

accordance with a generally accepted and recognised accounting system consistent with modern petroleum industry practices and procedures. Books and accounts shall be available for the use of the Designated Authority in order that it may carry out its auditing responsibilities under this contract.

Operating costs means the sum of the following costs incurred in petroleum activities 6.3 undertaken before or at the point of tanker loading a current calendar year exploration costs; b current calendar year noncapital costs; current calendar year depreciation of capital costs; and allowable operating costs incurred in previous calendar years which have not been recovered in accordance with subsection 2 of Section 7 of this contract; c d less e miscellaneous receipts as defined in subsection 8 of this Section. 6.4 All calculations required to determine operating costs shall be done in United States dollars. Where costs are denoted in any other currency they shall be translated into United States dollars at the exchange rate set on the day the cost was incurred by a bank designated by the Designated Authority.

EXPLORATION COSTS Exploration costs means those operating costs incurred which relate directly to the 6.5 current calendar years exploration activities in the contract area and include but are not limited to the following a b costs of exploratory and appraisal drilling in the contract area including labor materials and services used in the drilling of wells with the object of finding unproven reservoirs of petroleum; costs of surveys in the contract area including labor materials and services including desk studies and analysis of survey data used in aerial geological geochemical geophysical and seismic surveys and core hole drilling; and Date 2nd April 2003 1230PM 9 c costs of other exploration directly related to petroleum activities in the contract area including the cost of auxiliary or temporary facilities used in exploration.

NONCAPITAL COSTS 6.6 Noncapital costs means those operating costs incurred that relate directly to the current calendar years activities in the contract area excluding exploration costs and capital costs. Noncapital costs include but are not limited to the following a b c d e f g costs of labor materials and services used in day to day well activities field production facilities activities secondary recovery activities storage handling transportation and delivery activities gas processing auxiliaries and utilities and other operating activities including repairs and maintenance; costs of office services and general

administration directly related to the petroleum activities carried out in the contract area including technical and related services office supplies office rentals and other rentals of services and property and personnel expenses; costs of production drilling in the contract area including labor materials and services used in drilling wells with the object of penetrating a proven reservoir such as the drilling of delineation wells as well as redrilling deepening or recompleting wells; costs of feasibility studies and environmental impact assessments directly related to petroleum activities in the contract area; application fees contract service fees and registration fees directly related to petroleum activities in the contract area; premiums paid for insurance normally required to be carried for the petroleum activities carried out by the contract operator under this contract; closing down costs being those expenditures incurred at the end of the production life of a petroleum pool in the contract area which could include the costs of i removal of all production facilities including the removal of platforms and associated facilities; ii environmental restoration including any feasibility studies; and h costs of purchased geological and geophysical information. CAPITAL COSTS 6.7

Capital costs means expenditures made for items directly related to petroleum activities in the contract area and which normally have a useful life of more than one 1 year. Capital costs include but are not limited to the following Date 2nd April 2003 1230PM 10 a b c d e f costs of construction utilities and auxiliaries workshops power and water facilities warehouses site offices access and communication facilities; costs of production facilities including offshore platforms including the costs of labor fuel hauling and supplies for both the offsite fabrication and onsite installation of platforms and other construction costs in erecting platforms wellhead production tubing sucker rods surface pumps flow lines gathering equipment delivery lines storage facilities all other equipment facilities and modules on platforms oil jetties and anchorages treating plants and equipment secondary recovery systems gas plants and steam systems; costs of pipelines and other facilities for the transporting of petroleum produced in the contract area to the point of tanker loading; costs of movable assets and subsurface drilling and production tools equipment and instruments and miscellaneous equipment used for production in the contract area; costs of floating craft automotive

equipment furniture and office equipment; and if approved by the Designated Authority costs of employee and welfare housing recreational educational health and meals facilities and other similar costs necessary for petroleum activities in the Joint Petroleum Development Area.

MISCELLANEOUS RECEIPTS 6.8 Miscellaneous receipt means the value of property defined in paragraph c below and all monies received by the contractor other than for the disposal of petroleum produced from the contract area which are directly related to the conduct of petroleum activities in the contract area. Miscellaneous receipts include but are not limited to the following a b c d e f any amounts received from the sale or disposal of petroleum produced from production testing activities undertaken in exploration and appraisal wells; any amounts received for the disposal loss or destruction of property the cost of which is an operating cost; the value of property the cost of which is an operating cost when that property ceases to be used in petroleum activities in the contract area; any amounts received by the contract operator under an insurance policy the premiums of which are operating costs in respect of damage to or loss of property; any amounts received as insurance compensation or indemnity in respect of petroleum production lost or destroyed prior to the point of tanker loading; any amounts received from the hiring or leasing of property the cost of which is an operating cost; Date 2nd April 2003 1230PM 11 g h i any amounts received from supplying information obtained from surveys appraisals or studies the cost of which is an operating cost; any amounts received as charges for the use of employee amenities the cost of which is an operating cost; and any amounts received in respect of expenditures which are operating costs by way of indemnity or compensation for the incurring of the expenditure refund of the expenditure or rebate discount or commission in respect of the expenditure. **INELIGIBLE**

COSTS 6.9 The following expenditures are not eligible as operating costs a b c payments of principal or interest on a loan or other borrowing costs unless approved by the Designated Authority under paragraph c of subsection 10 of this Section; payments of interest components of creditpurchase payments; payments of dividends or the cost of issuing shares; d repayments of equity capital; e f g h i j k payments of private override royalties; payments associated with a farmin

agreement; payments of taxes under the taxation law of either Contracting State made in accordance with Article 5 of the Treaty and Annex G of the Treaty; payments of administrative accounting costs and other costs indirectly associated with petroleum activities in the contract area; costs incurred once petroleum production has passed the point of tanker loading; costs incurred as a result of noncompliance by the contract operator with the provisions of this contract the Petroleum Mining Code or the regulations and directions issued under the Petroleum Mining Code; and unless otherwise approved by the Designated Authority costs incurred by contractors other than the contract operator.

ACCOUNTING METHODS TO BE USED TO CALCULATE RECOVERY OF OPERATING COSTS

6.10 The following methods shall be used to calculate the recovery of operating costs.

a Depreciation

Date 2nd April 2003 1230PM 12 Depreciation shall be calculated beginning in the calendar year in which the asset to be depreciated is placed into service. A full years depreciation shall be allowed in that calendar year. In each calendar year the allowable recovery of capital cost depreciation shall be twenty 20 per cent of the individual assets initial capital cost calculated using the straight line method of depreciation.

b c Allocation of overhead costs

General and administration costs such as those listed in paragraph b of subsection 6 of this Section but other than direct charges allocable to petroleum activities in the contract area shall be determined by a detailed study and the method determined by such a study shall be applied each year consistently. The method determined shall require agreement of the Designated Authority and the contractor.

Interest Recovery

Interest on loans obtained by a contractor at rates not exceeding prevailing commercial interest rates on loans for capital investments in development of petroleum pools may be recoverable as an operating cost provided the Designated Authority has given its approval. The Designated Authority may give its approval if it is satisfied that recovery of interest is necessary to ensure the financial viability of the project.

d Gas Costs

The following procedures shall be used to allocate operating costs related to natural gas production.

i ii iii iv Operating costs directly related to the production of natural gas shall be directly chargeable against natural gas revenues in determining the entitlements of the Designated Authority and the contractor under Section 7.

Operating costs incurred for the production of both natural gas and crude oil shall be allocated to natural gas and crude oil revenues based on the relative value of the products produced for the current calendar year. Common support costs shall be allocated on an equitable basis agreed to by both Parties. If after commencement of production the natural gas revenues do not permit full recovery of natural gas costs as outlined above then the excess costs shall be recovered from crude oil revenues. Likewise if there are excess crude oil costs crude oil costs less crude oil revenues this excess shall be recovered from natural gas revenues. If production of either natural gas or crude oil has commenced while the other has not the allocable production costs and common support costs shall be allocated on an equitable basis agreed to by both Parties. Propane and butane fractions extracted from natural gas but not spiked in crude oil shall be deemed as natural gas for the purpose of accounting.

e Inventory Accounting Date 2nd April 2003 1230PM 13 Inventory levels shall be based on normal good oilfield practice. The value of inventory items used outside the contract area or sold the cost of which has been recovered as an operating cost shall be treated as miscellaneous receipts in accordance with subsection 8 of this Section. The costs of items purchased for inventory shall be recoverable as operating costs at such time as the items are landed in the Joint Petroleum Development Area.

f g Insurance and Claims Operating costs shall include premiums paid for insurance normally required to be carried for the petroleum activities relating to the contractors obligations conducted under the contract together with all expenditures incurred and paid in settlement of any and all losses claims damages judgements and other expenses including fees relating to the contractors obligations under the contract.

Apportioning of Costs and Miscellaneous Receipts Where property or any other thing for which an operating cost is allowable or a miscellaneous receipt is assessable is only used partially in conducting petroleum activities in the contract area only that proportion of the cost or the receipt which relates to the conduct of petroleum activities in the contract area shall be allowed as an operating cost or assessed as a miscellaneous receipt.

SECTION 7 RECOVERY OF OPERATING COSTS AND SHARING OF PETROLEUM PRODUCTION The contractor is authorised by the Designated Authority and obliged

to market all 7.1 petroleum produced and saved from the contract area subject to the following provisions. 7.2 Subject to subsections 9 and 10 of this Section to recover operating costs the contract operator shall be entitled to a quantity of petroleum production which is produced and saved hereunder and not used in petroleum activities equal in value to those costs. If in any calendar year the operating costs exceed the value of petroleum produced and saved hereunder and not used in petroleum activities then the unrecovered excess of operating costs shall be carried forward and recovered in succeeding years. 7.3 In each calendar year in which petroleum is produced from the contract area if the investment credit and operating costs recoverable under subsections 10 and 2 of this Section respectively are less than the value of the quantity of petroleum produced from the contract area then of the petroleum production remaining after deducting the quantity of petroleum production equal in value to the investment credit and operating costs the Parties shall be entitled to take and receive the following a the Designated Authority fifty 50 per cent and the contractor fifty 50 per cent for the tranche of 0 to 50000 barrels daily average of all crude oil production from the contract area for the calendar year; Date 2nd April 2003 1230PM 14 b c the Designated Authority sixty 60 per cent and the contractor forty 40 per cent for the tranche of 50001 to 150000 barrels daily average of all crude oil production from the contract area for the calendar year; and the Designated Authority seventy 70 per cent and the contractor thirty 30 per cent for the tranche of more than 150000 barrels daily average of all crude oil production from the contract area for the calendar year. For the purposes of calculating the daily average of all crude oil production in the calendar year when the first commercial production of crude oil from the contract area is produced the daily average production shall be calculated by reference to the number of days in the calendar year from the day when commercial production commenced. In the calendar year when commercial production of crude oil from a contract area is terminated the daily average production shall be calculated by reference to the number of days in the calendar year up to the day on which production is terminated in the contract area. The method of recovering investment credits and operating costs before the entitlements 7.4 are taken by each Party as provided under subsection 3

of this Section shall be subject to the following proration method. For each calendar year the recoverable investment credits and operating costs shall be apportioned for deduction from the production of each of the tranches defined in subsection 3 of this Section using the same ratios as the production from each such tranche over the total production of that calendar year.

7.5 Of the amount of natural gas including propane and butane fractions extracted from natural gas but not spiked in crude oil remaining after recovering investment credits and operating costs associated with natural gas activities the Designated Authority shall be entitled to take and receive fifty 50 per cent and the contractor shall be entitled to take and receive fifty 50 per cent.

7.6 Title to the contractors share of petroleum production under subsections 3 5 and 9 of this Section as well as to the shares of petroleum production exported and sold to recover investment credits and operating costs under subsections 10 and 2 of this Section respectively shall pass to the contractor at the point of tanker loading. The contractor shall use its best reasonable efforts to market petroleum production to the extent markets are available.

7.8 Any natural gas produced from the contract area and not used in petroleum activities hereunder may be flared if the processing and utilisation of the natural gas is not considered by the Parties to be economic. Such flaring shall be permitted to the extent that gas is not required to enable the maximum economic recovery of petroleum by secondary recovery activities including repressuring and recycling.

7.9 Notwithstanding the other provisions of this Section in the initial five 5 calendar years of production from the contract area such period to be determined without regard to whether production commenced under this contract or the previous contract the Parties shall be entitled to take and receive a quantity of petroleum equal to ten 10 per cent of the petroleum production in those years called the first tranche petroleum before any recovery of investment credits and operating costs. In each subsequent calendar year the first tranche petroleum shall be equal to twenty 20 per cent of the petroleum produced in that year. The quantity of first tranche petroleum from crude oil production for each calendar year shall be shared between the Date 2nd April 2003 1230PM 15 Designated Authority and the contractor in accordance with the sharing percentages as provided under subsection 3 of this Section by apportioning it as

applicable to the respective production tranches as therein defined using the same ratios as the production from each such tranche over the total production of that calendar year. The quantity of first tranche petroleum from natural gas production for each calendar year including propane and butane fractions extracted from natural gas but not spiked in crude oil shall be shared between the Designated Authority and the contractor in accordance with the sharing percentages as provided under subsection 5 of this Section. The initial five 5 calendar years of production is to commence on the day when the first commercial production of petroleum is produced and shall end at midnight 2400 hours local time being 1600 hours Greenwich Mean Time on the day preceding the fifth anniversary of this first commercial production from the contract area. Investment credits for exploration and capital costs defined in subsection 5 of Section 6 7.10 and paragraphs b c and d of subsection 7 of Section 6 shall be allowed to the contract operator and in each calendar year shall be recoverable by the contract operator after the sharing of the first tranche petroleum but before the recovery of operating costs. The contract operator shall recover the investment credits as a quantity of petroleum production equal in value to one hundred and twenty seven 127 per cent of such exploration and capital costs incurred. Investment credits not recovered in the calendar year in which the exploration and capital costs were incurred may be carried forward and recovered in subsequent years. 7.11 Notwithstanding the provisions of subsection 1 of this Section which oblige the contractor to market all petroleum produced from the contract area the Designated Authority may market any or all petroleum when the Designated Authority secures a net realized price for the petroleum f.o.b. the contract area which is greater than the price which can be realized by the contractor. The Designated Authority's right to market any or all of the petroleum shall continue for such period as it can secure a net realized price f.o.b. the contract area greater than that which can be realized by the contractor. The contract operator shall coordinate the efficient lifting of the petroleum production including tanker nomination and scheduling.

SECTION 8 VALUATION OF PETROLEUM PRODUCTION

8.1 Petroleum production sold to third parties shall be valued as follows a b c all petroleum production to which the contractor is entitled under this contract and

which is sold to third parties shall be valued at the net realized price f.o.b. the contract area; all petroleum production to which the Designated Authority is entitled under this contract which is sold to third parties shall be valued at the net realized price. f.o.b. the contract area; and where a contract of sale involves other than a net realized price f.o.b. the Designated Authority shall determine a fair and reasonable net f.o.b. price for the purposes of that sale. Petroleum production sold to other than third parties shall be valued by the Designated 8.2 Authority as follows Date 2nd April 2003 1230PM 16 a b by using the weighted average per unit price adjusted as necessary for quality quantity grade and specific gravity of the petroleum production received by the contractor and the Designated Authority from sales to third parties during the three 3 months preceding such sale excluding commissions and brokerages incurred in relation to such third party sales; and if there are no third party sales as defined in paragraph a at prevailing market prices adjusted to take account of quality quantity grade and specific gravity of the petroleum production and taking into consideration any special circumstances with respect to sales of such petroleum production. 8.3 For the purpose of this Section third party sales means sales by the contractor to independent purchasers with whom at the time the sale is made the contractor has no direct or indirect contractual relationship or joint interest. Commissions or brokerages incurred in connection with sales to third parties if any shall 8.4 not exceed the customary and prevailing rate. 8.5 During any calendar year in which petroleum is produced from the contract area the contractor shall be liable to make provisional payments to the Designated Authority equal to the estimated value of petroleum to which the Designated Authority is entitled under Section 7 of this contract. The provisional payments shall be made on a monthly basis unless the Designated Authority and the contractor agree on alternate arrangements. The amount of each provisional payment shall be calculated by the contractor using the estimates of operating costs contained in the work program and budget of operating costs and the contractors estimate of the value of quantities of petroleum sold. During the calendar year the provisional payments may be adjusted having regard to actual operating costs and the actual value of sales of petroleum. Within thirty 30 days after the end of the calendar year adjustments and cash settlements between the

Designated Authority and the contractor shall be made on the basis of the actual amounts of the operating costs and actual value of sales of petroleum made during the calendar year in order to comply with Section 7. Similarly where the Designated Authority markets petroleum production pursuant to subsection 11 of Section 7 the Designated Authority shall be liable to make provisional payments to the contractor in a manner consistent with this subsection. Petroleum production disposed of other than by sale or destruction shall be valued using 8.6 the method defined in subsection 2 of this Section. The contractor shall notify the Designated Authority of quantities and sales prices of all 8.7 petroleum production sold or disposed of before the sales or disposals are made.

SECTION 9 PAYMENTS The contract operator shall make all payments to the Designated Authority for which it is 9.1 liable under this contract in United States dollars or some other currency agreed between the contract operator and the Designated Authority. Payments shall be made to a bank designated by Date 2nd April 2003 1230PM 17 the Designated Authority. Where a payment is made in currency other than United States dollars the exchange rate used to convert the United States dollars liability into that currency shall be the exchange rate set down on the day of payment by a bank designated by the Designated Authority. The Designated Authority shall make all payments to the contract operator in United 9.2 States dollars or some other currency agreed between the contract operator and the Designated Authority. Where a payment is made in currency other than United States dollars the exchange rate used to convert the United States dollar liability into that currency shall be the exchange rate set down on the day of payment by a bank designated by the Designated Authority. Any payments required to be made pursuant to this contract shall be made within ten 10 9.3 days following the end of the month in which the obligation to make such payments is incurred.

SECTION 10 TENDERS FOR PETROLEUM ACTIVITIES The contract operator shall draw invitations to tender or subcontracts to the attention of 10.1 Australian and TimorLeste subcontractors Subject to subsection 4 of this Section all tenders for petroleum activities called by the 10.2 contract operator shall be subject to approval by the Designated Authority. The Designated Authority shall provide its approval or nonapproval within thirty 30 10.3 days of receipt of

the tender details from the contract operator. The tender details to be provided by the contract operator shall include a summary of the tenders received compared against the tender criteria determined by the contract operator and the reasons for the selection of the preferred tender. 10.4 Notwithstanding subsection 2 of this Section the contract may enter into subcontracts without the approval of the Designated Authority where a b the tender for petroleum activities is expected to involve expenditure of less than US two million 2000000; the tender for petroleum activities is expected to involve expenditure of less than US ten million 10000000 and those activities form part of a project for the development of petroleum resources the cost of which is expected to exceed US one hundred million 100000000; or c the tender selected by the contract operator is the lowest cost tender and has been submitted by an Australian or TimorLeste corporation. The contract operator shall provide the Designated Authority for information with full 10.5 financial details of the subcontract irrespective of the amount of the expenditure involved. SECTION 11 TITLE TO EQUIPMENT Date 2nd April 2003 1230PM 18 11.1 Equipment purchased by the contract operator pursuant to the work program and budget of operating costs remains the property of the contractor and shall be used in petroleum activities. SECTION 12 CONSULTATION AND ARBITRATION 12.1 Periodically the Designated Authority and the contract operator shall meet to discuss the conduct of petroleum activities under this contract and shall make every effort to settle amicably any problems arising therefrom. 12.2 Disputes if any arising between the Designated Authority and contractor relating to this contract or the interpretation and performance of this contract which cannot be settled amicably shall be submitted to arbitration. Except as may be otherwise agreed by the Parties arbitration shall be conducted in 12.3 accordance with the Rules of Arbitration of the International Chamber of Commerce. The Designated Authority on the one hand and the contractor on the other hand shall each 12.4 appoint one arbitrator and so advise the other Party and these two arbitrators shall appoint a third. If either Party fails to appoint an arbitrator within thirty 30 days after receipt of a written request to do so such arbitrator shall at the request of the other Party if the Parties do not otherwise agree be appointed by the President of the International Chamber of Commerce. If the

first two arbitrators appointed as aforesaid fail to agree on a third within thirty 30 days following the appointment of the second arbitrator the third arbitrator shall if the Parties do not otherwise agree be appointed at the request of either Party by the President of the International Chamber of Commerce. If an arbitrator fails or is unable to act that arbitrator's successor shall be appointed in the same manner as the arbitrator who is replaced.

12.5 The decision of the majority of the arbitrators shall be final and binding upon the Parties and an award may be enforced in any court having jurisdiction for that purpose. In accordance with paragraph b of Article 4 of the Treaty in the event that the Designated Authority cannot meet an obligation under an arbitral award arising from a dispute under this contract the Contracting States shall contribute the necessary funds in the same proportion as set out in paragraph a of Article 4 of the Treaty to enable the Designated Authority to meet that obligation. The place of arbitration shall be Singapore. The language of arbitration shall be the English language.

12.6

SECTION 13 TERMINATION [13.1 paragraph deliberately omitted] This contract may be terminated at any time by agreement of the Parties or in accordance with Article 48 of the Petroleum Mining Code.

Date 2nd April 2003 1230PM 19

SECTION 14 BOOKS ACCOUNTS AND AUDITS

BOOKS AND ACCOUNTS 14.1 In addition to any requirements pursuant to paragraph b of subsection 4 of Section 5 the contractor shall keep complete books and accounts recording all operating costs as well as monies received from the sale or disposal of petroleum production.

AUDITS 14.2 The Designated Authority may require independent auditing of the contractor's books and accounts relating to this contract for any calendar year and may require the independent auditor to perform such auditing procedures as are deemed appropriate by the Designated Authority. The contractor shall forward a copy of the independent accountants report to the Designated Authority within sixty 60 days following the completion of the audit. The Designated Authority reserves the right to inspect and audit the contractor's books and accounts relating to this contract.

SECTION 15 OTHER PROVISIONS

NOTICES 15.1 Any notices required or given by either Party to the other shall be served in accordance with Article 35 of the Petroleum Mining Code.

15.2 All notices to be served on the contract operator shall be addressed to ConocoPhillips 9112 Pty

Ltd Level3 53 Ord Street West Perth WA 6872 Australia Facsimile 61 8 9423 6675 15.3 All notices to be served on the Designated Authority relating to matters for which the office of the Designated Authority is responsible shall be addressed to Timor Sea Designated Authority for the Joint Petroleum Development Area 8th Floor Northern Territory House 22 Mitchell Street Darwin N.T Australia 0800 Facsimile 61 8 89817365 15.4 All notices to be served on the Designated Authority relating to matters for which the Technical Directorate of the Designated Authority is responsible shall be addressed to Date 2nd April 2003 1230PM 20 Timor Sea Designated Authority for the Joint Petroleum Development Area 8th Floor Northern Territory House 22 Mitchell Street Darwin N.T Australia 0800 Facsimile 61 8 89817365 Either Party may substitute or change the above such address by giving written notice to 15.5 the other. APPLICABLE LAW Subject to the provisions of the Treaty including the Petroleum Mining Code the law of 15.6 England shall apply to this contract. SUSPENSION OF OBLIGATIONS 15.7 Any failure or delay on the part of either Party in the performance of its obligations or duties under the contract shall be excused to the extent that such failure or delay is attributable to force majeure. 15.8 If exploration is delayed curtailed or prevented by force majeure the Designated Authority shall agree to vary the work program and expenditure commitments or exempt the contract operator from part or all of the work program and expenditure commitments during the period of force majeure. 15.9 The Party whose ability to perform its obligations is so affected by force majeure shall immediately notify the other Party in writing stating the cause and both Parties shall do all that is reasonably within their power to discharge their obligations. SECTION 16 EFFECTIVENESS 16.1 This contract shall be deemed to come into effect on 20 May 2002. This contract shall not be amended or modified in any respect except by the mutual 16.2 consent in writing of the Parties. IN WITNESS WHEREOF the Parties hereto have executed this contract in six original copies and in the English language on this 2 day of April 2003. Date 2nd April 2003 1230PM 21 Date 2nd April 2003 1230PM 22 Date 2nd April 2003 1230PM 23 APPENDIX A Description of contract area Commencing at the point of Latitude 105000 South Longitude 1262500 East; proceed east to the point of Latitude 105000 South Longitude 1263100

East; then proceed south to the point of Latitude 105200 South Longitude 1263100 East; then proceed west to the point of Latitude 105200 South Longitude 1262600 East; then proceed north to the point of Latitude 105100 South Longitude 1262600 East; then proceed west to the point of Latitude 105100 South Longitude 1262500 East; then proceed north returning to the point of Latitude 105000 South Longitude 1262500 East. Commencing at the point of Latitude 105200 South Longitude 1263300 East; proceed east to the point of Latitude 105200 South Longitude 1263600 East; then proceed south to the point of Latitude 105220 South Longitude 1263600 East; then proceed east to the point of Latitude 105220 South Longitude 1263800 East; then proceed south to the point of Latitude 105400 South Longitude 1263800 East; then proceed west to the point of Latitude 105400 South Longitude 1263300 East; then proceed north returning to the point of Latitude 105200 South Longitude 1263300 East. Commencing at the point of Latitude 110100 South Longitude 1262900 East; proceed east to the point of Latitude 110100 South Longitude 1263600 East; then proceed north to the point of Latitude 110000 South Longitude 1263600 East; then proceed east to the point of Latitude 110000 South Longitude 1263700 East; then proceed north to the point of Latitude 105900 South Longitude 1263700 East; then proceed east to the point of Latitude 105900 South Longitude 1264000 East; then proceed south to the point of Latitude 111000 South Longitude 1264000 East; then proceed west to the point of Latitude 111000 South Longitude 1263200 East; then proceed north to the point of Latitude 110800 South Longitude 1263200 East; then proceed west to the point of Latitude 110800 South Longitude 1263000 East; then proceed north to the point of Latitude 110600 South Longitude 1263000 East; then proceed east to the point of Latitude 110600 South Longitude 1263100 East; then proceed north to the point of Latitude 110400 South Longitude 1263100 East; then proceed west to the point of Latitude 110400 South Longitude 1263000 East; then proceed north to the point of Latitude 110300 South Longitude 1263000 East; then proceed west to the point of Latitude 110300 South Longitude 1262800 East; then proceed north to the point of Latitude 110200 South Longitude 1262800 East; then proceed east to the point of Latitude 110200 South Longitude 1262900 East;

then proceed north returning to the point of Latitude 110100 South Longitude 1262900 East. Date
2nd April 2003 1230PM 25 APPENDIX B Map of contract area Date 2nd April 2003 1230PM 26
MODEL PRODUCTION SHARING CONTRACT FIFTH OFFER OF BLOCKS MINISTRY OF
PETROLEUM NATURAL GAS GOVERNMENT OF INDIA 2005i MODEL PRODUCTION SHARING
CONTRACT BETWEEN THE GOVERNMENT OF INDIA AND XYZ COMPANIES WITH
RESPECT TO CONTRACT AREA IDENTIFIED AS BLOCK ii ARTICLE 2 3 4 5 6 7 8 9 10 11 12 13
14 15 16 17 18 19 20 21 22 23 Definitions Participating Interests License and Exploration Period
Relinquishment Work Programme Management Committee Operatorship Operating Agreement and
Operating Committee General Rights and Obligations of the Parties Government Assistance
Discovery Development and Production Petroleum Mining Lease Unit Development Measurement of
Petroleum Protection of the Environment Recovery of Cost Petroleum Production Sharing of
Petroleum Taxes Royalties Rentals Duties etc. Domestic Supply Sale Disposal and Export of Crude
Oil and Condensate Valuation of Petroleum Currency and Exchange Control Provisions Natural Gas
Employment Training and Transfer of Technology Local Goods and Services iii 24 25 26 27 28 29
30 31 32 33 34 35 36 37 Insurance and Indemnification Records Reports Accounts and Audit
Information Data Confidentiality Inspection and Security Title to Petroleum Data and Assets
Assignment of Participating Interest Guarantees Term and Termination of the Contract Force
Majeure Applicable Law and Language of the Contract Sole Expert Conciliation and Arbitration
Change of Status of Companies Entire Agreement Amendments miscellaneous Certificates Notices
and Waiver and APPENDICES Appendix A Description of the Contract Area Appendix B Map of the
Contract Area Appendix C Accounting Procedure to the Contract Appendix D Appendix E1
Appendix E2 Calculation of the Investment Multiple for Production Sharing purposes Form of Parent
company Financial and Performance Guarantee Form of Company Financial and Performance
Guarantee AppendixF Procedure for acquisition of goods and services AppendixG Performa of
Bank Guarantee to be provided pursuant to Article 29 iv MODEL PRODUCTION SHARING
CONTRACT FOR OFFSHORE AREAS This Contract made this day of between 1. The President of

India acting through the Ministry of Petroleum and Natural Gas hereinafter referred to as the Government of the FIRST PART; AND to XYZ Company a Company incorporated under the laws of hereinafter at referred having XYZ which expression its successors and such assigns as are permitted under Article 28 hereof of the SECOND PART; registered shall office include its as WITNESSETH WHEREAS 1 2 3 4 By virtue of article 297 of the Constitution of India Petroleum in its natural state in the territorial waters and the continental shelf of India is vested in the Union of India; The Oilfields Regulation and Development Act 1948 53 of 1948 hereinafter referred to as the Act and the Petroleum and Natural Gas Rules 1959 made thereunder hereinafter referred to as the Rules make provisions inter alia for the regulation of Petroleum Operations and grant of Licenses and Leases for exploration development and production of Petroleum in India; The Territorial Waters Continental Shelf Exclusive Economic Zone and other Maritime Zones Act 1976 80 of 1976 provides for the grant of a license by the Government to explore and exploit the resources of the continental shelf and exclusive economic zone and any Petroleum Operation under this Contract shall be carried out under a license granted by the Central Government; The above Acts and Rules provide for the grant of License and Lease in respect of any land or mineral underlying the ocean within the territorial waters the continental shelf and exclusive economic zone of India by the Central Government; 1 5 6 7 8 Rule 5 of the Rules provides for an agreement between the Government and the Licensee or Lessee containing additional terms and conditions with respect to the License or Lease; The Government desires that the Petroleum resources which may exist in the territorial waters the continental shelf and the exclusive economic zone of India be discovered and exploited with the utmost expedition in the overall interest of India and in accordance with modern oilfield and petroleum industry practices; XYZ Companies have committed that it has they have or will acquire and make available the necessary financial and technical resources and the technical and industrial competence and experience necessary for proper discharge and or performance of all obligations required to be performed under this Contract in accordance with modern oilfield and petroleum industry practices and will provide guarantees as required in Article 29 for the due

performance of its obligations hereunder; and As a result of discussions between representatives of the Government and XYZ Companies on the proposal of XYZ Companies the Government has agreed to enter into this Contract with XYZ Companies with respect to the Contract Area identified as block and detailed in Appendix A and Appendix B on the terms and conditions herein set forth. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows 2 FOR ONLAND AREAS This Contract made this day of between 1. The President of India acting through the Ministry of Petroleum and Natural Gas hereinafter referred to as the Government of the FIRST PART; AND to XYZ Company a Company incorporated under the laws of hereinafter referred at having which expression shall include its successors and such assigns as are permitted under Article 28 hereof of the SECOND PART; registered XYZ office its as WITNESSETH WHEREAS 1 2 3 4 5 The Oilfields Regulation and Development Act 1948 53 of 1948 hereinafter referred to as the Act and the Petroleum and Natural Gas Rules 1959 made thereunder hereinafter referred to as the Rules make provision inter alia for the regulation of Petroleum Operations and grant of Licenses and Leases for exploration development and production of Petroleum in India; The Rules provide for the grant of Licenses and Leases in respect of land vested in a State Government by that State Government with the prior approval of the Central Government; Rule 5 of the Rules provides for an agreement between the Central Government and the Licensee or Lessee containing additional terms and conditions with respect to the License or Lease; The Government desires that the Petroleum resources which may exist in India be discovered and exploited with the utmost expedition in the overall interest of India in accordance with modern oilfield and petroleum industry practices; XYZ Companies have committed that it has they have or will acquire and make available the necessary financial and technical resources and the technical and industrial competence and experience necessary for proper discharge and or performance of all obligations required to be performed under this Contract in 3 accordance with modern oilfield and petroleum industry practices and will provide guarantees as required in Article 29 for the due performance of its obligations

hereunder; and 6 As a result of discussions between representatives of the Government and XYZ Companies on the proposal of XYZ Companies the Government has agreed to enter into this Contract with XYZ Companies with respect to the Contract Area identified as block and detailed in Appendix A and Appendix B on the terms and conditions herein set forth. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows

4 ARTICLE 1 DEFINITIONS In this Contract unless the context requires otherwise the following terms shall have the meaning ascribed to them hereunder

Accounting Procedure means the principles and procedures of accounting set out in Appendix C.

Act means Oilfields Regulation and Development Act 1948 as amended from time to time. Affiliate means a company or a body; a b which directly or indirectly controls or is controlled by a Company which is a Party to this Contract; or which directly or indirectly controls or is controlled by a company which directly or indirectly controls or is controlled by a Company which is a Party to this Contract. For the purpose of this definition it is understood that control means i ii ownership by one company of more than fifty percent50 of the voting securities of the other company; or the power to direct administer and dictate policies of the other company even where the voting securities held by such company exercising such effective control in that other company is less than fifty percent50 and the term controlled shall have a corresponding meaning. Appendix means an Appendix attached to this Contract and made a part thereof. Appraisal Programme means a programme carried out following a Discovery in the Contract Area for the purpose of appraising Discovery and delineating the Petroleum Reservoirs to which the Discovery relates in terms of thickness and lateral extent and determining the characteristics thereof and the quantity of recoverable Petroleum therein. Appraisal Well means a Well drilled pursuant to an Appraisal Programme. Approved Work Programme and Approved Budget means a Work Programme or a Budget that has been approved by the Management Committee pursuant to the provisions of this Contract.

5 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15 1.16 1.17 1.18 Arms Length Sales means sales made freely in the open market in freely convertible currencies between willing and unrelated sellers and buyers and in

which such buyers and sellers have no contractual or other relationship directly or indirectly or any common or joint interest as is reasonably likely to influence selling prices and shall inter alia exclude sales whether direct or indirect through brokers or otherwise involving Affiliates sales between Companies which are Parties to this Contract sales between governments and governmentowned entities counter trades restricted or distress sales sales involving barter arrangements and generally any transactions motivated in whole or in part by considerations other than normal commercial practices. Article means an article of this Contract and the term Articles means more than one Article. Associated Natural Gas or ANG means Natural Gas produced in association with Crude Oil either as free gas or in solution if such Crude Oil can by itself be commercially produced. Barrel means a quantity or unit equal to 158.9074 litres forty two 42 United States gallons liquid measure at a temperature of sixty 60 degrees Fahrenheit 15.56 degrees Celsius and under one atmosphere pressure 14.70 psia. in and below which Basement means any igneous or metamorphic rock or rocks or any stratum of such nature the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of Petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected in accordance with the knowledge generally accepted in the international petroleum industry. Budget means a budget formulated in relation to a Work Programme. Business Day means any of the Calendar Day excluding holidays. Calendar Day means any of the seven 7 days of a week. Calendar Month means any of the twelve 12 months of the Calendar Year. Calendar Quarter or Quarter means a period of three 3 consecutive Calendar Months commencing on the first day of January April July and October of each Calendar Year. Calendar Year means a period of twelve 12 consecutive Months according to the Gregorian calendar commencing with the first 1st day of January and ending with the thirtyfirst 31st day of December. 6 1.19 1.20 1.21 1.22 1.23 1.24 1.25 1.26 1.27 1.28 Commercial Discovery means a Discovery of Petroleum reserves which has been declared as a Commercial Discovery in accordance with the provisions of Article 10 andor Article 21. Commercial Production means production of Crude Oil or Condensate or Natural

Gas or any combination of these from the Contract Area excluding production for testing purposes and delivery of the same at the relevant Delivery Point under a programme of regular production and sale. Company for the purpose of this Contract means a company which is a Party to this Contract and where more than one Company is Party to the Contract the term Companies shall mean all such Companies collectively including their respective successors and permitted assigns under Article 28. Condensate means those low vapour pressure hydrocarbons obtained from Natural Gas through condensation or extraction and refers solely to those hydrocarbons that are liquid at normal surface temperature and pressure conditions provided that in the event Condensate is produced from a Development Area and is segregated and transported separately to the Delivery Point then the provisions of this Contract shall apply to such Condensate as if it were Crude Oil. Contract means this agreement and the Appendices mentioned herein and attached hereto and made an integral part hereof and any amendments made thereto pursuant to the terms hereof. Contract Area means on the Effective Date the area described in Appendix A and delineated on the map attached as Appendix B or any portion of the said area remaining after relinquishment or surrender from time to time pursuant to the terms of this Contract including any additional area as provided under Article 11.3. Contract Costs means Exploration Costs Development Costs and Production Costs as provided in Section 2 of the Accounting Procedure and allowed to be cost recoverable in terms of Section 3 of the Accounting Procedure. Contract Year means a period of twelve 12 consecutive months counted from the Effective Date or from the anniversary of the Effective Date. Contractor means the Companyies. Cost Petroleum means the portion of the total value of Petroleum Produced and Saved from the Contract Area which the Contractor is entitled to take in a particular period for the recovery of Contract Costs as provided in Article 15. 7 1.29 1.30 1.31 1.32 1.33 1.34 Crude Oil or Oil or Crude means all kinds of hydrocarbons and bitumen both in solid and in liquid form in their natural state or obtained from Natural Gas by condensation or extraction including distillate and Condensate when commingled with the heavier hydrocarbons and delivered as a blend at the Delivery Point but excluding Natural Gas. Deepwater Area for deepwater blocksareas means area

falling beyond four hundred 400 metre isobath provided however that for the purposes of this Contract the Contract Area as on Effective Date as described in the AppendixA and AppendixB shall be deemed to be Deepwater Area falling beyond four hundred 400 metre isobath. Delivery Point means except as otherwise herein provided or as may be otherwise agreed between the Parties having regard to international practice the point at which Petroleum reaches the outlet flange of the delivery facility either offshore or onshore and different Delivery Points may be established for purposes of sales. Delivery Points shall be approved by the Management Committee. Development Area means part of the Contract Area which encompasses one or more Commercial Discoveries and any additional area that may be required for proper development of such Commercial Discoveries and established as such in accordance with the provisions of the Contract. Development Costs means those costs and expenditures incurred in carrying out Development Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Development Operations means operations conducted in accordance with the Development Plan and shall include but not be limited to the purchase shipment or storage of equipment and materials used in developing Petroleum accumulations the drilling completion and testing of Development Wells the drilling and completion of Wells for Gas or water injection the laying of gathering lines the installation of offshore platforms and installations the installation of separators tankages pumps artificial lift and other producing and injection facilities required to produce process and transport Petroleum into main Oil storage or Gas processing facilities either onshore or offshore including the laying of pipelines within or outside the Contract Area storage at Delivery Points the installation of said storage or Gas processing facilities the installation of export and loading facilities and other facilities required for the development and production of the said Petroleum accumulations and for the delivery of Crude Oil and/or Gas at the Delivery Point and also including incidental operations not specifically referred to herein but required for the most efficient and economic development and production of the said Petroleum

8 1.35 1.36 1.37
1.38 1.39 1.40 1.41 1.42 1.43 accumulations in accordance with modern oilfield and petroleum

industry practices. Development Plan means a plan submitted by the Contractor for the development of a Commercial Discovery which has been approved by the Management Committee or the Government pursuant to Article 10 or Article 21. Development Well means a Well drilled deepened or completed after the date of approval of the Development Plan pursuant to Development Operations or Production Operations for the purposes of producing Petroleum increasing production sustaining production or accelerating extraction of Petroleum including production Wells injection Wells and dry Wells. Directorate General of Hydrocarbons or DGH means an organisation including its successors under the Ministry of Petroleum and Natural Gas. Discovery means the finding during Petroleum Operations of a deposit of Petroleum not previously known to have existed which can be recovered at the surface in a flow measurable by conventional petroleum industry testing methods. Discovery Area means that part of the Contract Area about which based upon Discovery and the results obtained from a Well or Wells drilled in such part the Contractor is of the opinion that Petroleum exists and is likely to be produced in commercial quantities. Effective Date means the later of the date on which this Contract is executed by the Parties or the date of issue of License or date from which License has been made effective by the Central Government or State Governments as the case may be. Environmental Damage means soil erosion removal of vegetation destruction of wildlife pollution of groundwater or surface water land contamination air pollution noise pollution bush fire disruption to water supplies to natural drainage or natural flow of rivers or streams damage to archaeological palaeontological and cultural sites and shall include any damage or injury to or destruction of soil or water in their physical aspects together with vegetation associated therewith aquatic or terrestrial mammals fish avifauna or any plant or animal life whether in the sea or in any other water or on in or under land. Exploration Costs means those costs and expenditures incurred in carrying out Exploration Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Exploration Operations means operations conducted in the Contract Area pursuant to this Contract in searching for Petroleum and in the course of an Appraisal Programme and shall include but not be limited to

aerial geological geophysical geochemical palaeontological palynological topographical and seismic surveys analysis studies and their interpretation investigations relating to the subsurface geology including structural test drilling stratigraphic test drilling drilling of Exploration Wells and Appraisal Wells and other related activities such as surveying drill site preparation and all work necessarily connected therewith that is conducted in connection with Petroleum exploration. Exploration Period means the period mentioned in Article 3 during which Exploration Operations may be carried out by the Contractor as provided in Article 3 hereof. Exploration Phase or Phase means any of the periods specified in Article 3 in which the Contractor is required to complete the Minimum Work Programme specified therein. Exploration Well means a Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity be it of structural stratigraphic facies or pressure nature to at least a depth or stratigraphic level specified in the Work Programme. Field means an Oil Field or a Gas Field or combination of both as the case may be. Financial Year means the period from the first 1st day of April to the thirtyfirst 31st day of March of the following Calendar Year. Foreign Company means a Company within the meaning of Section 591 of the Companies Act 1956. Frontier Area means any area identified demarcated and so notified by the Government or its authorised agencies for the purpose of exploration and exploitation of Oil and Gas which is logistically and technically difficult and lacks infrastructural andor marketing facilities etc. Gas means Natural Gas. Gas Field means within the Contract Area a Natural Gas Reservoir or a group of Natural Gas Reservoirs within a common geological structure or feature. Government or Central Government means Government of India unless otherwise stated. Investment shall have the meaning ascribed to that expression in paragraph 3 of Appendix D. 10 1.44 1.45 1.46 1.47 1.48 1.49 1.50 1.51 1.52 1.53 1.54 1.55 1.56 1.57 1.58 1.59 1.60 1.61 1.62 1.63 1.64 1.65 1.66 Investment Multiple means the ratio of accumulated Net Cash Income to accumulated Investment by the Contractor as determined in accordance with Appendix D. Lease means a petroleum mining lease referred to in the Rules and shall unless otherwise stated therein exclude right for exploration and exploitation of coal lignite bed methane CBM. Lessee means the Contractor to whom a Lease is

issued under the Rules for the purpose of carrying out Petroleum Operations in a Development Area or Contract Area. LIBOR means the London InterBank Offer Rate for sixmonth maturates of United States Dollars as quoted by the International Swaps and Derivative Association or such other bank being a BBA LIBOR contributor panel bank as the Parties may agree. License means a petroleum exploration license referred to in the Rules. Licensee means the Contractor to whom a License is issued under the Rules for the purpose of carrying out Petroleum Operations in the Contract Area. Minimum Work Programme means with respect to each Exploration Phase the Work Programme specified in Article 5 with respect to such Phase. Management Committee means the committee constituted pursuant to Article 6 hereof. Month means Calendar Month. Natural Gas means wet gas dry gas all other gaseous hydrocarbons and all substances contained therein including sulphur carbondioxide and nitrogen but excluding extraction of helium which are produced from Oil or Gas Wells excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from gas. Net Cash Income shall have the meaning assigned in paragraph 2 of Appendix D. Non Associated Natural Gas or NANG means Natural Gas which is produced either without association of Crude Oil or in association with such quantities of Crude Oil which by itself cannot be commercially produced. 11 1.67 1.68 1.69 1.70 1.71 1.72 1.73 1.74 1.75 1.76 1.77 Oil Field means within the Contract Area an Oil Reservoir or a group of Oil Reservoirs within a common geological structure or feature. Operator means one of the Parties comprising the Contractor appointed as the Operator pursuant to Article 7. Operating Agreement means the constituents of the Contractor in accordance with Article 7 with respect to conduct of Petroleum Operations. the operating agreement entered by Operating Committee means the Committee established by that name in the Operating Agreement pursuant to Article 7. Participating Interest means in respect of each Party constituting the Contractor the undivided share expressed as a percentage of such Partys participation in the rights and obligations under this Contract. Parties means the parties signatory to this Contract including their successors and

permitted assigns under this Contract and the term Party means any of the Parties. Petroleum means Crude Oil and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale. Petroleum Operations means as the context may require Exploration Operations Development Operations or Production Operations or any combination of two or more of such operations including construction operation and maintenance of all necessary facilities plugging and abandonment of Wells safety environmental protection transportation storage sale or disposition of Petroleum to the Delivery Point Site Restoration and any or all other incidental operations or activities as may be necessary. Petroleum Produced and Saved means gross Petroleum produced minus impurities such as water or solids produced along with Petroleum Petroleum recycled to the reservoir Petroleum used in Petroleum Operations or flared or otherwise unavoidably lost under the provisions of the Contract. Production Costs means those costs and expenditures incurred in carrying out Production Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Production Operations means all operations conducted for the purpose of producing Petroleum from the Development Area after the commencement of production from the Development Area including the operation and maintenance of all necessary facilities therefor. 12 1.78 1.79 1.80 1.81 1.82 1.83 1.84 1.85 1.86 1.87 1.88 Profit Petroleum means the total value of Petroleum Produced and Saved from the Contract Area in a particular period as reduced by Cost Petroleum and calculated as provided in Article 16. Recompletion means an operation whereby a completion in one zone is abandoned in order to attempt a completion in a different zone within an existing Well bore. Reservoir means a naturally occurring discrete accumulation of Petroleum. Rules means the Petroleum and Natural Gas Rules 1959 and any amendments made thereto from time to time. Section means a section of the Accounting Procedure. Selfsufficiency means in relation to any Year that the volume of Crude Oil and Crude Oil equivalent of Petroleum products exported from India during that Year either equals or exceeds the volume of Crude Oil and Crude Oil equivalent of Petroleum products imported into India during the same Year as determined by Government. Site Restoration shall mean all

activities required to return a site to its state as of the Effective Date pursuant to the Contractors environmental impact study and approved by the Government or to render a site compatible with its intended afteruse to the extent reasonable after cessation of Petroleum Operations in relation thereto and shall include where appropriate proper abandonment of Wells or other facilities removal of equipment structures and debris establishment of compatible contours and drainage replacement of top soil revegetation slope stabilisation infilling of excavations or any other appropriate actions in the circumstances. Statement or Statements refers to the statements required to be furnished in accordance with AppendixC of this Contract. State Government means any government of a state of the Union of India which has control over the Contract Area for the purpose of grant of Licenses Leases. In case the Contract Area covers more than one state the State Government shall include all such governments of those states. Subcontractor means any company or person contracted by the Contractor or Operator to provide goods or services with respect to Petroleum Operations. US or USD or US Dollar or United States Dollar means the currency of the United States of America. 13 1.89 1.90 Well means a borehole made by drilling in the course of Petroleum Operations but does not include a seismic shot hole. Work Programme means a work programme formulated for the purpose of carrying out Petroleum Operations. 1.91 Year means a Financial Year. 14 ARTICLE 2 PARTICIPATING INTERESTS 2.1 The initial Participating Interest of the Parties comprising the Contractor shall be as follows X Company Y Company Z Company 2.2 Except as provided in this Article or elsewhere in this Contract the rights and obligations of the Parties comprising the Contractor shall include but not be limited to a b c d the right to take Cost Petroleum in accordance with the provisions of Article 15; the right to take its Participating Interest share of Profit Petroleum in accordance with the provisions of Article 16; the right to receive its Participating Interest share of any inental income and receipts arising from Petroleum Operations; and the obligation to contribute its Participating Interest share of costs and expenses including Contract Costs. 15 3.1 3.2 3.3 3.4 3.5 ARTICLE 3 LICENSE AND EXPLORATION PERIOD The Exploration Period shall begin on the Effective Date and shall consist of three Exploration Phases each phase not exceeding three

Contract Years for a total period not exceeding seven 7 consecutive Contract Years eight 8 consecutive Contract Years in case of Deepwater Areas and Frontier Areas unless extended pursuant to the terms of this Contract except that for Deepwater Areas and Frontier Areas the first Exploration Phase may be of four 4 years and correspondingly the Exploration Period may be eight 8 consecutive Contract Years. Except as otherwise provided in this Contract the term of the first Exploration Phase shall not exceed to be taken from the accepted bid and subject to Article 3.1 consecutive Contract Years hereinafter referred to as the first Exploration Phase. Except as otherwise provided in this Contract the term of the second Exploration Phase shall not exceed to be taken from the accepted bid and subject to Article 3.1 consecutive Contract Years from the end of the first Exploration Phase hereinafter referred to as the second Exploration Phase. Except as otherwise provided in this Contract the term of the third Exploration Phase shall not exceed to be taken from the accepted bid and subject to Article 3.1 consecutive Contract Years from the end of the second Exploration Phase hereinafter referred to as the third Exploration Phase. At the expiry of any Exploration Phase of the Exploration Period provided that the Contractor has completed the Minimum Work Programme for that Exploration Phase the Contractor shall have the option exercisable by giving a written notice to the Government at least thirty 30 days prior to the expiry of the relevant Phase either a b to proceed to the next Exploration Phase on presentation of the requisite guarantees as provided for in Article 29; or to relinquish the entire Contract Area except for any Discovery Area and any Development Area and to conduct Development Operations and Production Operations in relation to any Commercial Discovery in accordance with the terms of this Contract and the Contractor shall have no further obligation in respect of the Minimum Work Programme under Article 5 for any subsequent Exploration Phases of the Exploration Period. 16 3.6 3.7 3.8 3.9 3.10 3.11 If neither of the options provided for in paragraphs a and b hereof is exercised by the Contractor this Contract shall terminate at the end of the then current Exploration Phase and the License shall be automatically cancelled. If at the end of an Exploration Phase the Minimum Work Programme for that phase is not completed the time for completion of the said Minimum Work

Programme shall be extended for a period necessary to enable completion thereof but not exceeding six 6 months provided that the Contractor submits his request by giving a written notice to the Government at least thirty 30 days prior to the expiry of the relevant Phase and can show technical or other good reasons for noncompletion of the Minimum Work Programme and the Management Committee gives its consent to the said extension and provided further that the period of such extension shall be subtracted from the next succeeding Exploration Phase if any. In case the Minimum Work Programme of any particular Exploration Phase is completed before stipulated time as provided in the Article 3.2 and 3.3 the time so saved will be added to the next Exploration Phase if so requested by the Contractor giving a notice in writing to the Government thirty 30 days prior to such early completion of the Phase and in that event the provision of the Article 3.5 a shall apply immediately after such early completion of the Phase. If at the end of an Exploration Phase execution of any Work Programme is in progress and which is in addition to the Minimum Work Programme such Exploration Phase shall be extended for a period not exceeding six 6 months to enable completion thereof provided that the Minimum Work Programme for such Phase has been completed and the Management Committee gives its consent to the said extension as provided in the Article 3.6. In the event of an extension as provided for herein the notice referred to in Article 3.5 shall be given at least thirty 30 days prior to the expiry of the relevant extension. Where sufficient time is not available prior to the expiry of the Exploration Period to complete an Appraisal Programme at the request of the Contractor the Government shall extend the Exploration Period for such period not exceeding eighteen 18 months for onland and shallow water blocks and thirty 30 months for deepwater blocks as may be mutually agreed between the Parties for the Appraisal Programme to be carried out and for the Contractor and the Management Committee to comply with the provisions of Article 10 and Article 21. If no Commercial Discovery has been made in the Contract Area by the end of the Exploration Period the Contract shall terminate. If this Contract is terminated in accordance with its terms the License shall be automatically cancelled. If at the expiry of the Exploration Period a development plan for development of a Commercial Discovery and an

application for Lease is under consideration by the 17 Management Committee or Government as the case may be pursuant to Articles 10 11 and 21 respectively the License shall continue in force with respect to that part of the Contract Area to which the application for the Lease relates pending a decision on the proposed development plan and the application for the Lease but shall cease to be in force and effect with respect to the remainder of the Contract Area. 18 4.1 4.2 4.3 4.4 4.5 4.6

ARTICLE 4 RELINQUISHMENT If at the end of the first Exploration Phase the Contractor elects pursuant to Article 3.5 to continue Exploration Operations in the Contract Area in the second Exploration Phase the Contractor shall retain upto seventy five percent 75 of the original Contract Area including any Development Area and Discovery Area in not more than three 3 areas of simple geometrical shapes and relinquish the balance of the Contract Area prior to the commencement of the second Exploration Phase. Notwithstanding the provision of this Article 4.1 in the event the Development Areas and Discovery Areas exceed seventy five percent 75 of the original Contract Area the Contractor shall be entitled to retain to the extent of Development Areas and Discovery Areas. If at the end of the second Exploration Phase the Contractor elects pursuant to Article 3.5 to continue Exploration Operations in the Contract Area in the third Exploration Phase the Contractor shall retain upto fifty percent 50 of the original Contract Area including any Development Area and Discovery Area in not more than three 3 areas of simple geometrical shapes and relinquish the balance of the Contract Area prior to the commencement of the third Exploration Phase. Notwithstanding the provision of this Article 4.2 in the event the Development Areas and Discovery Areas exceed fifty percent 50 of the original Contract Area the Contractor shall be entitled to retain to the extent of Development Areas and Discovery Areas. At the end of the third Exploration Phase the Contractor shall retain only Development Areas and Discovery Areas. If the Contractor exercises the option provided for in paragraph b of Article 3.5 the Contractor shall after any Discovery Areas or Development Areas have been designated relinquish all of the Contract Area not included within the said Discovery Areas or Development Areas. As and when the Contract is terminated under the provisions of Article 3 or in accordance with any other provisions of this Contract the entire Contract

Area remaining with the Contractor shall be deemed to have been relinquished by the Contractor as on the date on which the Contract is terminated. Relinquishment of all or part of the Contract Area or termination of the Contract shall not be construed as absolving the Contractor of any liability undertaken or incurred by the Contractor in respect of the Contract Area during the period between the Effective Date and the date of such relinquishment or termination.

19 4.7 Subject to Article 14.9 the liability of the Contractor shall be limited to any liability undertaken or incurred in respect of relating to or connected with the Contract and/or any claim arising out of or in relation to the act of negligence misconduct commission or omission in carrying out Petroleum Operations during the period between the Effective Date and the date of relinquishment of the Contract Area or termination or expiry of the Contract as the case may be.

20 ARTICLE 5 WORK PROGRAMME

5.1 5.2 The Contractor shall commence Petroleum Operations not later than six 6 months from the Effective Date. During the currency of the first Exploration Phase as per Article 3.2 the Contractor shall complete the following Work Programme

a b a seismic programme consisting of the acquisition processing and interpretation of line kilometres of 2D and/or sq. kms. of 3D seismic data in relation to the exploration objectives; and Exploration Wells shall be drilled to at least one of the following depths

i ii iii metres and geological objective; to Basement; and that point below which further drilling becomes impracticable due to geological conditions encountered and drilling would be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment of drilling under this provision by the Contractor would require unanimous approval of the Management Committee.

5.3 During the currency of the second Exploration Phase as per Article 3.3 the Contractor shall complete the following Work Programme

a b a seismic programme consisting of the acquisition processing and interpretation of line kilometres of 2D and/or sq. kms. of 3D seismic data in relation to the exploration objectives; and Exploration Wells shall be drilled to at least one of the following depths

i ii iii metres and geological objective; to Basement; and that point below which further drilling becomes impracticable due to geological conditions encountered and drilling would be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment

of drilling under this provision by the Contractor would require unanimous approval of the Management Committee. 21 5.4 During the currency of the third Exploration Phase as per Article 3.4 the Contractor shall complete the following Work Programme Note 5.5 5.6 5.7 a b a seismic programme consisting of the acquisition processing and interpretation of line kilometres of 2D and/or sq. kms. of 3D seismic data in relation to the exploration objectives; and Exploration Wells shall be drilled to at least one of the following depths i metres and geological objective; ii to Basement; and that point below which further drilling becomes impracticable due iii to geological conditions encountered and drilling would be abandoned by a reasonable prudent operator in the same or similar circumstances. Abandonment of drilling under this provision by the Contractor would require unanimous approval of the Management Committee. The details of the work programme to be filled in the Articles 5.2 5.3 and 5.4 shall be as per the bid of Companies and accepted by the Government. The actual depth objective for each of the Wells shall be determined by the Contractor in the light of the advice of the Management Committee before the commencement of the drilling. Each Well which reaches the geological objective for which the depth objective was determined shall be deemed to have been drilled to the depth objective or to actual total depth whichever is greater. The Contractor shall ensure that all relevant subsurface geological geochemical and geophysical information necessary for the attainment of the exploration objectives in accordance with modern oilfield and petroleum industry practices is obtained during exploratory drilling. If the depthgeological objective of the Well is not achieved for any reason a substitute Well shall be drilled of the same specifications as stipulated in and subject to Articles 5.2 5.3 and 5.4 as the case may be. Subject to Article 31 the Contractor undertakes to complete the Minimum Work Programme in accordance with Articles 5.2 5.3 5.4 and 5.6 as the case may be. In the event that the Contractor fails to fulfill the said Minimum Work Programme by the end of the relevant Exploration Phase or early termination of the Contract by the Government for any reason whatsoever each Company constituting the Contractor shall pay to the Government within sixty 60 days following the end of the relevant Exploration Phase or early termination of the Contract as may be the case its Participating

Interest share for an amount which when evaluated in terms of the Minimum Work Programme specified for the relevant Phase is equal to the amount which would be required to complete the said Minimum Work Programme. For determination of this amount available 22 5.8 5.9 5.10 5.11 5.12 relevant information including the Budget and modern oilfield and petroleum industry practices may be taken into account. If the Minimum Work Programme for the third Exploration Phase has been completed earlier than eighteen months from the end of the Phase the Contractor shall meet with the Government to discuss the possibility of early relinquishment unless the Contractor undertakes further work with the approval of the Management Committee. In the event that the Contractor has carried out work in excess of the Minimum Work Programme in any Exploration Phase the excess exploration work done shall be set off against the Minimum Work Programme for the following Exploration Phase. As soon as possible after the Effective Date and thereafter within ninety 90 days before commencement of each following Year the Contractor shall submit to the Management Committee the Work Programmes and the Budgets relating to Petroleum Operations to be carried out during the relevant Year. Work Programme and Budgets for the Exploration Period shall include work sufficient to meet the relevant Minimum Work Programme with respect to each Exploration Phase specified in this Article 5. The Contractor may propose modifications or revisions to the details of a reviewed or an approved Work Programme and Budget as the case may be in the light of the then existing circumstances and shall submit to the Management Committee modifications or revisions to the Work Programme and Budget referred to in Article 5.10. Work Programmes and Budgets and any modifications or revisions thereto relating to Exploration Operations shall be submitted to the Management Committee for review and advice as provided in Article 6.5. Work Programmes and Budgets related to Development Operations and Production Operations and any modifications or revisions thereto shall be submitted for approval as provided in Article 10 and Article 21. 23 6.1 6.2 6.3 6.4 6.5

ARTICLE 6 MANAGEMENT COMMITTEE There shall be constituted a committee to be called the Management Committee with functions as stated herein below. Government shall nominate two 2 members representing Government in the

Management Committee whereas each Company constituting the Contractor shall nominate one 1 member each to represent Company in the Management Committee provided that in case the Contractor constitutes only one Company that Company shall have two 2 members. The Parties shall nominate the members to the Management Committee within thirty 30 days of the Effective Date. Each Party may nominate alternate members with full authority to act in the absence and on behalf of the members nominated under Article 6.2 and may at any time nominate another member or alternate member to replace any member nominated earlier by notice to other members of the Management Committee. One representative of the Government shall be designated as the Chairman of the Management Committee and the second representative of the Government shall be designated as the Deputy Chairman. The member of the Operator or the member designated by the Operator where Operator has two 2 members in the Management Committee shall be designated as the Secretary of the Committee. Operator on behalf of the Contractor with the approval of Operating Committee if constituted under the Article 7.4 or in case of a single Party constituting the Contractor then that Party shall submit following matters to the Management Committee for review and it shall have advisory functions a b c d e f the annual Work Programmes and Budgets in respect of Exploration Operations and any revisions or modifications thereto; annual work progress and costs incurred thereon; proposals for surrender or relinquishment of any part of the Contract Area by the Contractor; proposals for an Appraisal Programme or revisions or additions thereto and the declaration of a Discovery as a Commercial Discovery; any other matter required by the terms of this Contract to be submitted to it for review or advice; and any other matter which the Contractor dees to submit for review or advice including matters concerning interParty relationships. 24 6.6 The following matters shall be submitted by Operator on behalf of the Contractor with the approval of Operating Committee if constituted under the Article 7.4 or in case of single Party constituting the Contractor then by that Party to the Management Committee for approval a b c d e f g h i j Annual Work Programmes and Budgets in respect of Development Operations and Production Operations and any modifications or revisions thereto; proposals for the approval of development plans as may

be required under this Contract or modifications or revisions to a Development Plan; determination of a Development Area; appointment of auditors along with scope of audit approval and adoption of audited report submitted under Article 25.4.3; collaboration with licensees or contractors of other areas; claims or settlement of claims for or on behalf of or against the Contractor in excess of limits fixed by the Management Committee from time to time; proposal about abandonment planSite Restoration as required to be submitted under Article 14.10; any other matter required by the terms of this Contract to be submitted for the approval of the Management Committee; any other matter which the Contractor dees to submit to it; and any matter which Government refers to the Management Committee for its consideration and reasoned opinion. Unless agreed otherwise by all the members of the Management Committee the Management Committee shall meet at least once every six 6 months during the Exploration Period and thereafter at least once every three 3 months or more frequently at the request of any member. The Secretary with the approval of the Chairman shall convene each meeting by notifying the members twenty eight 28 days prior to such a meeting or a shorter period of notice if the members unanimously so agree of the time and place of such meeting and the purpose thereof and shall include in such notice a provisional agenda for such meeting. The Chairman shall be responsible for processing the final agenda for such meeting and the agenda shall include all items of business requested by the members to be included provided such requests are received by the Secretary at least ten 10 days prior to the date fixed for the meeting. The Secretary shall forward the agenda to the members at least seven 7 Business Days prior to the date fixed for the meeting. Matters not included in the agenda may be taken up at the meeting by any member with the unanimous consent of all the members whether present or not present at the meeting. 6.7 6.8 The Chairman or the Deputy Chairman as may be the case shall preside over the meetings of the Management Committee and in their absence any other member representing Government and present shall preside over the meetings. 25 6.9 6.10 6.11 Secretary to the Management Committee shall be responsible inter alia for preparation of the minutes of every meeting in the English language and provision to every member of the Management Committee with

two 2 copies of the minutes approved by the Chairman within three 3 Business Days of the meeting. Unless agreed otherwise by all the members of the Management Committee the minutes of a meeting shall be finalised by the Management Committee within three 3 Business Days thereafter. Members shall notify the Chairman and the other members of their approval of the minutes by putting their signatures on one copy of the minutes and returning the same to the Chairman. Members may suggest any modification to the minutes while returning the signed copy. Members may also communicate with the Chairman through telex cable or facsimile or any other effective mode of communication agreed by all the members of the Management Committee. If the Chairman or any other member does not agree with the modification to the minutes suggested by any member the matter shall be brought to the attention of the other members and resubmitted to the Management Committee at the next meeting and the minutes shall stand approved as to all other matters. If a member fails to respond within the aforesaid three 3 Business Day period unless agreed otherwise by the Management Committee as herein provided the minutes shall be deemed to be approved by such member. Any member shall be entitled if either he or his alternate is unable to attend a meeting to cast his vote by telex cable facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee and received by the Chairman prior to the date on which the vote is taken in the course of the meeting or by giving a prior written notice to all other members appoint a member with his prior consent representing another Party in the Management Committee as its proxy to attend a meeting and to exercise the appointing members right to vote at the meeting whether as directed by the appointing member or otherwise. A member appointed as a proxy and attending a meeting shall be present in two separate capacities and vote accordingly. All such votes shall have the same effect as if that member had been present and so voted at the meeting. In case of urgency where Operating Committee has made a recommendation together with reasons to the Chairman requiring consideration of a matter by the Management Committee without delay Chairman after being satisfied may waive the requirements of notice period for the meeting and circulation of agenda to

such extent as would be consistent with the urgency and consideration of the matter by the Management Committee. Alternatively Chairman may approve submission of notice and agenda to members by telex or facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee receipt of which shall be confirmed by telephone by the Chairman requiring the members to confirm their decision by these modes of communication not later than three 3 Business Days from confirmation of 26 6.12 6.13 6.14 6.15 6.16 receipt of notice and agenda by the member. Any member failing to convey the decision within the time limits of three 3 Business Days shall be deemed to have voted in favour of the proposal. The result of any such vote shall be notified by the Chairman to all the members. The meetings of the Management Committee shall be held in India unless otherwise mutually agreed by the members of the Management Committee. All expenses of the members of the Management Committee attending meetings shall be borne by the respective Party and shall in no event be cost recoverable. All matters requiring the approval of the Management Committee shall be generally approved by a unanimous vote of the members of the Management Committee present as well as the views of the members received by some other mode of communication. In case unanimity is not achieved in decision making process within a reasonable period as may be required under the circumstances the decision of the Management Committee shall be approved by the majority Participating Interest of seventy percent 70 or more with Government representative having a positive vote in favour of the decision. There shall be a quorum of the Management Committee for holding a meeting and making decisions with each Party to the Contract represented by at least one of its nominated members in the Management Committee either present in person or represented as per Article 6.10. If there is no quorum in a meeting the meeting shall stand postponed to the same day and time in the next week and if quorum is not present or represented even in the next meeting and subject to a Government member being present the members present and represented will constitute the quorum and take decisions and decisions taken by such quorum shall be final and binding to all the absenting Parties or Parties not represented notwithstanding the provisions of Article 6.13. The

Management Committee if it considers necessary may appoint legal financial or technical subcommittees comprised of such representatives as may be agreed by the Management Committee to consider any matter requiring approval or decision of the Management Committee. Such subcommittee expenses shall form part of Contract Cost with relevant cost classification as decided by the Management Committee pursuant to the Section 2 of the Accounting Procedure and will be cost recoverable. In the event a Party to the Contract is not entitled to vote in the Operating Committee meetings being in default under the Operating Agreement and Operator notifies Chairman of the default by the Party then the issue of exercising voting right by such defaulting Party in the Management Committee meetings shall be discussed by the Management Committee. The Management Committee excluding the defaulting Party after duly hearing the views of the defaulting Party on the matter of their default under Operating Agreement shall 27 take unanimous decision on exclusion or otherwise of the defaulting Party from voting in the Management Committee meetings. For avoidance of any doubt it is clearly understood that unanimous decision by the Management Committee referred to in this Article 6.16 excludes defaulting Party from such decision. Accordingly if the Management Committee decides to exclude the defaulting Party from voting in the Management Committee then the said Party shall not be entitled to vote in the meetings of the Management Committee under Contract. In that event notwithstanding the provisions of Article 6.13 decisions of the Management Committee shall be made by vote of the members of the Management Committee excluding the member appointed by the said Party in default and any vote or purported vote by such member in the Management Committee shall be ignored. The said Party in default shall be bound by all decisions of the Management Committee. The nondefaulting Parties under the Operating Agreement shall indemnify Government against any claims of whatsoever nature which may arise due to exclusion of defaulting Party from voting in the Management Committee. 28

OPERATORSHIP OPERATING AGREEMENT AND OPERATING COMMITTEE ARTICLE 7 7.1 7.2 7.3 7.4 XYZ shall be the Operator for the purpose of carrying out Petroleum Operations pursuant to this Contract during the term of the Contract. No change in the operatorship shall be effected

without the consent of the Government and such consent shall not be unreasonably withheld. The functions required of the Contractor under this Contract shall be performed by the Operator on behalf of all constituents of the Contractor subject to and in accordance with the terms and provisions of this Contract and generally accepted modern oilfield and petroleum industry practices provided however that this provision shall not be construed as relieving the constituents of the Contractor from any of its obligations or liability under the Contract. Within forty five 45 days of the Effective Date or such longer period as may be agreed to by Government the Companies constituting the Contractor shall execute an Operating Agreement. The said agreement shall be consistent with the provisions of this Contract and shall provide for among other things a b c d the appointment resignation removal and responsibilities of the Operator; the establishment of an Operating Committee comprising of an agreed number of representatives of the Companies chaired by a representative of the Operator; functions of the said Operating Committee taking into account the provisions of the Contract procedures for decision making frequency and place of meetings; and contribution to costs default sole risk disposal of Petroleum and assignment as between the Parties to the Operating Agreement. 7.4.1 7.4.2 Operator shall provide to the Government a copy of the duly executed Operating Agreement within thirty 30 days of the Effective Date or such longer period as may be agreed to by the Government. In case a single Company constitutes the Contractor the provisions of Article 7.4 and 7.4.1 shall not be applicable. However in case of increase in the number of constituents of the Contractor the provisions of Article 7.4 and 7.4.1 shall apply from the date of such increase in the number of the constituents. 29 ARTICLE 8 GENERAL RIGHTS AND OBLIGATIONS OF THE PARTIES 8.1 Subject to the provisions of this Contract the Contractor shall have the following rights a b c d e subject to the provisions of Article 12 the exclusive right to carry out Petroleum Operations to recover costs and expenses as provided in this Contract. The right shall exclude exploitation of coalignite bed methane CBM by the Contractor in the Contract Area; the right to use free of charge such quantities of Petroleum produced as are reasonably required for conducting Petroleum Operations in the Contract Area in accordance with generally accepted

modern oilfield and petroleum industry practices; the right to lay pipelines build roads construct bridges ferries aerodromes landing fields radio telephones and related communication and infrastructure facilities and exercise other ancillary rights as may be reasonably necessary for the conduct of Petroleum Operations subject to such approvals as may be required and the applicable laws in force from time to time for the regulation and control thereof; the right to use all available technical data seismic and well information maps samples etc. of the Contract Area as on the Effective Date free of to nominal copyingreproduction costs for further charge subject Petroleum Operations. The Contractor shall submit the list of all data required by them to Directorate General of Hydrocarbons DGH based on the list of data provided in the information docket for the block pertaining to the Contract Area as soon as possible but not later than one hundred and eighty 180 days from the execution of the Contract and the same if available and reproducible shall be made available to the Contractor in the office of DGH within ninety 90 days from the submission of such request for data by the Contractor provided the Effective Date of the Contract has commenced and the Contractor has furnished relevant guarantees under Article 29 of the Contract. such other rights as are specified in this Contract. 8.2 The Government reserves the right to itself or to grant to others the right to prospect for and mine minerals or substances other than Petroleum within the Contract Area; provided however that if after the Effective Date others are issued rights or the Government proceeds directly to prospect for and mine in the Contract Area any minerals or substances other than Petroleum the Contractor shall use its best efforts to avoid obstruction to or interference with such operations within the Contract Area and the third parties and/or the Government 30 as the case may be shall use best efforts to ensure that operations carried out do not obstruct or unduly interfere with Petroleum Operations in the Contract Area. 8.3 The Contractor shall having due regard to modern oilfield and petroleum industry practices a b c d e f g h except as otherwise expressly provided in this Contract conduct all Petroleum Operations at its sole risk cost and expense and provide all funds necessary for the conduct of Petroleum Operations including funds for the purchase or lease of equipment materials or supplies required for Petroleum Operations as well as

for making payments to employees agents and Subcontractors; conduct all Petroleum Operations within the Contract Area diligently expeditiously efficiently and in a safe and workmanlike manner pursuant to the Work Programme formulated in accordance with Contract; ensure provision of all information data samples etc. which may be required to be furnished under the applicable laws or under this Contract; ensure that all equipment materials supplies plant and installations used by the Contractor the Operator and Subcontractors comply with generally accepted standards and are of proper construction and kept in safe and good working order; in the preparation and implementation of Work Programmes and in the conduct of Petroleum Operations follow modern oilfield and petroleum industry practices with such degree of diligence and prudence reasonably and ordinarily exercised by experienced parties engaged in a similar activity under similar circumstances and conditions; the procedure for acquisition of goods and services as of the Effective Date shall be as per the AppendixF of this Contract. Based on economic considerations and generally accepted practices in the international petroleum industry with the objective of ensuring cost and operational efficiency in the conduct of Petroleum Operations the AppendixF to this Contract may be modified or changed with the prior approval of the Management Committee when circumstances so justify; after the designation of a Development Area pursuant to this Contract forthwith proceed to take all necessary action for prompt and orderly development of the Development Area and for the production of Petroleum in accordance with the terms of this Contract; appoint experienced representative and in his absence a suitably qualified replacement therefor who shall be resident in India and who shall have full authority to take such steps as may be necessary to implement this Contract and whose names shall on appointment within ninety 90 days after commencement of the first Contract Year be made known to the Government; sufficiently technically competent and a 31 i j k provide acceptable working conditions living accommodation and access to medical attention and nursing care for all personnel employed in Petroleum Operations; carry out such other obligations as are specified in this Contract in particular those specified in Article 14; and be always mindful of the rights and interests of India in the conduct of Petroleum Operations. 32 ARTICLE 9 GOVERNMENT

ASSISTANCE 9.1 Upon application in the prescribed manner and subject to compliance with applicable laws and relevant procedures the Government or its nominee will a b c use their good offices to provide the right of ingress and egress from the Contract Area and any facilities used in Petroleum Operations wherever located and which may be within their control; use their good offices when necessary to assist the Contractor in procurement or commissioning of facilities required for execution of Work Programmes including necessary approvals permits consents authorisations visas work permits Licenses including Licenses and Leases rights of way easement surface rights and security protection at the Contractors cost required pursuant to this Contract and which may be available from resources within its control; and in the event that onshore facilities are required outside the Contract Area for Petroleum Operations including but not limited to storage loading and processing facilities pipelines and offices use their good offices in assisting the Contractor to obtain from the authorities of the state in which such facilities are required such licenses permits authorizations consents security protection at the Contractors cost surface rights and easements as are required for the construction and operation of the said facilities by the Contractor. 33 ARTICLE

10 DISCOVERY DEVELOPMENT AND PRODUCTION 10.1 If and when a Discovery is made within the Contract Area the Contractor shall a b c forthwith inform the Management Committee and Government of the Discovery; promptly thereafter but in no event later than a period of thirty 30 days from the date of the Discovery furnish to the Management Committee and Government particulars in writing of the Discovery; and promptly run tests to determine whether the Discovery is of potential commercial interest and within a period of sixty 60 days after completion of such tests submit a report to the Management Committee containing data obtained from such tests and its analysis and interpretation thereof together with a written notification of whether in the Contractors opinion such Discovery is of potential commercial interest and merits appraisal. If the Contractor determines to conduct a drill stem or production test in open hole or through perforated casing with regard to any Exploration Well it shall notify the Government of the time of such test at least forty eight 48 hours prior to the proposed test and the Government shall have the right to have a

representative present during such test. If pursuant to Article 10.1 c the Contractor notifies the Management Committee that the Discovery is of potential commercial interest the Contractor shall prepare and submit to the Management Committee within one hundred and twenty 120 days of such notification a proposed Appraisal Programme with a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery designed to achieve both the following objectives i determine without delay and in any event within the period specified in Article 10.5 whether such Discovery is a Commercial Discovery and ii determine with reasonable precision the boundaries of the area to be delineated as the Development Area. The proposed Appraisal Programme shall be reviewed by the Management Committee within thirty 30 days after submission thereof pursuant to Article 10.3. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor which may be revised or modified or amended by the Contractor in light of the Management Committee review shall be adopted as the Appraisal Programme and the Contractor shall promptly commence implementation thereof; and the annual Budget for the Exploration Period adopted pursuant to Article 5 shall be revised accordingly. 34 10.2 10.3 10.4 10.5 10.6 10.7 The Contractor shall in respect of a Discovery of Crude Oil advise the Management Committee by notice in writing within a period of eighteen 18 months for onland and shallow water blocks and thirty 30 months for deepwater blocks from the date on which the notice provided for in Article 10.1 c was delivered whether such Discovery should be declared a Commercial Discovery or not. Such notice shall be accompanied by a report on the Discovery setting forth all relevant technical and economic data including estimated recoverable reserves and production sustainable production expenditures prevailing and forecasted prices and other pertinent technical and economic factors according to modern oilfield and petroleum industry practices as well as all evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or for the Contractor with respect to the Discovery and any other relevant information. If the Contractor is of the opinion that Crude Oil has been discovered in commercial quantities it shall submit the proposal to the Management Committee for review that the Discovery

be declared a Commercial Discovery. In the case of a Discovery of Gas the provisions of Article 21 shall apply. estimated development levels The Management Committee shall within forty 40 days of the date of the notice referred to in Article 10.5 review the proposal of the Contractor and request any other additional information it may reasonably require so as to complete the review of the proposal made by the Contractor. The Contractor shall furnish the additional information within thirty 30 days from the date of the request. The review by the Management Committee shall be made and conveyed to the Contractor within the later of a ninety 90 days from the date of notice referred to in Article 10.5 or b forty 40 days of receipt of such other information as may be required under this Article. If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred in the Article 10.6 within two hundred 200 days of the declaration of the Discovery as a Commercial Discovery the Contractor shall submit to the Management Committee a comprehensive development plan of the Commercial Discovery which shall a b c relate to the Discovery Area and contain a Reservoir or part thereof and the boundaries of the proposed Development Area; be designed to ensure the most efficient beneficial and timely use of the Petroleum resources discovered; and be prepared in accordance with sound engineering economic safety and environmental principles recognised in the generally accepted modern oilfield and petroleum industry practices. Such plan shall contain detailed proposals by the Contractor for the construction establishment and operation of all facilities and services for and inental to the recovery storage and transportation of the Petroleum from the proposed 35 Development Area to the Delivery Point together with all data and supporting information including but not limited to i ii description of the nature and characteristic of the Reservoir data statistics interpretations and conclusions on all aspects of the geology Reservoir evaluation Petroleum engineering factors Reservoir models estimates of reserve in place possible production magnitude nature and ratio of Petroleum fluids and analysis of producible Petroleum; outlines of the development project andor alternative development projects if any describing the production facilities to be installed and the number of Wells to be drilled under such development project andor

alternative development projects if any; estimate of the rate of production to be established and projection of the possible sustained rate of production in accordance with modern oilfield and petroleum industry practices under such development project and/or alternative development projects if any which will ensure that the area does not suffer an excessive rate of decline of production or an excessive loss of Reservoir pressure; estimates of Development Costs and Production Costs under such development project and/or alternative development projects if any; v Contractors recommendations as to the particular project that it would iii iv 10.8 prefer; vi Work Programme and Budget for development proposals relating to the proposed Development Area; vii anticipated adverse impact on the environment and measures to be taken for prevention or minimisation thereof and for general protection of the environment in conduct of operations; viii measures to be taken for the health and safety of persons employed in Petroleum Operations; the information required in Article 21. ix A proposed development plan submitted by the Contractor pursuant to Article 10.7 may be approved by the Management Committee within one hundred and ten 110 days of submission thereof or eighty 80 days of receipt of any additional information requested by the Management Committee. In case the Management Committee requires any reasonable additional information the same shall be requested by it within eighty 80 days from the submission of the development plan. The Contractor shall provide such additional information within thirty 30 days from the request by the Management Committee. If within a period of one hundred and ten 110 days after submission of a proposed development plan or eighty 80 days from the receipt of any additional information where asked by the Management Committee the Management Committee fails to convey a decision to the Contractor the Contractor shall have option to submit the proposal to the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development 36 10.9 10.10 10.11 10.12 10.13 10.14 plan for the approval of the Government. The Government shall respond on the proposed development plan submitted by the Contractor within one hundred and ten 110 days. In case Government refuses to approve the proposed development plan it shall convey the reasons for such

refusal and the Contractor shall be given opportunity to make appropriate modifications to meet concerns of Government and the provisions of the foregoing Article and resubmit the plan within ninety 90 days from the date of receipt of refusal from the Government. A Development Plan approved by the Management Committee or Government as may be the case from time to time shall commit the Contractor to the obligations stipulated in Articles 10.10 to 10.12. Work Programmes and Budgets for Development and Production Operations shall be submitted to the Management Committee as soon as possible after the approval of a Development Plan under Article 10.8 and thereafter not later than 31st December each Year in respect of the Year immediately following. The Management Committee when considering any Work Programme and Budget may require the Contractor to prepare an estimate of potential production to be achieved through the implementation of the said Work Programme and Budget for each of the three 3 Years following the Year to which the Work Programme and Budget relate. If major changes in yearly estimates of potential production are required these shall be based on evidence necessitating such changes. Not later than the fifteenth 15th of January each Year in respect of the Year immediately following commencement of Commercial Production the Contractor shall determine the Programme Quantity with the approval of the Management Committee. The Programme Quantity for any Year shall be the maximum quantity of Petroleum based on Contractors estimates as approved by the Management Committee which can be produced from a Development Area consistent with modern oilfield and petroleum industry practices and minimising unit production cost taking into account the capacity of the producing Wells gathering lines separators storage capacity and other production facilities available for use during the relevant Year as well as the transportation facilities up to the Delivery Point. Proposed revisions to the details of a Development Plan or an annual Work Programme or Budget in respect of Development and Production Operations shall for good cause and if the circumstances so justify be submitted for approval to the Management Committee. In the event the area encompassing the Commercial Discovery extends beyond the Development Area designated in the Development Plan either within the original Contract Area but subsequently relinquished or outside the original Contract

Area the Management Committee may make recommendations to the Government 37 concerning enlargement of the Development Area provided the same was not awarded to any other company by the Government or is not held by any other party or not on offer by the Government and no application for a License or Lease is pending with the Government. However in case the area is held by any other party or on offer by the Government or application for License or Lease is pending with the Government the Management Committee shall notify the same to the Government for further action on the matter. Government may consider such request for extension at its sole discretion and on terms and conditions which it may consider fit. 38

ARTICLE 11 PETROLEUM MINING LEASE FOR OFFSHORE AREA

11.1 11.2 11.3 11.4 The Contractor shall submit an application for grant of License in respect of the Contract Area as early as possible but not later than fifteen 15 Business Days from the date of execution of this Contract. On submission of a development plan of a Commercial Discovery pursuant to Article 10.7 the Contractor shall submit an application for a Lease in respect of the proposed Development Area. Where a part of a Reservoir in respect of which a Commercial Discovery has been declared extends beyond the Contract Area subject to Article 10.14 such area may be included in the proposed Development Area in relation to which application for a Lease is made on terms and conditions as deemed by the Government; provided that such area is a b c not subject to a license or lease granted to any other person; not the subject of negotiations bidding for a license or lease; and available for licensing i.e. is not an area over which Petroleum Operations are excluded. Where a Development Plan has been approved pursuant to Article 10 and the Contractor has complied with the terms and conditions of the License and this Contract and is not in breach of any of the terms thereof or the provisions of any law and subject to normal Government clearances approvals being obtained by the Contractor as applicable before grant issue of the Lease the Government shall grant to the Contractor a Lease over the Development Area as agreed subject to Article 11.5 to enable the Contractor to carry out Petroleum Operations in the Development Area in accordance with the Development Plan. 11.5 The Lease shall be granted for an initial period of twenty 20 years from the date of grant thereof subject to a b cancellation in

accordance with its terms or for termination of this Contract in accordance with its terms; extension by mutual agreement between the Parties for five 5 years or such period as may be agreed after taking into account the balance recoverable reserve and balance economic life of the FieldDevelopment Area from the expiry of the initial period provided that in the event of a Commercial production of Non Associated Natural Gas the extension may 39 be for a period of ten 10 years or such period as may be mutually agreed between the Parties after taking into account the balance recoverable reserves and balance economic life of the FieldDevelopment Area from the date of expiry of the initial term; and the terms of this Contract and other terms and conditions as set forth in such Lease be consistent with this Contract and the relevant legislation. c 40

ARTICLE 11

PETROLEUM MINING LEASE FOR ONSHORE AREA 11.1 11.2 11.3 11.4 The Contractor shall submit an application for grant of License in respect of the Contract Area as early as possible but not later than fifteen 15 Business Days from the date of execution of this Contract. On submission of a development plan of a Commercial Discovery pursuant to Article 10.7 the Contractor shall submit an application for a Lease in respect of the proposed Development Area to the relevant State Governments. Where a part of a Reservoir in respect of which a Commercial Discovery has been declared extends beyond the Contract Area subject to Article 10.14 such area may be included in the proposed Development Area in relation to which application for a Lease is made on terms and conditions as deed by the Central Government; provided that such area is a b c not subject to a license or lease granted to any other person; not the subject of negotiationsbidding or contract awarded for a license or lease; and available for licensing i.e. is not an area over which Petroleum Operations are excluded. Where a Development Plan has been approved pursuant to Article 10 and the Contractor has complied with the terms and conditions of the License and this Contract and is not in breach of any of the terms thereof or the provisions of any law and subject to normal Government clearancesapprovals being obtained by the Contractor as applicable before grantissue of the Lease the Central Government will assist the Contractor in obtaining the Lease from the relevant State Governments over the Development Area as agreed subject to Article 11.5 to enable

the Contractor to carry out Petroleum Operations in the Development Area in accordance with the Development Plan. 11.5 The Lease shall be granted for an initial period of twenty 20 years from the date of grant thereof subject to a b cancellation in accordance with its terms or for termination of this Contract in accordance with its terms; extension by mutual agreement between the Parties for five 5 years or such period as may be agreed after taking into account the balance recoverable reserve and balance economic life of the FieldDevelopment 41 Area from the expiry of the initial period provided that in the event of a Commercial production of Non Associated Natural Gas the extension may be for a period of ten 10 years or such period as may be mutually agreed between the Parties after taking into account the balance recoverable reserves and balance economic life of the FieldDevelopment Area from the date of expiry of the initial term; and the terms of this Contract and other terms and conditions as set forth in such Lease be consistent with this Contract and the relevant legislation. c 42 12.1 12.2 12.3 ARTICLE 12 UNIT DEVELOPMENT If a Reservoir in a Discovery Area is situated partly within the Contract Area and partly in an area in India over which other parties have a contract to conduct petroleum operations and both parts of the Reservoir can be more efficiently developed together on a commercial basis on receiving information in writing from any party to these contracts or any information on this from any bonafide source the Government may for securing the more effective recovery of Petroleum from such Reservoir by notice in writing to the Contractor require that the Contractor a b c collaborate and agree with such other parties on the joint development of the Reservoir ; submit such agreement between the Contractor and such other parties to the Government for approval within one hundred and eighty 180 days; and prepare a plan for such joint development of the said Reservoir within one hundred and eighty 180 days of the approval of the agreement referred to in b above. If no plan is submitted within the period specified in Article 12.1 c or such longer period as the Government and the Contractor and the other parties referred to in Article 12.1 may agree or if such plan as submitted is not acceptable to the Government and the Parties cannot agree on amendments to the proposed joint development plan the Government may cause to be prepared at the expense of the Contractor

and such other parties a plan for such joint development consistent with generally accepted modern oilfield and petroleum industry practices which shall take into consideration any plans and presentations made by the Contractor and the aforementioned other parties. If the parties are unable to agree on the proposed plan for joint development the Government may call for a joint development plan from an independent agency which agency may make such a proposal after taking into account the position of the parties in this regard. Such a development plan if approved by Government shall be binding on the parties notwithstanding their disagreement with the plan. However the Contractor may in case of any disagreement on the issue of joint development or the proposed joint development plan prepared in accordance with Article 12.2 or within forty five 45 Business Days of the plan approval as aforesaid in this Article notify the Government that it elects to surrender its rights in the ReservoirDiscovery in lieu of participation in a joint development. 43 12.4

12.5 If a proposed joint development plan is agreed and adopted by the parties or adopted following determination by the Government the plan as finally adopted shall be the approved joint development plan and the Contractor shall comply with the terms of the said development plan as if the Commercial Discovery is established. The provisions of Articles 12.1 12.2 and Article 12.3 shall apply mutatis mutandis to a Discovery of a Reservoir located partly within the Contract Area which although not equivalent to a Commercial Discovery if developed alone would be a Commercial Discovery if developed together with that part of the Reservoir which extends outside the Contract Area to the areas subject to contract for petroleum operations by other parties. 44

ARTICLE 13
MEASUREMENT OF PETROLEUM 13.1 13.2 Petroleum used for internal consumption for Petroleum Operations flared saved and sold from the Contract Area shall be measured by methods and appliances generally accepted and customarily used in modern oilfield and petroleum industry practices and approved by the Management Committee and the Government. The Government may at all reasonable times inspect and test the appliances used for measuring the volume and determining the quality of Petroleum provided that any such inspection or testing shall be carried out in such a manner so as not to unduly interfere with Petroleum Operations. 13.3 Before

commencement of production from the Contract Area the Parties shall mutually agree on a methods to be employed for measurement of volumes of Petroleum production; the point or points at which Petroleum shall be measured and the respective shares allocated to the Parties in accordance with the terms of this Contract; the frequency of inspections and testing of measurement appliances and relevant procedures relating thereto; and the consequences of a determination of an error in measurement.

b c d The Contractor shall undertake to measure the volume and quality of the Petroleum Produced and Saved from the agreed measurement point consistent with generally accepted modern oilfield and petroleum industry practices with the frequency and according to procedures agreed pursuant to Article 13.3. The Contractor shall not make any alteration in the agreed method or procedures for measurement or to any of the approved appliances used for that purpose without the written consent of the Management Committee and the Government. the Contract Area at The Contractor shall give the Government timely notice of its intention to conduct measuring operations or any agreed alteration for such operations and the Government shall have the right to be present at and supervise either directly or through authorised representatives such operations.

13.4 13.5 45 13.6 The Contractor shall keep all the records of analysis and measurement of hydrocarbons calibrations and proving of measurement system and make available to Government or its authorized agency such records on request. 46

ARTICLE 14 PROTECTION OF THE ENVIRONMENT

14.1 The Government and the Contractor recognise that Petroleum Operations will cause some impact on the environment in the Contract Area. Accordingly in performance of the Contract the Contractor shall conduct its Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation of natural resources and shall in particular;

a b employ modern oilfield and petroleum industry practices and standards including advanced techniques practices and methods of operation for the prevention of Environmental Damage in conducting its Petroleum Operations; take necessary and adequate steps to i ii prevent Environmental Damage and where some adverse impact on the environment is unavoidable to minimise such damage and the consequential effects thereof on property and

people; ensure adequate compensation for injury to persons or damage to property caused by the effect of Petroleum Operations; and c comply with the requirements of applicable laws and the reasonable requirements of the Government from time to time. If the Contractor fails to comply with the provisions of paragraph bi of Article 14.1 or contravenes any relevant law and such failure or contravention results in any Environmental Damage the Contractor shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof. If the Government in accordance with the laws has good reason to believe that any works or installations erected by the Contractor or any operations conducted by the Contractor are endangering or may endanger persons or any property of any person or are causing or may cause pollution or are harming or may harm fauna or flora or the environment to a degree which the Government deems unacceptable the Government may require the Contractor to take remedial measures within such reasonable period as may be determined by the Government and to repair any such damage. If the Government deems it necessary it may also require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such remedial measures or has repaired any damage caused.

14.2 14.3 47 14.4 The measures and methods to be used by the Contractor for the purpose of complying with the terms of paragraph bi of Article 14.1 shall be determined in timely consultation with the Government upon the commencement of Petroleum Operations or whenever there is a significant change in the scope or method of conducting Petroleum Operations and shall take into account the international standards applicable in similar circumstances and the relevant environmental impact study carried out in accordance with Article 14.5 below. The Contractor shall notify the Government in writing of the measures and methods finally determined by the Contractor and shall cause such measures and methods to be reviewed from time to time in the light of prevailing circumstances.

14.5 The Contractor shall cause a person or persons with special knowledge on environmental matters to carry out two environmental impact studies in order a b to determine at the time of the studies the prevailing situation relating to the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or

neighbouring areas; and to establish the likely effect on the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or neighbouring areas in consequence of the relevant phase of Petroleum Operations to be conducted under this Contract and to submit for consideration by the Parties methods and measures contemplated in Article 14.4 for minimising Environmental Damage and carrying out Site Restoration activities. The first of the aforementioned studies shall be carried out in two parts namely a preliminary part which must be concluded before commencement of any field work relating to a seismographic or other survey and a final part relating to drilling in the Exploration Period. The part of the study relating to drilling operations in the Exploration Period shall be approved by Government before the commencement of such drilling operations it being understood that such approval shall not be unreasonably withheld. the aforementioned studies shall be completed before The second of commencement of Development Operations and shall be submitted by the Contractor as part of the Development Plan with specific approval of Government being obtained before commencement of Development Operations it being understood that such approval shall not be unreasonably withheld. The studies mentioned in Article 14.5 above shall contain proposed environmental guidelines to be followed in order to minimize Environmental Damage and shall include but not be limited to the following to the extent appropriate to the respective study taking into account the phase of operations to which the study relates

14.5.1	14.5.2	14.5.3	48	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
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proposed access cutting; clearing and timber salvage; wildlife and habitat protection; fuel storage and handling; use of explosives; camps and staging; liquid and solid waste disposal; cultural and archaeological sites; selection of drilling sites; terrain stabilization; protection of freshwater horizons; blowout prevention plan; flaring during completion and testing of Gas and Oil Wells; abandonment of Wells; rig dismantling and site completion; reclamation for abandonment; noise control; debris disposal; and protection of natural drainage and water flow. 14.5.4 Subject to the provision of all applicable laws and notifications on protection of environment any new project or expansion or modernization projects for petroleum operations for which a proposal is submitted by the Contractor the

Government shall complete the assessment of the project within a period of ninety 90 days from the receipt of the requisite documents and data from the project authorities and completion of public hearing. The decision of the Government on the proposal of the Contractor for environmental clearance shall be conveyed within thirty 30 days thereafter. 14.6 The Contractor shall ensure that a b c Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with modern oilfield and petroleum industry practices and that such Petroleum Operations are properly monitored; the pertinent completed environmental impact studies are made available to its employees and to its contractors and Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and the contracts entered into between the Contractor and its contractors and Subcontractors relating to its Petroleum Operations shall include the provisions stipulated herein and any established measures and methods for the implementation of the Contractors obligations in relation to the environment under this Contract. 49 14.7 14.7.1 14.7.2 14.8 The Contractor shall prior to conducting any drilling activities prepare and submit for review by the Government contingency plans for dealing with Oil spills fires acents and emergencies designed to achieve rapid and effective emergency response. The plans referred to above shall be discussed with the Government and concerns expressed shall be taken into account. In the event of an emergency acent Oil spill or fire arising from Petroleum Operations affecting the environment the Contractor shall forthwith notify the Government and shall promptly implement the relevant contingency plan and perform such Site Restoration as may be necessary in accordance with modern oilfield and petroleum industry practices. In the event of any other emergency or acent arising from the Petroleum Operations affecting the environment the Contractor shall take such action as may be prudent and necessary in accordance with modern oilfield and petroleum industry practices in such circumstances. In the event that the Contractor fails to comply with any of the terms contained in Article 14.7 within a period specified by the Government the Government after giving the Contractor reasonable notice in the circumstances may take any action which may be necessary to ensure compliance with such

terms and to recover from the Contractor immediately after having taken such action all costs and expenditures incurred in connection with such action together with such interest as may be determined in accordance with Section 1.7 of Appendix C of this Contract.

14.9 On expiry or termination of this Contract or relinquishment of part of the Contract Area the Contractor shall a b subject to Article 27 remove all equipment and installations from the relinquished area or former Contract Area in a manner agreed with the Government pursuant to an abandonment plan; and perform all necessary Site Restoration in accordance with modern oilfield and petroleum industry practices and take all other action necessary to prevent hazards to human life or to the property of others or the environment.

14.10 The Contractor shall prepare a proposal for the restoration of site including abandonment plan and requirement of funds for this and the annual contribution. This will be submitted along with the annual Budget for the consideration and approval of the Management Committee. The annual contribution shall be deposited by the Contractor in the Site Restoration fund which will be established in accordance with the scheme notified by the Government.

50 14.11 Subject to Section 3.2 of Accounting Procedure any Site Restoration fund scheme formulated by Government and subject to provisions of this Contract any and all costs incurred by the Contractor pursuant to this Article shall be cost recoverable to sinking funds established for abandonment and restoration of the Contract Area. including but not limited

14.12 In this Article a reference to Government includes the State Government.

14.13 Where the Contract Area is partly located in areas forming part of certain national parks sanctuaries mangroves wetlands of national importance biosphere reserves and other biologically sensitive areas passage through these areas shall generally not be permitted. However if there is no passage other than through these areas to reach a particular point beyond these areas permission of the appropriate authorities shall be obtained.

14.14 The obligations and liability of the Contractor for the environment hereunder shall be limited to damage to the environment which a b occurs after the Effective Date; and results from an act or omission of the Contractor.

51 15.1 15.2 15.3 15.4 15.5 15.6 15.7 15.8

ARTICLE 15 RECOVERY OF COST PETROLEUM

The Contractor shall be entitled to recover Contract Costs out of a

percentage of the total value of Petroleum Produced and Saved from the Contract Area in the Year in accordance with the provisions of this Article. Exploration Costs incurred by the Contractor in the Contract Area upto the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover the aggregate of such Exploration Costs out of the Cost Petroleum at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date of such Commercial Production. The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Exploration Costs which it has incurred in any Year after the date of Commercial Production at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date such Exploration Costs are incurred. Development Costs incurred by the Contractor in the Contract Area upto the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover out of the Cost Petroleum the aggregate of such Development Costs at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date of such Commercial Production. The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Development Costs which it has incurred after the date of first Commercial Production at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date such Development Costs are incurred. The Contractor shall be entitled to recover in full during any Year the Production Costs incurred in that Year out of the Cost Petroleum. The Contractor shall be entitled to recover in full during any Year the royalty payments to the GovernmentState Governments in that Year out of the Cost Petroleum. If during any Year the Cost Petroleum is not sufficient to enable the Contractor to recover in full the Contract Costs due for recovery in that Year in accordance with the provisions of Articles 15.1 to 15.7 then subject to the provisions of Article 15.12 52 15.9 15.10 15.11 a recovery shall first be made of royalty payments; and b recovery shall next be made of the Production Costs; and c recovery shall next be made of the Exploration Costs; and d recovery shall then be made of the Development Costs. The unrecovered portions of Contract Costs shall be carried forward to the following Year and the Contractor shall be entitled to recover such Contract Costs in such Year or the subsequent

Years as if such Contract Costs were due for recovery in that Year or the succeeding Years until the unrecovered Contract Costs have been fully recovered out of Cost Petroleum from the Contract Area. The maximum amount of Cost Petroleum to which the Contractor shall be entitled in accordance with the provisions of this Article shall be to be taken from the accepted bid X percent X of the total value of the Petroleum Produced and Saved from the Contract Area. For the purposes of this Article as well as Article 16 costs receipts and income shall be converted into production unit equivalents and vice versa viz both in physical and monetary terms using the relevant prices established pursuant to Article 19 for Crude Oil and Article 21 for Natural Gas. Pending completion of the calculations required to establish definitively the Contractors entitlement to Cost Petroleum from the Contract Area in any Year the Contractor shall take delivery provisionally of volumes of Crude Oil or Natural Gas representing its estimated Cost Petroleum entitlement calculated with reference to estimated production quantities costs and prices as established by the Contractor and approved by the Management Committee. Such provisional determination of Cost Petroleum shall be made every Quarter on an accumulative basis. Within ninety 90 days of the end of each Year a final calculation of the Contractors entitlement to Cost Petroleum based on actual production quantities costs and prices for the entire Year as reflected in audited accounts under Article 25.4.3 shall be undertaken and any necessary adjustments to the Cost Petroleum entitlement shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter.

15.12 Where more than one Party constitutes the Contractor the percentage of the total Cost Petroleum from the Contract Area which shall be available to each such Party in any Year for recovery of its share of Contract Costs shall be determined on the basis of the respective Participating Interest of each such Party.

53 ARTICLE 16 PRODUCTION SHARING OF PETROLEUM

16.1 16.2.1 16.2.2 16.2.3 16.2.4 16.2.5 The Parties to this Contract shall share in the Profit Petroleum in each Year in accordance with the provisions of this Article. A Partys share of Profit Petroleum in any Year shall be calculated on the basis of the Investment Multiple actually achieved by the Contractor at the end of the preceding Year for the Contract Area as provided in

AppendixD. When the Investment Multiple of the Contractor at the end of any Year is less than one and one half 1.5 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than one and one half 1.5 but is less than two 2.0 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than two 2.0 but is less than two and one half 2.5 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than two and one half 2.5 but is less than three 3.0 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three 3.0 but is less than three and one half 3.5 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. 16.2.6 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three and one half 3.5 the Government shall be entitled to take and receive [] percent and the Contractor shall be entitled to take and receive [] percent of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. These figures shall be as per the bid of the Contractor and accepted by Government. Any balance left to the credit of the Parties in any Site Restoration account opened pursuant to the provision of Article 14.10 after Site Restoration has been done by the Contractor in accordance with the provisions of this Contract and the laws in

this regard shall be shared between the Government and the Contractor as per the Investment Multiple reached at the time of ceasing of production from the Contract Area. Other than ANG or NANG the Government shall have the option to take its entitlement to Profit Petroleum either in cash or in kind in any Year. In case of ANG or NANG as the case may be the Government shall have the option to take its entitlement to Profit Petroleum in cash or in kind and such option shall be exercised at interval of every five 5 Years from the commencement of first Commercial Production from the Contract Area. In accordance with the Article 16.4.1 The Government shall exercise such option by giving a written notice to the Contractor not later than thirtieth 30th June in the preceding Year in which the entitlement is due. Once the Government has exercised its option the same shall continue unless the Government informs the Contractor otherwise. Where the Government has informed the Contractor of its intention to take its share in kind the Parties shall mutually agree on a procedure for delivery of the Governments share of Profit Petroleum and where relevant the composition of the Petroleum which is to be delivered. The value of the Contractors Investment Multiple at the end of any Year in respect of the Contract Area shall be calculated in the manner provided for and on the basis of the net cash flows specified in AppendixD to this Contract. However the amount of Profit Petroleum to be shared between the Government and the Contractor shall be determined for each Quarter on an accumulative basis. Pending finalisation of accounts Profit Petroleum shall be shared between the Government and the Contractor on the basis of provisional estimated figures of Contract Costs production prices receipts income and any other income or allowable deductions and on the basis of the value of the Investment Multiple achieved at the end of the preceding Year. All such provisional estimates shall be approved by the Management Committee. When it is necessary to convert monetary units into physical units of production equivalents or vice versa the price or prices determined pursuant to Articles 19 and 21 for Crude Oil 55 Condensate and Natural Gas respectively shall be used. Within ninety 90 days of the end of each Year a final calculation of Profit Petroleum based on actual costs quantities prices and income for the entire Year shall be completed and any necessary adjustments to the sharing of Petroleum

shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter. Explanation The Profit Petroleum due to the Government shall be deposited with Pay Accounts officer or its successor Ministry of Petroleum Natural Gas Government of India Shastri Bhavan New Delhi by 10th of the Month following each Quarter 16.6 The Profit Petroleum due to the Contractor in any Year from the Contract Area shall be divided amongst the Parties constituting the Contractor in proportion to their respective Participating Interest. 56

ARTICLE 17 TAXES ROYALTIES RENTALS DUTIES ETC. 17.1 17.2 17.2.1 Companies their employees persons providing any materials supplies services or facilities or supplying any ship aircraft machinery equipment or plant whether by way of sale or hire to the Companies for Petroleum Operations or for any other purpose and the employees of such persons shall be subject to all fiscal legislation in India except where pursuant to any authority granted under any applicable law they are exempted wholly or partly from the application of the provisions of a particular law or as otherwise provided herein. Pursuant to the provisions of section 42 of the Incometax Act 1961 the allowances specified herein shall apply in computing income tax payable by a Company on its profits and gains from the business of Petroleum Operations in lieu of and not in addition to corresponding allowances provided for under the heading Profits and Gains of Business or Profession in the Incometax Act 1961. Any other allowance which are not specified herein shall be treated in accordance with the provisions of Incometax Act 1961. Subject to the provisions herein below deductions at the rate of one hundred percent 100 per annum shall be allowed for all expenditures both capital and revenue expenditures incurred in respect of Exploration Operations and drilling operations. The expenditure incurred in respect of Development Operations other than drilling operations and Production Operations will be allowable as per the provisions of the Incometax Act 1961. The expenses so incurred are subject to the following a where any expenditure is not solely incurred on Petroleum Operations or is incurred as part of or in conjunction with any other business only that proportion of the total expenditure which can be proved to the assessing officer to represent a fair proportionate part thereof having regard to all relevant facts and

circumstances shall be allowed; sections 40A and 44C of the Incometax Act 1961 shall apply. b

17.2.2 A Company shall be entitled for income tax purposes only to deduct all its unsuccessful Exploration Costs in contract areas covered by other contracts from the aggregate value of Petroleum allocable to the Company from any Fields in the Contract Area in the manner as follows a unsuccessful Exploration Costs incurred in contract areas other than the Contract Area where a Commercial Discovery has been made up to the date of commencement of Commercial Production shall be aggregated and 57 17.2.3 17.2.4 17.2.5 b the Company shall be entitled to deduct such costs at the rate of one hundred per cent 100 per annum; unsuccessful Exploration Costs incurred in contract areas other than the Contract Area where a Commercial Discovery has been made after the commencement of Commercial Production shall be deductible at the rate of one hundred per cent 100 per annum of such costs beginning from the Year such costs are incurred. All allowable expenditure incurred prior to the Year in which Commercial Production commences shall be aggregated and the assessed loss for that Year as well as the assessed loss if any incurred in the assessment year relevant to the Year in which Commercial Production commences or in any subsequent assessment year shall be carried forward to succeeding assessment years and set off as provided in the Incometax Act 1961. For any or all accumulated expenditures incurred in respect of Exploration Operations and drilling operations prior to the date of commercial production Companies shall have option to amortize such expenditures over a period of ten 10 years from the date of first commercial production. The profits and gains of the business of the Parties comprising the Contractor consisting of Petroleum Operations shall for the purpose of levy of income tax under the Incometax Act 1961 be computed on the basis of the value determined in accordance with Article 19 of its Participating Interest share of Crude Oil produced and saved and sold or otherwise disposed of from the Contract Area and from any revenue realised on the sale of Associated or Non Associated Natural Gas referred to in Article 21 as well as any other gains or receipts from Petroleum Operations as reduced by the deductions as specified herein and except as herein provided all the provisions of the Incometax Act 1961 shall apply. 17.2.6 Companies shall be

eligible for benefits available under section 80 IA of the Incometax Act 1961 as applicable from time to time.

17.3 For the purposes of Article 17.2 and section 42 of the Incometax Act 1961

17.3.1 The following terms used in section 42 of the Incometax Act 1961 shall have the meanings corresponding to the terms used in this Contract and defined in Article 1 as follows

a b agreement means this Contract as defined in Article 1; commercial production shall have the meaning assigned in Article 1.

17.3.2 The terms assessing officer assessed loss and assessment year shall have the meaning as defined in the Incometax Act 1961.

58 17.3.3 17.4 17.5 17.6 17.7 17.8 17.9 The other terms used herein and defined in Article 1 shall have the meaning therein ascribed.

Companies Lessee shall be required to pay royalty to the Government Lessor for offshore areas at the rate of ten percent 10 of the wellhead value of Crude Oil and Natural Gas. In case of an onshore area Companies shall be required to pay to the State Governments Lessor at the rate of twelve point five zero percent 12.5 of the wellhead value of Crude Oil and ten percent 10 of the wellhead value of Natural Gas. In case of an offshore area falling beyond four hundred 400 metre isobath the rate of royalty payable by Companies Lessee to the Government Lessor shall be at the rate of five percent 5 of the wellhead value of Crude Oil and Natural Gas for the first seven years from the date of commencement of Commercial Production in the Field. The valuation of Crude Oil and Natural Gas shall be as per the Article 19 and Article 21 respectively. The royalty amount due to GovernmentState Governments shall be payable latest by the end of the succeeding Month.

Machinery plant equipment materials and supplies imported by the Contractor and its Subcontractors solely and exclusively for use in Petroleum Operations under this Contract or similar contracts with the Government where customs duty has been exempted by the Government shall be exempt from customs duties and export duties or other charges on reexportation of the said items in accordance with applicable legislation. The Government shall have the right to inspect the records and documents of the physical item or items for which an exemption has been provided pursuant to Article 17.5 to determine that such item or items are being or have been imported solely and exclusively for the purpose for which the exemption was granted. The Government shall also be

entitled to inspect such physical items wherever located to ensure that such items are being used for the purpose herein specified and any item not being so used shall immediately become liable to payment of the applicable customs duties. Subject to Article 27 the Contractor and its Subcontractors may sell or otherwise transfer in India all imported items which are no longer required for Petroleum Operations subject to applicable laws including rules regulations procedures notifications etc. governing customs duties and sale or disposal of such items. Any sales tax or tax of similar nature payable on the sales of Petroleum under this Contract shall be borne/reimbursed by the buyers. Subject to the provisions herein above provided the Contractor shall be liable for payment of annual license charges and rental fees and other charges under the Rules; 59 b c d e f charges payable by specified industries or in connection with Petroleum Operations under applicable legislation; payments for purchase lease or rental of land or land rights in connection with Petroleum Operations; taxes fees or charges for specific services rendered on request or to the public generally; customs duties except for those items subject to exemption as provided in Article 17 applicable at the rates specified from time to time; and stamp duties registration fees license fees taxes such as taxes on property or assets not calculated by reference to income or otherwise exempted or other levies fees or charges of a nondiscriminatory nature and generally applicable in India or in the State where Petroleum Operations are being conducted. If any change in or to any Indian law rule or regulation dealing with income tax or other corporate tax export/import tax excise customs duty or any other levies duties or taxes imposed on Petroleum or dependent upon the value of Petroleum results in a material change to the expected economic benefits accruing to any of the Parties after the date of execution of the Contract the Parties shall consult promptly in good faith to make necessary revisions and adjustments to the Contract in order to maintain such expected economic benefits to each of the Parties provided however that the expected economic benefits to the Parties shall not be reduced as a result of the operation of this Article. 17.10 60

ARTICLE 18 DOMESTIC SUPPLY SALE DISPOSAL AND EXPORT OF CRUDE OIL AND CONDENSATE 18.1 18.2 18.3 18.4 Until such time as the total availability to the Government of

Crude Oil and Condensate from all Petroleum production activities in India meets the total national demand each Company comprising the Contractor shall be required to sell in the domestic market in India all of the Companys entitlement to Crude Oil and Condensate from the Contract Area in order to assist in satisfying the national demand. If during any Year India attains Selfsufficiency the Government shall promptly thereafter but in no event later than the end of the first Quarter of the following Year so advise the Companies by written notice. In such event as from the end of the second Quarter of the following Year or such earlier date as the Parties may mutually agree domestic sale obligation shall be suspended and the Company shall have the right to lift and export its Participating Interest share of Crude Oil and Condensate until such time if any as Selfsufficiency shall have ceased to exist. If Selfsufficiency ceases to exist during a Year the Government shall recover its position to ask Companies under Article 18.1 in respect of the following Year by giving ninety 90 days notice thereof to the Companies to sell Crude Oil and Condensate in the Indian domestic market. Upon India achieving Selfsufficiency the Companies shall be entitled to freely lift and export any Crude Oil and Condensate pursuant to this Article 18 subject to Governments generally applicable destination restrictions to countries with which the Government for policy reasons has severed or restricted trade. No later than sixty 60 days prior to the commencement of production in a Field and thereafter no less than sixty 60 days before the commencement of each Year the Contractor shall cause to be prepared and submitted to the Parties a production forecast setting out the total quantity of Crude Oil that it estimates can be produced from a Field during the succeeding Year based on a maximum efficient rate of recovery of Crude Oil from that Field in accordance with modern oilfield and petroleum industry practices. No later than thirty 30 days prior to the commencement of each Quarter the Contractor shall inform its estimate of production for the succeeding Quarter and shall endeavour to produce the forecast quantity for each Quarter. 18.5 Each Company comprising the Contractor shall throughout the term of this Contract have the right to separately take in kind and dispose of all its share of Cost Petroleum and Profit Petroleum and shall have the obligation to lift the said 61 18.6 18.7 Petroleum on a current basis and in such quantities

so as not to cause a restriction of production or inconvenience to the other Companies. The Government shall throughout the term of this Contract have the right to separately take in kind and dispose of its share of Crude Oil and shall have the obligation to lift the said Oil on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the Contractor. For the purpose of implementing the provisions of this Article a Crude lifting procedure and Crude sales agreement based on generally acceptable international terms shall be agreed upon by the Contractor with buyers no later than six 6 months or such shorter period as may be mutually agreed between the Contractor and buyers with the consent of Government prior to the commencement of production in a Field. Such lifting procedure shall be made available to all the Parties to this Contract. 62 ARTICLE 19 VALUATION OF PETROLEUM 19.1 19.2 19.3 19.3.1 19.4

For the purpose of this Contract the value of Crude Oil Condensate and Natural Gas refer Article 21 shall be based on the price determined as provided herein. A price for Crude Oil shall be determined for each Month or such other period as the Parties may agree hereinafter referred to as the Delivery Period in terms of United States Dollars per Barrel on import parity basis with marine freight being determined on the basis of nearest port to the Contract Area for Crude Oil produced and sold or otherwise disposed of from Contract Area for each Delivery Period in accordance with the appropriate basis for that type of sale or disposal specified below. Subject to the provisions of this Article 19 it is clearly understood that the actual prices received by the Companies from the sales will form the basis for the purposes of cost recovery Profit Petroleum sharing and payment of royalty as provided in the Articles 15 16 and 17 respectively. The basis of valuation given in this Article for the purpose of Article 15 16 and 17 shall apply only where Government is of the view that sale prices realised by the Companies are not consistent with the price realisable at Arms Length Sales. In the event that some or all of a Company's or Contractor's total sales of Crude Oil during a Delivery Period are made to third parties at Arms Length Sales all sales so made shall be valued at the weighted average of the prices actually received by a Company calculated by dividing the total receipts from all such sales at the Delivery Point by the total number of Barrels of the Crude Oil sold

in such sales. Each Company constituting the Contractor shall separately submit to the designated nominee of the Government within fifteen 15 days of the end of each Delivery Period a report containing the actual prices obtained in their respective Arms Length Sales for any Crude Oil. Such reports shall distinguish between term sales and spot sales and itemize volumes customers prices received and credit terms and a Company shall allow the designated nominees of the Government to examine the relevant sales contracts. For the purpose of determining price at Arms Length Sales the price of the Crude Oil at which sale takes place will generally be based on per Barrel of one or more crude oils which at the time of calculation are being freely and actively traded in the international market and are similar in characteristics and quality to the Crude Oil in respect of which the price is being determined selling price to be ascertained from Platts Crude Oil Market Wire daily publication Platts or the spot market for the same crude oils ascertained in the same manner whichever 63 price more truly reflects the current value of such crude oils. For any Delivery Period in which sales take place the price shall be the arithmetic average price per Barrel determined by calculating the average for such Delivery Period of the mean of the high and low FOB prices for each day of the crude oils selected for comparison adjusted for differences in the Crude Oil and the crude oils being compared for quality transportation costs delivery time quantity payment terms and other contract terms to the extent known and other relevant factors. In the event that Platts ceases to be published or is not published for a period of thirty 30 consecutive days the Parties shall agree on an alternative daily publication. The Contractor shall make available all the data pertaining to pricing of Crude to enable Government to see that the proposed sale price by the Contractor each constituents of the Contractor reflects a fair market price for the Crude. In the event that at the relevant time no crude oils of similar quality to the Crude Oil to be sold are being actively traded in the international markets where prices can be ascertained by international publication or the official FOB selling prices and the international spot market price vary widely between producers the Parties shall meet in good faith to determine an appropriate pricing basis. The Contractor shall determine the relevant prices in accordance with this Article and the calculation basis of calculation

and the price determined shall be supplied to the Government and shall be subject to agreement by the Government. In the event that the Parties fail to reach agreement on any matter concerning selection of the crude oils for comparison the calculation the basis of or mechanism for the calculation of the prices the prices arrived at the adjustment of any price or generally about the manner in which the prices are determined according to the provisions of this Article within thirty 30 days or such longer period as may be mutually agreed between the Parties from the date of commencement of Commercial Production or the end of each Delivery Period thereafter any Party may refer the matter or matters in issue for final determination by a sole expert or arbitrator appointed as provided in Article 33. If the matter is referred to the sole expert within ten 10 days of the said appointment the Parties shall provide the expert with all information they deem necessary or as the expert may reasonably require. Within fifteen 15 days from the date of his appointment the expert shall report to the Parties on the issues referred to him for determination applying the criteria or mechanism set forth herein and indicate his decision thereon to be applicable for the relevant Delivery Period for Crude Oil and such decision shall be accepted as final and binding by the Parties.

19.4.1 19.5 19.6 19.6.1 19.6.2 19.6.3 Any price or pricing mechanism agreed by the Parties pursuant to the provisions of this Article shall not be changed retroactively. 64 19.7 19.8 In the event that all sales of Crude Oil in a Delivery Period by a Company constituting the Contractor are to be made to an Affiliate the Parties may agree on an alternative method of valuing the Crude Oil for the purposes of this Contract provided that such alternative method results in an internationally competitive fair market valuation for that Delivery Period. In case of disagreement the decision of the Government on determining a Crude price in case of sales to an Affiliate shall be final and binding. In the event that in any Delivery Period there is more than one type of sales referred to in Articles 19.3 and 19.7 then for the purpose of calculating Cost Petroleum and Profit Petroleum entitlement and royalty payments pursuant to Articles 15 16 and 17 respectively a single price per Barrel of Crude Oil for all the sales for the relevant Delivery Period shall be used. Such single price shall be the weighted average of the prices determined for each type of sale weighted by the respective

volumes of Crude Oil sold in each type of sale in the relevant Delivery Period. 19.9 The provisions specified above for the determination of the price of sales of Crude Oil shall apply mutatis mutandis to Condensates. 19.10 The price of Natural Gas shall be determined as provided in Article 21. 65

ARTICLE 20 CURRENCY AND EXCHANGE CONTROL PROVISIONS 20.1

Subject to the provisions herein and to compliance with the relevant provisions of the laws of general application in India governing currency and foreign exchange and related administrative instructions and procedures issued thereunder on a nondiscriminatory basis each Foreign Company comprising the Contractor shall during the term of this Contract have the right to a b c d e f repatriate abroad in United States Dollars or any other freely convertible currency acceptable to the Government and the Foreign Company the net proceeds of sales of Petroleum in India; receive retain and use abroad the proceeds of any export sales of Petroleum under the Contract; open maintain and operate bank accounts with reputable banks both inside and outside India for the purpose of this Contract; freely import through normal banking channels funds necessary for carrying out the Petroleum Operations; convert into foreign exchange and repatriate sums imported pursuant to d above in excess if any of its requirements; and make payments outside of India for purchases services and loans obtained abroad without the requirement that funds used in making such payments must come from or originate in India. Provided however that repatriation pursuant to subparagraphs a and e and payments pursuant to subparagraph f shall be subject to the provisions of any treaties and bilateral arrangements between the Government and any country with respect to payments to or from that country. 20.2 The rates of exchange for the purchase and sale of currency by the Companies shall be the prevailing rates of general application determined by the Reserve Bank of India or such other financial body as may be mutually agreed by the Parties and for accounting purposes under this Contract these rates shall apply as provided in Section 1.6 of AppendixC. 20.3. A Party other than a Foreign Company comprising the Contractor shall be governed by the relevant currency and foreign exchange laws and related administrative instructions and procedures issued thereunder. 20.4 Indian Companies shall have right to remit their portion of expenditure in foreign currencies in

accordance with the exchange control provisions. 66 ARTICLE 21 NATURAL GAS 21.1 Subject to Article 21.2 the Indian domestic market shall have the first call on the utilisation of Natural Gas discovered and produced from the Contract Area. Accordingly any proposal by the Contractor relating to Discovery and production of Natural Gas from the Contract Area shall be made in the context of the Governments policy for the utilisation of Natural Gas and shall take into account the objectives of the Government to develop its resources in the most efficient manner and to promote conservation measures. 21.2 The Contractor shall have the right to use Natural Gas produced from the Contract Area for the purpose of Petroleum Operations including reinjection for pressure maintenance in Oil Fields gas lifting and captive power generation required for Petroleum Operations. 21.3 For the purpose of sales in the domestic market pursuant to this Article 21 the Contractor shall have freedom to market the Gas and sell its entitlement. 21.4 Associated Natural Gas ANG 21.4.1 21.4.2 In the event that a Discovery of Crude Oil contains ANG the Contractor shall declare in the proposal for the declaration of the said Discovery as a Commercial Discovery as specified in Article 10 whether and by what amount the estimated production of ANG is anticipated to exceed the quantities of ANG which will be used in accordance with Article 21.2 such excess being hereinafter referred to as the Excess ANG. In such an event the Contractor shall indicate whether on the basis of the available data and information it has reasonable grounds for believing that the Excess ANG could be commercially exploited in accordance with the terms of this Contract along with the Commercial Production of the Crude Oil from the Contract Area and whether the Contractor intends to so exploit the Excess ANG. Based on the principle of full utilisation and minimum flaring of ANG a proposed development plan for an Oil Discovery shall to the extent practicable include a plan for utilisation of the ANG including estimated quantities to be flared reinjected and to be used for Petroleum Operations; and if the Contractor proposes to commercially exploit the Excess ANG for sale in the domestic market in accordance with Governments policy or elsewhere the proposed plans for such exploitation. 67 21.4.3 21.4.4 If the Contractor wishes to exploit the Excess ANG subject to Article 21.1 the Contractor shall be free to explore markets for the

commercial exploitation of the said Excess ANG and submit its proposals for such exploitation to the Government in accordance with Article 21.4.2. Where the Contractor is of the view that the Excess ANG cannot be commercially exploited and chooses not to exploit the said Excess ANG or is unable to find a market for the Excess ANG pursuant to Article 21.4.3 the Government shall be entitled to take and utilise such Excess ANG free of any costcharge. 21.4.5 If the Government elects to take the Excess ANG as provided in Article 21.4.4 a b c d e the Contractor shall deliver such Excess ANG to the Government or its nominee free of any costcharge at the downstream flange of the GasOil separation facilities; the Contractor shall based on sound petroleum engineering practices install such facilities as would facilitate insofar as practicable uninterrupted delivery of such Excess ANG to the Government or its nominee; the cost of all facilities installed pursuant to paragraph b above shall be borne by the Government or its nominee; the Government or its nominee shall bear all costs including gathering treating processing and transporting costs beyond the downstream flange of the GasOil separation facilities; and the delivery of such Excess ANG shall be subject to procedures to be agreed between the Government or its nominee and the Contractor prior to such delivery such procedures to include matters relating to timing of offtake of such Excess ANG. Parties shall endeavour that such procedures do not restrict Oil production. 21.4.6 21.4.7 The Excess ANG which is not commercially exploited by the Contractor or taken by the Government or its nominee pursuant to this Article 21 shall be returned to the subsurface structure or flared or otherwise disposed off as approved by the Government in the context of the Development Plan provided that flaring will be resorted to only for small quantities and as a last resort. As soon as practicable after the submission of the proposed development plan the Contractor and the Government or its nominee shall meet to discuss the sale and/or disposal of any ANG discovered with a view to giving effect to the provisions of this Article 21 in a timely manner. 21.5 Non Associated Natural Gas NANG

21.5.1 In the event of a Discovery of NANG in the Contract Area the Contractor shall promptly report such Discovery to the Management Committee and the 68 21.5.2 21.5.3 21.5.4 Government and the provisions of Articles 10.1 and 10.2 shall apply. The remaining provisions of Article 10 would apply

to the Discovery and development of NANG only insofar as they are not inconsistent with the provisions of this Article. Notwithstanding the provisions of Article 3 the Contractor shall be entitled to retain the Discovery Area subject to the provisions of this Article 21. If pursuant to Article 10.1 the Contractor gives notification that the Discovery is of potential commercial interest the Contractor shall submit to the Management Committee within one 1 year from the date of notification of the above said Discovery the proposed Appraisal Programme including a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery to determine i without delay whether such Discovery is a Commercial Discovery and ii with reasonable precision the boundaries of the area to be delineated as the Development Area. Such proposed Appraisal Programme shall be supported by all relevant data such as Well data Contractors best estimate of reserve range and production potential and shall indicate the date of commencement of the proposed Appraisal Programme. The proposed Appraisal Programme together with the Work Programme and Budget referred to in Article 21.5.2 shall be reviewed by the Management Committee within sixty 60 days of its submission by the Contractor. The Management Committee shall offer its comments within the said period. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor as revised or modified or amended in light of the Management Committee review and advice shall be adopted as the Appraisal Programme and the Contractor shall promptly proceed with implementation of the said Programme. If on the basis of the results of the Appraisal Programme the Contractor is of the opinion that NANG has been discovered in commercial quantities it shall submit to the Management Committee as soon as practicable but not later than three 3 years from the date of notification of the aforementioned Discovery a proposal for the declaration of the Discovery as a Commercial Discovery. Such proposal shall take into account the Governments policies on Gas utilization and propose alternative options if any for use or consumption of the NANG and be accompanied by a report on the Discovery supported by inter alia technical and economic data evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or on behalf of the Contractor and other relevant

information. If no proposal is submitted to the Management Committee by the Contractor within three 3 years from the said Discovery the Contractor shall relinquish its rights to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area. 69

21.5.5 21.5.6 21.5.7 21.5.8 Where the Contractor has submitted a proposal for the declaration of a Discovery as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilization or commercial development of the NANG in the domestic market or elsewhere and in the context of Governments policy on Gas utilization and the chain of activities required to bring the NANG from the Delivery Point to potential consumers in the domestic market or elsewhere. The Management Committee may within eighty five 85 days of the submission of the said proposal request the Contractor to submit any additional information on the Discovery the anticipated markets or any other related matter that may reasonably be required to facilitate a review. The Contractor shall submit the required information within thirty 30 days of the request by the Management Committee. The Management Committee will advise the Contractor of its review within one hundred and thirty five 135 days from the submission of proposal or within fifty five 55 days from the receipt of additional information as the case may be on the proposal made by the Contractor to declare the Discovery as a Commercial Discovery. If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred to in the Article 21.5.5 the Contractor shall within one 1 year of the declaration of the Discovery as a Commercial Discovery submit a development plan for the development of the Discovery to the Management Committee for approval. Such plan shall be supported by all relevant information including inter alia the information required in Article 10.7. from information clarificationsadditional Unless otherwise agreed by the Management Committee it shall consider the proposed development plan and give their approval within one hundred and sixty five 165 days of submission thereof or eighty five 85 days from the receipt of the the Contractor. Any clarificationadditional information required by the Management Committee shall be asked for within eighty five 85 days of receipt of the proposal from the Contractor. The Contractor shall provide such

additional information within thirty 30 days from the receipt of request by the Management Committee. If the Management Committee fails to convey its decision within one hundred and sixty five 165 days from the submission of the development plan or eighty five 85 days from the receipt of the clarificationsadditional information whichever is later the Contractor may submit the development plan for the approval of the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development plan for the approval of the Government. Where the development plan is submitted to the Government for approval pursuant to Article 21.5.7 the Government shall convey its decision within one hundred and fifteen 115 days from the date of receipt of the proposal from the ask it Contractor. Government where necessary may considers 70 21.5.9 21.5.10 21.5.11 21.5.12 clarificationsadditional information from the Contractor within eighty five 85 days and shall convey its decision within fifty five 55 days from the date of receipt of such clarificationsadditional information. If the Government has failed to approve or disapproves the Contractors proposed development plan within one hundred and fifteen 115 days from receipt or within fifty five 55 days from the receipt of clarifications information from the Contractor as mentioned in the Article 21.5.8 the Government shall advise the Contractor in writing of the reasons for such failure or disapproval and the Government and the Contractor shall meet to discuss the said development plan and the reasons for the said failure to approve or disapproval and use their best efforts to agree on appropriate modifications thereto to meet the Governments concerns or objections. Thereafter the Contractor shall have the right to resubmit within eighty five 85 days of communication from the Government the proposed development plan duly amended to meet the Governments concerns. Such right of resubmission of the proposed development plan shall be exercisable by the Contractor only once. The Government will respond to the resubmitted plan within one hundred and fifteen 115 days. If no such plan is submitted to the Government within the above specified period the Contractor shall relinquish its right to develop such Gas Discovery and such Discovery shall be excluded from the Contract Area. In the event that the Management Committee or Government as may be the case approves the

Contractors development plan for the development of such Commercial Discovery with such modifications and amendments as the Management Committee or Government as may be the case may approve the said Gas Discovery shall be promptly developed by the Contractor in accordance with the approved plan which shall be the Development Plan. The Contractor will have a two 2 years period from the date of approval of the Development Plan by the Management Committee or Government to tieup the markets for sale of Nonassociated Natural Gas. In the event the Contractor does not commence development of such Discovery within ten 10 years from the date of the first Discovery Well the Contractor shall relinquish its right to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area.

21.6 Valuation of Natural Gas

21.6.1 21.6.2

The Contractor shall endeavour to sell all Natural Gas produced and saved from the Contract Area at armslength prices to the benefits of Parties to the Contract. Notwithstanding the provision of Article 21.6.1 Natural Gas produced from the Contract Area shall be valued for the purposes of this Contract as follows

71 a b c Gas which is used as per Article 21.2 or flared with the approval of the Government or reinjected or sold to the Government pursuant to Article 21.4.5 shall be ascribed a zero value; Gas which is sold to the Government or any other Government nominee shall be valued on the terms and conditions actually obtained including pricing formula and delivery; and Explanation However it is clarified that this provision would apply only when the sale is made to the Government or Government nominee under the provisions of the Contract Gas which is sold or disposed of otherwise than in accordance with paragraph a or b shall be valued on the basis of competitive arms length sales in the region for similar sales under similar conditions. The formula or basis on which the prices shall be determined pursuant to Article 21.6 shall be approved by the Government prior to the sale of Natural Gas to the consumersbuyers within sixty 60 Business Days from the receipt of proposal or from the date of receipt of clarificationadditional information where asked for by the Government. For granting this approval Government shall take into account the prevailing policy if any on pricing of Natural Gas including any linkages with traded liquid fuels and it may delegate or assign this function to a regulatory authority as and when such an authority is in

existence and in place. 21.7 72 ARTICLE 22 EMPLOYMENT TRAINING AND TRANSFER OF TECHNOLOGY 22.1 22.2 22.3 Without prejudice to the right of the Contractor to select and employ such number of personnel as in the opinion of the Contractor are required for carrying out Petroleum Operations in a safe cost effective and efficient manner the Contractor shall to the maximum extent possible employ and require the Operator and Subcontractors to employ citizens of India having appropriate qualifications and experience taking into account experience required in the level and nature of the Petroleum Operations. The Operator shall offer a mutually agreed number of Indian nationals the opportunity for onthejob training and practical experience in Petroleum Operations during the Exploration Period. Not later than six 6 months after approval of the Development Plan the Operator shall in consultation with the Government establish and implement training programmes for staff positions in each phase and level of Petroleum Operations including skilled technical executive and management positions with a view to ensuring employment of nationals of India and gradual and progressive reduction of foreign personnel. At the request of the Government the Foreign Companies shall separately endeavour to negotiate in good faith technical assistance agreements with the Government or a company nominated by Government for this purpose setting forth the terms by which each Foreign Company constituting the Contractor may render technical assistance and make available commercially proven technical information of a proprietary nature for use in India by the Government or the company nominated by Government. The issues to be addressed in negotiating such technical assistance agreements shall include but not be limited to licensing issues royalty conditions confidentiality restrictions liabilities costs and method of payment.

73 ARTICLE 23 LOCAL GOODS AND SERVICES 23.1 In the conduct of Petroleum Operations the Contractor shall a b c give preference to the purchase and use of goods manufactured produced or supplied in India provided that such goods are available on terms equal to or better than imported goods with respect to timing of delivery quality and quantity required price and other terms; employ Indian Subcontractors having the required skills or expertise to the maximum extent possible insofar as their services are available on comparable standards with those obtained elsewhere and at

competitive prices and on competitive that where no such Subcontractors are available preference shall be given to nonIndian Subcontractors who utilise Indian goods to the maximum extent possible subject however to the proviso in paragraph a above; and ensure that provisions in terms of paragraphs a to b above are contained in contracts between the Operator and its Subcontractors. terms; provided Subject to Article 8.3f the Contractor shall establish appropriate procedures including tender procedures for the acquisition of goods and services which shall ensure that suppliers and Subcontractors in India are given adequate opportunity to compete for the supply of goods and services. The tender procedures shall include inter alia the financial amounts or value of contracts which will be awarded on the basis of selective bidding or open competitive bidding the procedures for such bidding and the exceptions to bidding in cases of emergency and shall be subject to the approval of the Management Committee. 23.2 23.3 Within sixty 60 days after the end of each Year the Contractor shall provide the Government with a report outlining its achievements in utilising Indian resources during that Year in accordance with Section 10 of Appendix C to this Contract. 23.4 In this Article goods means equipment materials and supplies. 74 ARTICLE 24 INSURANCE AND INDEMNIFICATION 24.1 Insurance 24.1.1 The Contractor shall during the term of this Contract maintain and obtain insurance coverage for and in relation to Petroleum Operations for such amounts and against such risks as are customarily or prudently insured in the international petroleum industry in accordance with modern oilfield and petroleum industry practices and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government as additional insured and shall waive subrogation against the Government. The said insurance shall without prejudice to the generality of the foregoing cover a b c d loss or damage to all installations equipment and other assets for so long as they are used in or in connection with Petroleum Operations; provided however that if for any reason the Contractor fails to insure any such installation equipment or assets it shall replace any loss thereof or repair any damage caused thereto; loss damage or injury caused by pollution in the course of or as a result of Petroleum Operations; loss of property or damage or bodily injury suffered by any third party in the

course of or as a result of Petroleum Operations for which the Contractor may be liable; any claim for which the Government may be liable relating to the loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor is liable to indemnify the Government or the State Government; e with respect to Petroleum Operations offshore the cost of removing wrecks and cleaning up operations following any accident in the course of or as a result of Petroleum Operations; and the Contractors and/or the Operators liability to its employees engaged in Petroleum Operations. f 24.1.2 The Contractor shall require its Subcontractors to obtain and maintain insurance against the risks referred to in Article 24.1.1 relating mutatis mutandis to such Subcontractors. 24.2 Indemnity Subject to Article 4.7 the Contractor shall indemnify defend and hold the Government and the State Government harmless against all claims losses and damages of any nature whatsoever including without limitation claims for loss or damage to property or injury or death to persons caused by or resulting from any Petroleum Operations conducted by or on behalf of the Contractor. 75 25.1 25.2 25.3 25.4.1 25.4.2 25.4.3 25.4.4 25.5 25.6 25.7 ARTICLE 25 RECORDS REPORTS ACCOUNTS AND AUDIT The Contractor shall prepare and maintain in original at an office in India accurate and current books records reports and accounts of its activities for and in connection with Petroleum Operations so as to present a fair clear and accurate record of all its activities expenditures and receipts. Based on generally accepted and recognised accounting principles and modern petroleum industry practices record books accounts and accounting procedures in respect of Petroleum Operations shall be maintained on behalf of the Contractor by the Operator at its business office in India in accordance with the Accounting Procedure to this Contract. The Contractor shall submit to the Government regular Statements and reports relating to Petroleum Operations as provided in AppendixC. The annual audit of accounts shall be carried out on behalf of the Contractor by a qualified independent firm of recognised chartered accountants registered in India. The appointment of auditor and the scope of audit should have prior approval of the Management Committee. The Contractor shall submit the audited accounts to the Management Committee for approval within sixty 60 days from

the end of the Year. The Management Committee shall consider and approve the auditors report within thirty 30 days after the submission of such report. Copy of the auditors report shall be submitted to the Government within thirty 30 days after the approval of the Management Committee. The Government shall have the right to audit the accounting records of the Contractor in respect of Petroleum Operations as provided in the Accounting Procedure. The accounting and auditing provisions and procedures specified in this Contract are without prejudice to any other requirements imposed by any statute in India including without limitation any specific requirements of the statutes relating to taxation of Companies. For the purpose of any audit referred to in Articles 25.5 the Contractor shall make available in original to the auditor all such books records accounts and other documents and information as may be reasonably required by the auditor during normal business hours.

76 ARTICLE 26 INFORMATION DATA CONFIDENTIALITY INSPECTION AND SECURITY

26.1 26.2 26.3 The Contractor shall promptly after they become available in India provide the Government free of cost with all data obtained as a result of Petroleum Operations under the Contract including but not limited to geological geophysical geochemical petrophysical engineering Well logs maps magnetic tapes cores cuttings and production data as well as all interpretative and derivative data including reports analyses interpretations and evaluation prepared in respect of Petroleum Operations hereinafter referred to as Data. Data shall be the property of the Government provided however that the Contractor shall have the right to make use of such Data free of cost for the purpose of Petroleum Operations under this Contract as provided herein. The Contractor may for use in Petroleum Operations retain copies or samples of material or information constituting the Data and with the approval of the Government original material except that where such material is capable of reproduction and copies have been supplied to the Government the Contractor may subject to the right of inspection by the Government export subject to any applicable regulations samples or other original Data for processing or laboratory examination or analysis provided that representative samples equivalent in quality size and quantity or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Government. The

Contractor shall keep the Government currently advised of all developments taking place during the course of Petroleum Operations and shall furnish the Government with full and accurate information and progress reports relating to Petroleum Operations on a daily Monthly Yearly or other periodic basis as Government may reasonably require provided that this obligation shall not extend to proprietary technology. The Contractor shall meet with the Government at a mutually convenient location in India to present the results of all geological and geophysical work carried out as well as the results of all engineering and drilling operations as soon as such Data becomes available to the Contractor.

26.4 All Data information and reports obtained or prepared by for or on behalf of the Contractor pursuant to this Contract shall be treated as confidential and subject to the provisions herein below the Parties shall not disclose the thereof to any third party without the consent in writing of the other Parties.

26.5 The obligation specified in Article 26.4 shall not operate so as to prevent disclosure 77 a b c d e f g to Affiliates contractors or Subcontractors for the purpose of Petroleum Operations; to employees professional consultants advisers data processing centres and laboratories where required for the performance of functions in connection with Petroleum Operations for any Party comprising the Contractor; to banks or other financial institutions in connection with Petroleum Operations; to bonafide intending assignees or transferees of a Participating Interest of a Party comprising the Contractor or in connection with a sale of the stock or shares of a Party comprising the Contractor; to the extent required by any applicable law or in connection with any legal proceedings or by the regulations of any stock exchange upon which the shares of a Party comprising the Contractor are quoted; to Government departments for or in connection with the preparation by or on behalf of the Government of statistical reports with respect to Petroleum Operations or in connection with the administration of this Contract or any relevant law or for any purpose connected with Petroleum Operations; and by a Party with respect to any Data or information which without disclosure by such Party is generally known to the public. Any Data information or reports disclosed by the Parties comprising the Contractor to any other person pursuant to Article 26.5 a to d shall be disclosed on the terms that such Data information or reports

shall be treated as confidential by the recipient. Prompt notice of disclosures made by Companies pursuant to Article 26.5 shall be given to the Government. Any Data information and reports relating to the Contract Area which in the opinion of the Government might have significance in connection with offers by the Government of acreages may be disclosed by the Government for such purpose. Government may also disclose such Data or information for any exploration programme to be conducted by a third party in adjoining areas with the consent of the Contractor for better understanding of regional geological setup and such consent by the Contractor shall not be unreasonably withheld. Where an area ceases to be part of the Contract Area the Contractor shall hand over all the originals and copies of the Data and information with respect to that part to the Government within a period of one 1 year from the date of relinquishment or surrender. The Contractor shall however be allowed to retain one copy of the Data in its possession for its own use where required and shall not use the Data for sale or any other purposes. Subject to the provisions of this Article the Contractor shall keep all Data information confidential. 78 26.6 26.7 26.8 26.9 26.10 26.11 The Government shall at all reasonable times through duly authorised representatives be entitled to observe Petroleum Operations and to inspect all assets books records reports accounts contracts samples and Data kept by the Contractor or the Operator in respect of Petroleum Operations in the Contract Area provided however that the Contractor shall not be required to disclose any proprietary technology. The duly authorised representatives shall be given reasonable assistance by the Contractor for such functions and the Contractor shall afford such representatives reasonable use of all facilities and privileges afforded to its own personnel in the field including the use of office space and housing for a period not exceeding 30 mandays in a Year and thereafter at the cost of Government. The said representatives shall be entitled to make a reasonable number of surveys measurements drawings tests and copies of documents take samples and make reasonable use of the equipment and instruments of the Contractor provided that such functions shall not unduly interfere with the Contractors Petroleum Operations. The Contractor shall give reasonable advance notice to the Government or to any other authority designated by the

Government for such purpose of its programme of conducting surveys by aircraft or by ships indicating inter alia the name of the survey to be conducted approximate extent of the area to be covered the duration of the survey the commencement date and the name of the airport or port from which the survey aircraft or ship will commence its voyage. The Government or the authority designated by the Government for such purpose shall have the right to inspect any aircraft or ship used by the Contractor or a Subcontractor carrying out any survey or other operations in the Contract Area and shall have the right to put on board such aircraft or ship Government officers in such number as may reasonably be necessary to ensure compliance by the Contractor or the Subcontractor with the security requirements of India. 79 27.1 27.2 27.3 27.4 27.5 27.6 27.7

ARTICLE 27 TITLE TO PETROLEUM DATA AND ASSETS The Government is the sole owner of Petroleum underlying the Contract Area and shall remain the sole owner of Petroleum produced pursuant to the provisions of this Contract except as regards that part of Crude Oil Condensate or Gas the title whereof has passed to the Contractor or any other person in accordance with the provisions of this Contract. Title to Petroleum to which the Contractor is entitled under this Contract and title to Petroleum sold by the Companies shall pass to the relevant buyer party at the Delivery Point. The Contractor shall be responsible for all costs and risks prior to and including at the Delivery Point and each buyer party shall be responsible for all costs and risks associated with such buyer partys share after the Delivery Point. Title to all Data specified in Article 26 shall be vested in the Government and the Contractor shall have the right to use thereof as therein provided. Assets purchased by the Contractor for use in Petroleum Operations shall be owned by the Parties comprising the Contractor in proportion to their Participating Interest provided that the Government shall have the right to require vesting of full title and ownership in it free of charge and encumbrances of any or all assets whether fixed or movable acquired and owned by the Contractor for use in Petroleum Operations inside or outside the Contract Area such right to be exercisable at the Governments option upon expiry or earlier termination of the Contract. The Contractor shall be responsible for proper maintenance insurance and safety of all assets acquired for Petroleum

Operations and for keeping them in good repair order and working condition at all times and the costs thereof shall be recoverable as Contract Costs in accordance with AppendixC. So long as this Contract remains in force subject to Article 27.5 the Contractor shall free of any charge for the purpose of carrying out Petroleum Operations hereunder have the exclusive use of assets which have become the property of Government. Equipment and assets no longer required for Petroleum Operations during the term of the Contract shall be sold exchanged or otherwise disposed of by the Contractor provided however that the proceeds of sale shall be credited to Petroleum Operations as provided in Appendix C provided that prior written consent of the Management Committee shall be obtained for each transaction in excess of US 50000 Fifty thousand United States Dollars or such other value 80 as may be agreed from time to time by the Management Committee. The consent of the Management Committee shall not be unreasonably withheld. 81

ARTICLE 28 ASSIGNMENT OF PARTICIPATING INTEREST

28.1 Subject to the terms of this Article and other terms of this Contract any Party comprising the Contractor may assign or transfer a part or all of its Participating Interest with the prior written consent of the Government which consent shall not be unreasonably withheld provided that the Government is satisfied that a b c d the prospective assignee or transferee is of good standing has the capacity and ability to meet its obligations hereunder and is willing to provide an unconditional undertaking to the Government to assume its Participating Interest share of obligations and to provide guarantees in respect thereof as provided in the Contract; the prospective assignee or transferee is not a company incorporated in a country with which the Government for policy reasons has restricted trade or business; the prospective assignor or transferee respectively are willing to comply with any reasonable conditions of the Government as may be necessary in the circumstances with a view to ensuring performance under the Contract; and the assignment or transfer will not adversely affect the performance or obligations under this Contract or be contrary to the interests of India. transferor and assignee or

28.1.1 Subject to Article 28.7 nothing in this Article 28 shall prevent a Party comprising the Contractor from assigning or transferring a part or all of its Participating Interest to an Affiliate with the approval of the

Management Committee provided that; a b c d the assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided at AppendixG; the assignee provides a parent financial and performance guarantee issued by the guarantor which furnished the guarantee pursuant to Article 29 in respect of the assignor Partys obligations under this Contract in favour of the Government of the performance of such Affiliate assignee of its obligations under this Contract; the prospective Affiliate is not a company incorporated in a country with which the Government for policy reason has restricted trade or business; and the assignment will not adversely affect the performance or obligations under this Contract or be contrary to the interest of India. 82 28.2 In case of any change in the status of a Company or its shareholding resulting in a change in a b the control of the Company; or its relationship with the companies providing the guarantee under Article 29.1 a and 29.1 b; the Company shall seek the consent of the Government for assigning the Participating Interest under the changed circumstances and the provisions of this Article 28 shall apply mutatis mutandis to be obtaining of such consent. For the purpose of this Article 28.2 control has the same meaning as in Article 1.3. 28.3 An application for consent to assign or transfer shall be accompanied by all relevant information concerning the proposed assignment or transfer including detailed information on the proposed assignee or transferee and its shareholding and corporate structure as was earlier required from the Companies constituting the Contractor the terms of the proposed assignment or transfer and the unconditional undertaking referred to in Article. 28.4 28.5 28.6 28.7 The applicant shall also submit such information relating to the prospective assignee or transferee of the assignment or transfer as the Government may reasonably require to enable proper consideration and disposal of the application. No assignment or transfer shall be effective until the approval of the Government is received or deemed to have been received. Approval may be given by the Government on such terms and conditions as it may deem fit. Provided that such terms and conditions may not increase the obligations of the Parties comprising the Contractor. Upon assignment or transfer of its interest in

this Contract the assignor or transferor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee or transferee with the approval of the Government. In the event that the Government does not give its consent or does not respond to a request for assignment or transfer by a Party comprising the Contractor within one hundred and twenty 120 days of such request and receipt of all information referred to in Article 28.3 above consent shall be deemed to have been given by the Government. An assignment or transfer shall not be made where the Participating Interest to be retained by the proposed assignor or the percentage interest of assignee shall be less than ten per cent 10 of the total Participating Interest of all the constituents of the recommendations of the Management Committee may in special circumstances so permit. the Contractor except where the Government on 83 28.8 Nothing contained in this Article 28 shall prevent a Party comprising the Contractor from mortgaging pledging charging or otherwise encumbering at its own risk and cost all or part of its Participating Interest for the purposes of security relating to finance to the extent required for performing its obligation under the Contract provided that i ii iii iv v vi the avoidance of doubt such Party shall remain solely liable for all its obligations relating to its Participating Interest to the exclusion of the other participants thereto; the encumbrance shall be expressly subordinated to the rights of the other Parties under this Contract. The obligations occurring from the said encumbrance shall be the sole responsibility of the original Party and shall in no manner compromise the rights of other Parties to the Contract; such Party has given reasonable notice of such encumbrance and furnishes to all other Parties including for the Government a certified copy of the executed instruments evidencing the encumbrances; keeping in view the national interest of India prior consent of the Government shall be required which consent shall not be unreasonably withheld of the list of potential lenders with whom such Party can consider hypothecation; the Party creating the charge shall ensure that such charge shall not in any way affect the interest of other Parties or result in interference with joint operations. In the event of any claims or liabilities imposed on other Parties because of the creation of such charges the Party having created charge on its Participating Interest shall indemnify the other Parties; and in

case of foreclosure or default by a borrowing Party the mortgagee shall not be deemed to have acquired a right to carry on either by itself or through an agent the Petroleum Operation without the written consent of the Government of India. The Parties acknowledge that to obtain financing a Party Borrower will be required to secure for a permitted chargee the right to receive a copy of any notice served on the Borrower and the Parties agree that they shall serve a copy of any such notice on any such permitted chargee in accordance with the provisions of Article 37 at the same time as such notice is served on the Borrower. For the purposes of Article 37 the address for service of notices of the permitted chargee shall be that specified in the instrument or instruments referred to in Article 28.8iii. In case lender elects to participate directly or through a company other than the Borrower under the financing arrangement referred to above the same shall be subject to the rights of Government as contained in Article 28.1 of Contract and the preemptive rights of the Parties as may be contained in Operating Agreement. Any Party which wishes to exercise the said preemptive rights will explicitly assume the obligation on the same terms and conditions as the Borrower. 84

28.8.1 28.8.2 ARTICLE 29 GUARANTEES 29.1 Subject to Article 29.1 d each of the Companies constituting the Contractor shall procure and deliver to the Government within thirty 30 days from the Effective Date of this Contract a b c an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided at AppendixG; financial and performance guarantee in favour of the Government from a parent company acceptable to the Government in the form and substance set out in AppendixE1 or where there is no such parent company the financial and performance guarantee from the Company itself in the form and substance setout in AppendixE2; a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the aforesaid guarantees have been duly signed and delivered on behalf of the guarantors with due authority and is legally valid and enforceable and binding upon them; d Government Companies as defined in the Companies Act and Companies having a net worth of US one 1 billion or more as per the latest audited account shall not be required to furnish bank

guarantee towards its Minimum Work Programme as specified in Article 5 of this Contract; Note This provision shall be applicable for deep water contracts. OR d Government Companies as defined in the Companies Act and Companies having a net worth of US Five Hundred 500 million or more as per the latest audited account shall not be required to furnish bank guarantee towards its Minimum Work Programme as specified in Article 5 of this Contract. Note This provision shall be applicable for onland and shallow water block contracts. 29.2 The amount of the guarantee referred to in Article 29.1 a above shall be an amount equal to thirty five percent 35 of the Companys Participating Interest share of the total estimated annual expenditure in respect of the Minimum Work Programme to be undertaken by the Contractor in the Contract Area during the relevant Year of a Phase subject to Article 29.3. 85 29.3 The guarantee referred to in Article 29.2 shall provide that; 29.4 29.5 29.6 29.7 a b at the end of each Year it shall be automatically renewed for an amount equal to a Companys Participating Interest share of thirty five percent 35 of the total estimated expenditure in respect of the Minimum Work Programme to be undertaken for the following Year of an Exploration Phase unless the Contractor has terminated the Contract in accordance with the terms thereof. The guarantee shall be renewed at the end of each Year positively thirty 30 days before the expiry of the guarantee period. after the completion and due performance of the Minimum Work Programme of a particular Exploration Phase the guarantee will be released in favour of the Company on presentation to the bank of a certificate from the Government that the obligation of the Contractor has been fulfilled and the guarantee may be released subject to Article 29.4. If the Contractor elects to proceed to the second and third Exploration Phase respectively of the Exploration Period a bank guarantee for the succeeding Exploration Phase in terms of Articles 29.1 a 29.2 and 29.3 shall be delivered to the Government with the notice of such election and if such guarantee is not so delivered the provisions of Article 29.5 shall apply. If any of the documents referred to in Article 29.1 is not delivered within the period specified herein this Contract may be terminated by the Government upon ninety 90 days written notice of its intention to do so. Subject to Article 29.7 notwithstanding any change in the composition or shareholding of the parent company furnishing a

performance guarantee as provided herein it shall not under any circumstances be absolved of its obligations contained in the guarantees provided pursuant to Article 29.1b. If a b c d a Party Assignor assigns all or a part of its Participating Interest to a third party Assignee in accordance with Article 28; the Assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for an amount equal to the assignees Participating Interest share of the estimated expenditure of the Minimum Work Programme of the Exploration Phase current at the Effective Date of the assignment; the Assignee provides performance guarantee and legal opinion in terms of this Article; and the addendum to the Contract giving effect to the assignment of Participating Interest is executed by all Parties; 86 then the Government shall release the guarantee given by the assignor under Article 29.1 a to the extent of the amount of the guarantee provided by the assignee and where relevant the guarantee under Article 29.1 b. 87 ARTICLE 30 TERM AND TERMINATION OF THE CONTRACT 30.1 30.2 The term of this Contract shall be for the period of the License and any Lease granted thereunder unless the Contract is terminated earlier in accordance with its terms and shall be deemed to have been terminated if for any reason the Contractor ceases to hold such License or Lease. Subject to the provision of Articles 5 14 and 30.6 and without prejudice to the provisions of Article 30.7 or any other provisions of this Contract the Contractor shall have the right to terminate this Contract a with respect to any part of the Contract Area other than a Development Area then producing or that prior thereto had produced Petroleum upon giving ninety 90 days written notice of its intention to do so; and b with respect to any Development Area in which Petroleum is being produced or that prior thereto had produced Petroleum upon giving at least one hundred and eighty 180 days written notice of its intention to do so. 30.3 This Contract may subject to the provisions herein below and Article 31 be terminated by the Government upon giving ninety 90 days written notice to the other Parties of its intention to do so in the following circumstances namely that the Contractor or a Party comprising the Contractor the Defaulting Party a b c d has knowingly submitted any false statement to the Government in any manner which was a material consideration

in the execution of this Contract; or has intentionally and knowingly extracted or authorised the extraction of hydrocarbon not authorized to be extracted by the Contract or without the authority of the Government except such extractions as may be unavoidable as a result of operations conducted hereunder in accordance with generally accepted modern oilfield and petroleum industry practices which when so extracted were immediately notified to the Government or is adjudged bankrupt by a competent court or enters into or scheme of composition with its creditors or takes advantage of any law for the benefit of debtors; or has passed a resolution to apply to a competent court for liquidation of the Company unless the liquidation is for the purpose of amalgamation or reconstruction of which the Government has been given notice and the Government is satisfied that the Companys performance under this 88 Contract would not be adversely affected thereby and has given its approval thereto; or has assigned any interest in the Contract without the prior consent of the Government as provided in Article 28; or has failed to make any monetary payment required by law or under this Contract by the due date or within such further period after the due date as may thereafter be specified by the Government; or has failed to comply with or has contravened the provisions of this Contract in a material particular; or has failed to comply with any final determination or award made by a sole expert or arbitrators subject to Article 33; or has failed to carry out or observe any of the terms and conditions of the License or Lease or the provisions of the Acts or Rules in force thereunder subject however to Article 31. on notice of termination as provided in Article 29.5. e f g h i j PROVIDED THAT where the Contractor comprises two or more Parties the Government shall not exercise its rights of termination pursuant to Article 30.3 on the occurrence in relation to one or more but not all of the Parties comprising the Contractor of an event entitling the Government to terminate the Contract a b if any other Party or Parties constituting the Contractor the nonDefaulting Party or Parties satisfies the Government that it or they isare willing and would be able to carry out the obligations of the Contractor. where the non Defaulting Party or Parties with the consent of the Government hashave acquired the Participating Interest of the Defaulting Party pursuant to the provisions of the Operating Agreement and hashave procured and delivered to the

Government a guarantee or guarantees as referred to in Article 29.1 in respect of the Participating Interest of the Defaulting Party acquired by the non Defaulting Party or Parties. This Contract may also be terminated by the Government on giving the requisite notice specified above if the events specified in Article 30.3 c and d occur with respect to a company which has given a performance guarantee pursuant to Article 29 subject however to Article 30.5. If the circumstance or circumstances that give rise to the right of termination under Article 30.3f or g or i or Article 30.4 are remedied whether by the Defaulting Company or by another Party or Parties in its behalf within the ninety 90 day period or such extended period as may be granted by the Government following the notice of the Governments intention to terminate the Contract as aforesaid such termination shall not become effective. 89 30.4 30.5 30.6 On termination of this Contract for any reason whatsoever the rights and obligations of the Contractor shall cease but such termination shall not affect any rights of any Party which may have accrued or any obligations undertaken or incurred including obligations under Article 5.7 by the Contractor or any Party comprising the Contractor and not discharged prior to the date of termination. 30.7 In the event of termination pursuant to Articles 30.2 30.3 or 30.4 a b the Government may require the Contractor for a period not exceeding one eighty 180 days from the date of termination to continue for the account and at the cost of the Government Crude Oil or Natural Gas production activities until the right to continue such production has been transferred to another entity; a Foreign Company which is a constituent of the Contractor shall have to remove and export all its property subject to Article 27 and the provisions hereof provided that in the event that ownership of any property is in doubt or disputed such property shall not be exported unless and until the doubt or dispute has been settled in favour of the Foreign Company. 30.8 Within ninety 90 days after the termination of this Contract pursuant to Article 30.2 30.3 or 30.4 or such longer period as the Government may agree the Contractor shall comply with Article 14.9 and any reasonably necessary action as directed by the Government to avoid Environmental Damage or hazards to human life or to the property of others. 90 ARTICLE 31 FORCE MAJEURE 31.1 31.2 31.3 31.4 Any nonperformance or delay in performance by any Party hereto of any of its obligations

under this Contract or in fulfilling any condition of any License or Lease granted to such Party or in meeting any requirement of the Act the Rules or any License or Lease shall except for the payment of monies due under this Contract or under the Act and the Rules or any law be excused if and to the extent that such nonperformance or delay in performance under this Contract is caused by Force Majeure as defined in this Article. For the purpose of this Contract the term Force Majeure means any cause or event other than the unavailability of funds whether similar to or different from those enumerated herein the reasonable control of and unanticipated or unforeseeable by and not brought about at the instance of the Party claiming to be affected by such event or which if anticipated or foreseeable could not be avoided or provided for and which has caused the nonperformance or delay in performance. Without limitation to the generality of the foregoing the term Force Majeure shall include natural phenomena or calamities earthquakes typhoons fires wars declared or undeclared hostilities invasions blockades riots strikes insurrection and civil disturbances but shall not include the unavailability of funds. Where a Party is claiming suspension of its obligations on account of Force Majeure it shall promptly but in no case later than seven (7) days after the occurrence of the event of Force Majeure notify the Management Committee in writing giving full particulars of the Force Majeure the estimated duration thereof the obligations affected and the reasons for its suspension. A Party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the effects thereof on the performance of its obligations under this Contract. The Party affected shall promptly notify the Management Committee as soon as the Force Majeure event has been removed and no longer prevents it from complying with the obligations which have been suspended and shall thereafter resume compliance with such obligations as soon as possible. 31.5 The Party asserting the claim of Force Majeure shall have the burden of proving that the circumstances constitute valid grounds of Force Majeure under this Article and that such Party has exercised reasonable diligence and efforts to remedy the cause of any alleged Force Majeure. 91 31.6 31.7 Where a Party is prevented from exercising any rights or performing any obligations under this Contract due to Force

Majeure the time for the performance of the obligations affected thereby and for performance of any obligation or the exercise of any right dependent thereon and the term of any Exploration Phase of the Exploration Period or this Contract may be extended to the extent of Force Majeure period or by such period as may be agreed by the Management Committee. Notwithstanding anything contained herein above if an event of Force Majeure occurs and is likely to continue for a period in excess of thirty 30 days the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be taken to mitigate the effects thereof or to be adopted in the circumstances. 92

ARTICLE 32 APPLICABLE LAW AND LANGUAGE OF THE CONTRACT 32.1 32.2 32.3

This Contract shall be governed and interpreted in accordance with the laws of India. Nothing in this Contract shall entitle the Contractor to exercise the rights privileges and powers conferred upon it by this Contract in a manner which will contravene the laws of India. The English language shall be the language of this Contract and shall be used in arbitral proceedings. All communications hearing or visual materials or documents relating to this Contract shall be written or prepared in English. 32.4 The laws will also include amendments revisions modifications etc. 93 33.1 33.2 33.3 33.4 33.5

ARTICLE 33 SOLE EXPERT CONCILIATION AND ARBITRATION

The Parties shall use their best efforts to settle amicably all disputes differences or claims arising out of or in connection with any of the terms and conditions of this Contract or concerning the interpretation or performance thereof. Matters which by the terms of this Contract the Parties have agreed to refer to a sole expert and any other matter which the Parties may agree to so refer may be referred to a sole expert who shall be an independent and impartial person of international standing with relevant qualifications and experience appointed by agreement between the Parties and who shall not by virtue of nationality personal connection or commercial interest have a conflict between hisher own interest and hisher duty as a sole expert. In the event that the Parties fail or are unable to agree on a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the sole expert shall be appointed by a body or an institution or an agency or a person mutually agreed by Parties. In case there is no agreement on the body or an institution or an agency or a person for appointing sole

expert or such institution or agency or body fails to appoint a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the matter shall be referred to arbitration. Any sole expert appointed shall be acting as an expert and not as an arbitrator and the decision of the sole expert on matters referred to him/her shall be final and binding on the Parties and shall not be subject to arbitration. Subject to the provisions of this Contract the Parties hereby agree that any controversy difference disagreement or claim for damages compensation or otherwise hereinafter in this Clause referred to as a dispute arising between the Parties which cannot be settled amicably within ninety 90 days after the dispute arises may except for those referred to in Article 33.2 which may be referred to a sole expert be submitted to conciliation or an arbitral tribunal for final decision as hereinafter provided. The arbitral tribunal shall consist of three arbitrators. Each Party to the dispute shall appoint one arbitrator and the Party or Parties shall so advise the other Parties. The two arbitrators appointed by the Parties shall appoint the third arbitrator. Any Party may after appointing an arbitrator request the other Parties in writing to appoint the second arbitrator. If such other Party fails to appoint an arbitrator within thirty 30 days of receipt of the written request to do so such arbitrator may at the request of the first Party be appointed in accordance with Arbitration and Conciliation Act 1996. 94 33.6 33.7 33.8 33.9 33.10 33.11 33.12 33.13 33.14 If the two arbitrators appointed by or on behalf of the Parties fail to agree on the appointment of the third arbitrator within thirty 30 days of the appointment of the second arbitrator and if the Parties do not otherwise agree at the request of either Party the third arbitrator shall be appointed in accordance with Arbitration and Conciliation Act 1996. If any of the arbitrators fails or is unable to act his successor shall be appointed by the Party or person who originally appointed such in the manner set out in this Article as if he was the first appointment. The decision of the arbitral tribunal shall be pronounced within four 4 months unless otherwise extended by the Parties and in case of difference among the arbitrators the decision of the majority shall be final and binding on the Parties. The arbitration agreement contained in this Article 33 shall be governed by the Arbitration and Conciliation Act 1996 Arbitration Act. Arbitration proceedings shall be conducted in accordance with the rules for

arbitration provided in Arbitration Act. The right to arbitrate disputes under this Contract shall survive expiry or the termination of this Contract. Prior to submitting a dispute to arbitration the Parties may by mutual agreement submit the matter for conciliation in accordance with Part III of the Arbitration and Conciliation Act 1996. No arbitration proceedings shall be instituted while conciliation proceedings are pending provided that a Party may initiate arbitration proceedings in the event that dispute has not been resolved by conciliation within sixty 60 days of the date of agreement by the Parties to submit such dispute to conciliation. The venue of the sole expert conciliation or arbitration proceedings pursuant to this Article unless the Parties agree otherwise shall be New Delhi India and shall be conducted in the English language. Insofar as practicable the Parties shall continue to implement the terms of this Contract notwithstanding the initiation of proceedings before a sole expert conciliator or arbitral tribunal and any pending claim or dispute. The fees and expenses of a sole expert or conciliator appointed by the Parties shall be borne equally by the Parties. The cost and expenses of arbitrator appointed by a Party in accordance with the provision of this Article shall be borne by the respective Party and the cost and expenses of third arbitrator and other incidental expenditure in relation to arbitration and liability thereof shall be at the discretion of the arbitrators. Notwithstanding anything contrary contained herein above in the event of dispute among Government Companies and with the Government such disputes shall be settled in accordance with guidelines issued on the subject by Government from time to time.

95 ARTICLE 34 CHANGE OF STATUS OF COMPANIES 34.1 The Parties comprising the Contractor shall notify the Government of any change in the management or control of a Companies or the relationship with any guarantor of the Companies.

96 ENTIRE AGREEMENT AMENDMENTS WAIVER AND MISCELLANEOUS ARTICLE 35 35.1 This Contract supersedes and replaces any previous agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the execution date of this Contract. 35.2 35.3 35.4 35.5 This Contract shall not be amended modified varied or supplemented in any respect except by an instrument in writing signed by all the Parties which shall state the date upon which the amendment or modification shall become

effective. No waiver by any Party of any one or more obligations or defaults by any other Party in the performance of this Contract shall operate or be construed as a waiver of any other obligations or defaults whether of a like or of a different character. The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest. In the event of any conflict between any provisions in the main body of this Contract and any provision in the Appendices the provision in the main body shall prevail. 35.6 The headings of this Contract are for convenience of reference only and shall not be taken into account in interpreting the terms of this Contract. 35.7 35.8 Reference to any law or regulation having the force of law includes a reference to that law or regulation as from time to time may be amended extended or reenacted. A reference in this Contract to the word including shall also mean including but not limited to. 97

ARTICLE 36 CERTIFICATES 36.1 A Company shall furnish prior to execution of this Contract a duly authorised copy of a resolution properly and legally passed by the Board of Directors of the Company authorising its President or any VicePresident or any other representative to execute this Contract along with a certificate duly signed by the Secretary or an Assistant Secretary of the Company under its seal in this regard and to the effect that the Company has the power and authority to enter into this Contract and to perform its obligations thereunder and has taken all necessary action to authorise the execution delivery and performance of the Contract. 98 ARTICLE

37 NOTICES 37.1 All notices statements and other communications to be given submitted or made hereunder by any Party to another shall be sufficiently given if given in writing in English language and sent by registered post postage paid or by telegram telex facsimile radio or cable to the address or addresses of the other Party or Parties as follows a If to the Government Secretary to the Government of India Ministry of Petroleum and Natural Gas Shastri Bhavan Dr. Rajendra Prasad Marg New Delhi 110001 INDIA Facsimile No. 91 11 3383585 b XYZ Company Facsimile No. Telephone No. 37.2 Notices when given in terms of Article 37.1 shall be effective when delivered if offered at the address of the other Parties as under Article 37.1 during business hours on working days and if received outside business hours on the next following working day. 37.3 Any Party may

by reasonable notice as provided hereunder to the other Parties change its address and other particulars for notice purpose. 99 IN WITNESS WHEREOF the representatives of the Parties to this Contract being duly authorised have hereunto set their hands and have executed these presents this day of . Signed for and on behalf of the President of India Signed for and on behalf of XYZ Company Signed for and on behalf of XYZ Company By In presence of By In presence of By In presence of 100 APPENDIX A DESCRIPTION OF THE CONTRACT AREA The area comprising approximately Sq. Km. Onshore/offshore India identified as Block described herein and shown on the map attached as Appendix B. Longitude and Latitude measurements commencing at points A B C and D are given below 101 APPENDIX B MAP OF THE CONTRACT AREA 102 APPENDIX C ACCOUNTING PROCEDURE TO THE CONTRACT BETWEEN THE GOVERNMENT OF INDIA AND XYZ COMPANIES WITH RESPECT TO CONTRACT AREA IDENTIFIED AS BLOCK 103

Sections Section 1 General Provisions 1.1 Purpose 1.2 Definitions 1.3 Inconsistency 1.4 Documentation and Statements to be submitted by the Contractor 1.5 Language and units of account 1.6 Currency exchange rates 1.7 Payments 1.8 Arms length transactions 1.9 Audit and inspection rights of the Government 1.10 Revision of Accounting Procedure Section 2 Classification Definition and Allocation of Costs and Expenditures 2.1 Segregation of Costs 2.2 Exploration Costs 2.3 Development Costs 2.4 Production Costs 2.5 Service Costs 2.6 General and Administrative Costs Section 3 Costs Expenses Expenditures and Inental Income of the Contractor 3.1 Costs recoverable and allowable without further approval of the Government 3.1.1 Surface Rights 3.1.2 Labour and Associated Labour Costs 3.1.3 Transportation Costs 3.1.4 Charges for Services i Third Parties ii Affiliates of Contractor 3.1.5 Communications 3.1.6 Office Shore Bases and Miscellaneous facilities 3.1.7 Environmental Studies and Protection 3.1.8 Materials and Equipments 104 i ii iii General Warranty Value of Materials charged to the accounts under the Contract 3.1.9 Duties fees and other charges 3.1.10 Insurance and Losses 3.1.11 Legal expenses 3.1.12 Training costs 3.1.13 General and Administrative Costs 3.1.14 Royalty License fee surface rentals etc. 3.2 Costs not recoverable and not allowable under the Contract Other Costs recoverable and allowable only with

Management Committee approval
Intental income and credits
Nonduplication of charges and credits

3.3 3.4 3.5 Section 4 Records and Inventories of Assets 4.1 Records 4.2 Inventories Section 5
Production Statement Section 6 Value of Production and Pricing Statement Section 7 Statement of
Costs Expenditures and Receipts Section 8 Cost Recovery Statement Section 9 Profit Sharing
Statement Section 10 Local Procurement Statement Section 11 End of Year Statement Section 12
Budget Statement

105 ACCOUNTING PROCEDURE SECTION 1 GENERAL PROVISIONS 1.1
Purpose Generally the purpose of this Accounting Procedure is to set out principles and procedures
of accounting which will enable the Government of India to monitor effectively the Contractors costs
expenditures production and income so that the Governments entitlement to Profit Petroleum can be
accurately determined pursuant to the terms of the Contract. More specifically the purpose of the
Accounting Procedure is to classify costs and expenditures and to define which costs and
expenditures shall be allowable for cost recovery and profit sharing and participation purposes;
specify the manner in which the Contractors accounts shall be prepared and approved; and address
numerous other accounting related matters. This Accounting Procedure is intended to apply to the
provisions of the Contract and is without prejudice to the computation of income tax under
applicable provisions of the IncomeTax Act 1961 as amended.

1.2 Definitions For purposes of this
Accounting Procedure the terms used herein which are defined in the Contract shall have the same
meaning when used in this Accounting Procedure.

1.3 Inconsistency In the event of any
inconsistency or conflict between the provisions of this Accounting Procedure and the other
provisions of the Contract the other provisions of the Contract shall prevail.

1.4 Documentation and
Statements to be submitted by the Contractor

1.4.1 Within ninety 90 days of the Effective Date of
the Contract the Contractor shall submit to and discuss with the Government a proposed outline of
charts of accounts operating records and reports which outline shall reflect each of the categories
and subcategories of costs and income specified in Sections 2 and 3 106 and shall be in
accordance with generally accepted standards and recognized accounting systems and consistent
with normal petroleum industry practice and procedures for joint venture operations. Within ninety 90

days of receiving the above submission the Government shall either provide written notification of its approval of the proposal or request in writing revisions to the proposal. Within one hundred and eighty 180 days from the Effective Date of the Contract the Contractor and the Government shall agree on the outline of charts of accounts records and reports which shall also describe the basis of the accounting system and procedures to be developed and used under this Contract. Following such agreement the Contractor shall expeditiously prepare and provide the Government with formal copies of the comprehensive charts of accounts records and reports and allow the Government to examine the manuals and to review procedures which are and shall be observed under the Contract.

1.4.2 Notwithstanding the generality of the foregoing the Contractor shall make regular Statements relating to the Petroleum Operations as follows i ii iii Production Statement see Section 5 of this Accounting Procedure. Value of Production and Pricing Statement see Section 6 of this Accounting Procedure. Statement of Costs Expenditures and Receipts see Section 7 of this Accounting Procedure. iv Cost Recovery Statement see Section 8 of this Accounting Procedure. v vi Profit Sharing Statement see Section 9 of this Accounting Procedure Local Procurement Statement see Section 10 of this Accounting Procedure vii End of Year Statement see Section 11 of this Accounting Procedure. viii Budget Statement see Section 12 of this Accounting Procedure. All reports and Statements shall be prepared in accordance with the Contract and the laws of India and where there are no relevant provisions in either of these in accordance with generally accepted practices in the international petroleum industry. Each of the entities constituting the Contractor shall be responsible for maintaining its own accounting records in order to comply with all legal requirements and to support all returns or any other accounting reports required by any Government authority in relation to the Petroleum Operations. However for the purposes of giving effect to this Accounting Procedure the Party constituting the Contractor who is the Operator shall be responsible for maintaining at its business office in India on behalf of the Contractor all the

1.4.3 1.4.4 107 accounts of the Petroleum Operations in accordance with the provisions of the Accounting Procedure and the Contract.

1.5 Language and Units of Account 1.6 1.6.1 All accounts records

books reports and Statements shall be maintained and prepared in the English language using mercantile basis of accounting. The accounts shall be maintained in United States Dollars which shall be the controlling currency of account for cost recovery and profit sharing purposes. Metric units and Barrels shall be employed for measurements required under the Contract. Where necessary for clarification the Contractor may also maintain accounts and records in other languages currencies and units. Currency Exchange Rates For conversion purposes between United States Dollars and Indian Rupees or any other currency the monthly average of the daily mean of the buying and selling rates of exchange as quoted by the State Bank of India or any other financial body as may be mutually agreed by the Parties for the Month in which the revenues costs expenditures receipts or income are recorded shall be used. However in the case of any single nonUS Dollar transaction in excess of the equivalent of fifty thousand 50000 US Dollars the conversion into US Dollars shall be performed on the basis of the average of the applicable exchange rates for the day on which the transaction occurred. 1.6.2 Any realized or unrealized gains or losses from the exchange of currency in respect of Petroleum Operations shall be credited or charged to the accounts. A record of the exchange rates used in converting Indian Rupees or any other currencies into United States Dollars as specified in Section 1.6.1 shall be maintained by the Contractor and shall be identified in the relevant Statements required to be submitted by the Contractor in accordance with Section 1.4.2. 1.7 Payments 1.7.1 1.7.2 1.7.3 Subject to Article 20.3 of the Contract and the foreign exchange laws and regulations prevailing from time to time all payments between the Parties shall unless otherwise agreed be in United States Dollars and shall be made through a bank designated by each receiving Party. Unless otherwise specified all sums due under the Contract shall be paid within forty five 45 days from the date on which the obligation to pay was incurred. All sums due by one Party to the other under the Contract during any Month shall for each day such sums are overdue during such Month bear interest compounded daily at the applicable LIBOR plus two 2 percentage points. 108 1.8 Arms Length Transactions 1.9 1.9.1 1.9.2 1.9.3 Unless otherwise specifically provided for in the Contract all transactions giving rise to

revenues costs or expenditures which will be credited or charged to the accounts prepared maintained or submitted hereunder shall be conducted at arms length or on such a basis as will assure that all such revenues costs or expenditures will not be lower or higher as the case may be than would result from a transaction conducted at arms length on a competitive basis with third parties. Audit and Inspection Rights of the Government Without prejudice to statutory rights the Government upon at least twenty 20 Business Days advance written notice to the Contractor shall have the right to inspect and audit during normal business hours all records and documents supporting costs expenditures expenses receipts and income such as the Contractors accounts books records invoices cash vouchers debit notes price lists or similar documentation with respect to the Petroleum Operations conducted hereunder in each Year within two 2 years or such longer period as may be required in exceptional circumstances from the end of such Year. The Government may undertake the conduct of the audit either through its own representatives or through a qualified firm of recognised chartered accountants registered in India or a reputed consulting firm appointed for the purpose by the Government and the costs of audit in case of Government auditors shall be borne by the Government where as for outside auditors this shall be borne by the Contractor as a General and Administrative Cost. In conducting the audit the Government or its auditors shall be entitled to examine and verify at reasonable times all charges and credits relating to the Contractors activities under the Contract and all books of account accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records considered necessary by the Government to audit and verify the charges and credits. The auditors shall also have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the Contractor directly or indirectly serving the Petroleum Operations and to physically examine other property facilities and stocks used in Petroleum Operations wherever located and to question personnel associated with those operations. Where the Government requires verification of charges made by an Affiliate the Government shall have the right to obtain an audit certificate from an

internationally recognized firm of public accountants acceptable to both the Government and the Contractor which may be the Contractors statutory auditor. Submission of the audit certificate shall in no way relieve or diminish the 109 1.9.4 1.9.5 1.9.6 1.9.7 responsibility of the Contractor for the compliance with the obligations under the Contract. Any audit exceptions shall be made by the Government in writing and notified to the Contractor within one hundred and twenty 120 days following completion of the audit in question. The Contractor shall answer any notice of exception under Section 1.9.4 within one hundred and twenty 120 days of the receipt of such notice. Where the Contractor has after the said one hundred and twenty 120 days failed to answer a notice of exception the exception shall prevail and deemed to have been agreed to by the Contractor. All agreed adjustments resulting from an audit and all adjustments required by prevailing exceptions under Section 1.9.5 shall be promptly made in the Contractors accounts and any consequential adjustments to the Governments entitlement to Petroleum shall be made within thirty 30 days therefrom. Notwithstanding any reference to a Sole Expert or Arbitration in accordance with the provisions of the Contract in case any amount is claimed as due to the Government resulting from the audit exception but not accepted or settled by the Contractor then the Contractor shall deposit such claimed amount in a escrow account to be opened with a financial institution failing mutually agreed agreement with State Bank of India within thirty 30 days from the date when the amount is disputed by the Contractor. The amount in escrow account shall be appropriated or adjusted in accordance with the decision or award of the Sole Expert or Arbitral Tribunal as may be or otherwise as mutually agreed to between the Parties. 1.9.8 If the Contractor and the Government are unable to reach final agreement on proposed audit adjustments either Party may refer any dispute thereon to a sole expert as provided for in the Contract. So long as any issues are outstanding with respect to an audit the Contractor shall maintain the relevant documents and permit inspection thereof until the issue is resolved. 1.10 Revision of the Accounting Procedure By mutual agreement between the Government and the Contractor this Accounting Procedure may be revised from time to time in writing signed by the Parties stating the date upon which the amendments shall become effective.

110 SECTION 2 CLASSIFICATION DEFINITION AND ALLOCATION OF COSTS AND

EXPENDITURES 2.1 Segregation of Costs Costs shall be segregated in accordance with the

purposes for which such expenditures are made. All costs and expenditures allowable under Section

3 relating to Petroleum Operations shall be classified defined and allocated as set out below in this

Section. 2.2 Exploration Costs Exploration Costs are all direct and allocated indirect expenditures

incurred in the search for Petroleum in an area which is or was at the time when such costs were

incurred part of the Contract Area including expenditures incurred in respect of 2.2.1 Aerial

geophysical geochemical palaeontological geological topographical and seismic surveys analysis

and studies and their interpretation. 2.2.2 Core hole drilling and water Well drilling. 2.2.3 2.2.4 2.2.5

2.2.6 2.2.7 Labour materials supplies and services used in drilling Wells with the object of finding

Petroleum or in drilling Appraisal Wells provided that if such Wells are completed as producing Wells

or injection Well for enhancing Oil recovery the costs of completion thereof shall be classified as

Development Costs. Facilities used solely in support of the purposes described in Sections 2.2.1

2.2.2 and 2.2.3 above including access roads all separately identified. Any Service Costs and

General and Administrative Costs directly incurred on exploration activities and identifiable as such

and a portion of the remaining Service Costs and General and Administrative Costs allocated to

Exploration Operations determined by the proportionate share of total Contract Costs excluding

General and Administrative Costs and Service Costs represented by all other Exploration Costs.

Geological and geophysical information purchased or acquired in connection with Exploration

Operations. Any other expenditures incurred in the search for Petroleum not covered under Sections

2.3 or 2.4. 111 2.3 Development Costs 2.3.1 2.3.2 2.3.3 2.3.4 Development Costs are all direct and

allocated indirect expenditures incurred with respect to the development of discoveries within the

Contract Area including expenditures incurred on account of Geological and Geophysical

Development Operations. information acquired in connection with Drilling Development Wells

whether these Wells are dry or producing and drilling Wells for the injection of water or Gas to

enhance recovery of Petroleum. Completing of Exploration Wells by way of installation of casing or

equipment or otherwise or for the purpose of bringing a Well into use as a producing Well or as a Well for the injection of water or Gas to enhance recovery of Petroleum. Purchase installation or construction of production transport and storage facilities for production of Petroleum such as pipelines flow lines production and treatment units wellhead equipment subsurface equipment enhanced recovery systems offshore and onshore platforms export terminals and piers harbours and related facilities and access roads for production activities.

2.3.5 Engineering and design studies for facilities referred to in Section 2.3.3.

2.3.6 Any Service Costs and General and Administrative Costs directly incurred in Development Operations and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to development activities determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Development Costs.

2.4 Production Costs Production Costs are expenditures incurred on Production Operations after the start of production from the Field which are other than Exploration and Development Costs. The balance of General and Administrative Costs and Service Costs not allocated to Exploration Costs or Development Costs shall be allocated to Production Costs.

2.5 Service Costs Service Costs are direct and indirect expenditures incurred in support of Petroleum Operations including expenditures on the Contract Area warehouses piers marine vessels vehicles motorized rolling equipment aircraft fire and security stations workshops water and sewerage plants power plants housing community and recreational facilities and furniture and tools and in 112 equipment used in these activities. Service Costs in any Year shall include the costs incurred in such Year to purchase and/or construct the said facilities as well as the annual costs of maintaining and operating the same each to be identified separately. All Service Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.5 and 2.4 to Exploration Costs Development Costs and Production Costs and shall be separately shown under each of these categories. Where Service Costs are made in respect of shared facilities the basis of allocation of costs to Petroleum Operations hereunder shall be specified.

2.6 General and Administrative Costs

2.6.1 2.6.2 incurred on general General and

Administrative Costs are expenditures administration and management primarily and principally related to Petroleum Operations in or in connection with the Contract Area and shall include main office field office and general administrative expenditures in India including supervisory accounting and employee relations services; an annual overhead charge for services rendered by the parent company or an Affiliate to support and manage Petroleum Operations under the Contract and for staff advice and assistance including financial legal accounting and employee relations services but excluding any remuneration for services charged separately under this Accounting Procedure provided that i for the period from the Effective Date until the date on which the first Development Plan under the Contract is approved by the Government this annual charge shall be the Contractors verifiable expenditure but shall in no event be greater than the following percentages of the total Contract Costs incurred during the Contract Year in or in connection with the Contract Area and qualifying for recovery pursuant to Section 3 Contract costs in any Contract year in million US

Annual overhead charge	Over 25	Over 5	3 US 60000	2 of Contract Costs in excess of US 2 million.	US 120000	1 of Contract Costs in excess of US 5 million
02	Over 25	Over 5	3	US 60000	2	of Contract Costs in excess of US 2 million.
US 120000	1	of Contract Costs in excess of US 5 million	ii	from the date on which the first Development Plan is approved	the charge shall be at an amount or rate to be agreed on between the Parties and stated in the Development Plan.	2.6.3 All General and Administrative Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.5 and 2.4 to Exploration Costs Development Costs and Production Costs respectively and shall be separately shown under each of these cost categories.

113 SECTION 3 COSTS EXPENSES EXPENDITURES AND INCIDENTAL INCOME OF THE CONTRACTOR

3.1 Costs Recoverable and Allowable Without Further Approval of the Government Costs incurred by the Contractor on Petroleum Operations as per reviewed or approved Work Programme and Budget by the Management Committee as the case may be pursuant to the Contract as classified under the headings referred to in Section 2 shall be allowable for the purposes of the Contract except to the extent provided in Section 3.2 or elsewhere in this Accounting Procedure and subject to audit as referred to in Articles 25.4.1 to 25.4.4 and Article 25.5 as provided for herein. Further the reviewedapproved Work Programme and Budget as the case

may be or reappropriation of costs shall be submitted to the Management Committee for reviewapproval as the case may be within thirty 30 days from end of the relevant Financial Year and subject to the audit and other provisions of the Contract such costs shall be allowable for the purposes of the Contract. in case of variation in costs over 3.1.1 Surface Rights All direct costs necessary for the acquisition renewal or relinquishment of surface rights acquired and maintained in force for the purposes of the Contract except as provided in Section 3.1.9. 3.1.2 Labour and Associated Labour Costs a Contractors locally recruited employees based in India Costs of all the Contractors locally recruited employees who are directly engaged in the conduct of Petroleum Operations under the Contract in India. Such costs shall include the costs of employee benefits and Government benefits for employees and levies imposed on the Contractor as an employer transportation and relocation costs within India of the employee and such members of the employees family as per the personnel policy of the employer as required by law or customary practice in India. If such employees are engaged in other activities in India in addition to Petroleum Operations the cost of such employees shall be apportioned on a time sheet basis according to sound and acceptable accounting principles. b Assigned Personnel 114 Costs of salaries and wages including bonuses of the Contractors employees directly and necessarily engaged in the conduct of the Petroleum Operations under the Contract whether temporarily or permanently assigned irrespective of the location of such employees it being understood that in the case of those personnel only a portion of whose time is wholly dedicated to Petroleum Operations under the Contract only that pro rata portion of applicable salaries wages and other costs as specified in Sections 3.1.2c d e f and g shall be charged and the basis of such pro rata allocation shall be specified. The Contractors costs regarding holiday vacation sickness and disability benefits and living and housing and other customary allowances applicable to the salaries and wages chargeable under Section 3.1.2b above. Expenses or contributions made pursuant to assessments or obligations imposed under the laws of India which are applicable to the Contractors cost of salaries and wages chargeable under Section 3.1.2b above. The Contractors cost of established plans for

employees group life insurance hospitalization pension retirement and other benefit plans of a like nature customarily granted to the Contractors employees provided however that such costs are in accordance with generally accepted standards in the international petroleum industry applicable to salaries and wages chargeable to Petroleum Operations under Section 3.1.2b above. Personal income taxes where and when they are paid by the Contractor to the Government of India for the employee in accordance with the Contractors standard personnel policies. c d e f g Reasonable transportation and travel expenses of employees of the Contractor including those made for travel and relocation of the expatriate employees including their dependent family and personal effects assigned to India whose salaries and wages are chargeable to Petroleum Operations under Section 3.1.2b above. Transportation cost as used in this Section shall mean the cost of freight and passenger service and any accountable inental expenditures related to transfer travel and authorized under the Contractors standard personnel policies. The Contractor shall ensure that all expenditures related to transportation costs are equitably allocated to the activities which have benefited from the personnel concerned. 3.1.3 Transportation Costs The reasonable cost of transportation of equipment materials and supplies within India and from outside India to India necessary for the conduct of Petroleum Operations under the Contract including directly related costs such as unloading charges dock fees and inland and ocean freight charges. 115 3.1.4 Charges for Services i Third Parties The actual costs of contract services services of professional consultants utilities and other services necessary for the conduct of Petroleum Operations under the Contract performed by third parties other than an Affiliate of the Contractor provided that the transactions resulting in such costs are undertaken pursuant to Section 1.8 of this Accounting Procedure. ii Affiliates of Contractor a Professional and Administrative Services and Expenses Cost of professional and administrative services provided by any Affiliate for the direct benefit of Petroleum Operations including but not limited to services provided by the production exploration legal financial insurance accounting and computer services divisions other than those covered by Section 3.1.4 iib which the Contractor may use in lieu of having its own employees. Charges shall be

equal to the actual cost of providing their services shall not include any element of profit and shall not be any higher than the most favourable prices charged by the Affiliate to third parties for comparable services under similar terms and conditions elsewhere and will be fair and reasonable in the light of prevailing modern oilfield and petroleum industry practices.

b Scientific or Technical Personnel Cost of scientific or technical personnel services provided by any Affiliate of the Contractor for the direct benefit of Petroleum Operations which cost shall be charged on a cost of service basis. Charges therefor shall not exceed charges for comparable services currently provided by outside technical service organizations of comparable qualifications. Unless the work to be done by such personnel is covered by an Approved Budget and Work Programme the Contractor shall not authorize work by such personnel without approval of the Management Committee.

c the Equipment facilities and property owned and furnished by Contractors Affiliates at rates commensurate with the cost of ownership and operation provided however that such rates shall not exceed those currently prevailing for the supply of like equipment facilities and property on comparable terms in the area where the Petroleum Operations are being conducted. The equipment and facilities referred to herein shall exclude major investment items such as but not limited to drilling rigs producing platforms oil treating facilities oil and gas loading and transportation systems storage and terminal facilities and other major facilities rates for which shall be subject to separate agreement with the Government.

3.1.5 Communications Cost of acquiring leasing installing operating repairing and maintaining communication systems including radio satellite link and microwave facilities between the Contract Area and the Contractors nearest base facility.

3.1.6 Office Shore Bases and Miscellaneous Facilities Net cost to the Contractor of establishing maintaining and operating any office suboffice shore base facility warehouse housing or other facility directly serving the Petroleum Operations. If any such facility services contract areas other than the Contract Area or any business other than Petroleum Operations the net costs thereof shall be allocated on an equitable and consistent basis.

3.1.7 Environmental Studies and Protection Costs incurred in conducting the environmental impact assessment studies for the Contract Area and in taking environmental

protection measures including abandonment cost or contribution to abandonment funds as may be created for abandonment and Site Restoration pursuant to the terms of the Contract.

3.1.8 Materials and equipment i General So far as is practicable and consistent with efficient and economical operation only such material shall be purchased or furnished by the Contractor for use in the Petroleum Operations as may be required for use in the reasonably foreseeable future and the accumulation of surplus stocks shall be avoided. Material and equipment held in inventory shall only be charged to the accounts when such material is removed from inventory and used in Petroleum Operations. Costs shall be charged to the accounting records and books based on the First in First out method. ii Warranty In the case of defective material or equipment any adjustment received by the Contractor from the suppliers or manufacturers or their agents in respect of any warranty on material or equipment shall be credited to the accounts under the Contract. iii Value of materials charged to the accounts under the Contract 117 a Except as otherwise provided in subparagraph b below materials purchased by the Contractor for use in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts if any purchase and procurement fees plus freight and forwarding charges between point of supply and point of shipment freight to port of destination insurance taxes custom duties consular fees other items chargeable against imported material and where applicable handling and transportation costs from point of importation to warehouse or operating site and these costs shall not exceed those currently prevailing in normal arms length transactions on the open market. b Material purchased from or sold to Affiliates or transferred to or from activities of the Contractor other than Petroleum Operations under the Contract aa bb cc new material hereinafter referred to as condition A shall be valued at the current international price which shall not exceed the price prevailing in normal arms length transactions on the open market; used material which is in sound and serviceable condition and is suitable for reuse without reconditioning hereinafter referred to as condition B shall be priced at not more than seventy five per cent 75 of the current price of the above mentioned new materials; used material which cannot be classified as condition B but which after reconditioning will be further serviceable for

original function as good secondhand condition B material or is serviceable for original function but substantially not suitable for reconditioning hereinafter referred to as condition C shall be priced at not more than fifty per cent 50 of the current price of the new material referred to above as condition A. The cost of reconditioning shall be charged to the reconditioned material provided that the condition C material value plus the cost of reconditioning does not exceed the value of condition B material. Material which cannot be classified as condition B or condition C shall be priced at a value commensurate with its use. Material involving erection expenditure shall be charged at the applicable condition percentage referred to above of the current knockeddown price of new material referred to above as condition A. 118 When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price in relation to materials referred to above as conditions B and C such material shall be priced on a basis that will result in a net charge to the accounts under the Contract consistent with the value of the service rendered. Duties Fees and Other Charges 3.1.9 Any duties levies fees charges and any other assessments levied by any governmental or taxing authority in connection with the Contractors activities under the Contract and paid directly by the Contractor except corporate income tax payable by the constituents of the Contractor. 3.1.10 Insurance and Losses Insurance premia and costs incurred for insurance pursuant to Article 24 of the Contract provided that such insurance is customary affords prudent protection against risk and is at a premium no higher than that charged on a competitive basis by insurance companies which are not Affiliates. Except as provided in Sections 3.2 ix Section 3.2x and Section 3.2xi actual costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs may include but are not limited to repair and replacement of property in the Contract Area resulting from damages or losses incurred by fire flood storm theft acent or such other cause. 3.1.11 Legal Expenses All reasonable costs and expenses except Section 3.2 xi resulting from the handling investigating asserting defending or settling of any claim or legal action necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of

Petroleum Operations under the Contract or sums paid in respect of legal services necessary for the protection of the joint interest of Government and the Contractor shall be allowable. Such expenditures shall include attorneys fees court costs costs of investigation and procurement of evidence and amounts paid in settlement or satisfaction of any such litigation and claims provided such costs are not covered elsewhere in the Accounting Procedure. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliate such compensation shall be included instead under Section 3.1.2 or 3.1.4 ii above as applicable.

3.1.12 Training Costs All costs and expenses incurred by the Contractor in training as is required under Article 22 of the Contract. 119 3.1.13 General and Administrative Costs The costs described

in Section 2.6.1 and the charge described in Section 2.6.2 of this Accounting Procedure. Royalty License fee surface rentals etc. 3.1.14 Royalty License fee surface rentals dead rents and other

levies and taxes paid to the Government of India or State Government or local Government bodies or authority or agency except income tax paid to the Government. Costs not recoverable and not

allowable under the Contract 3.2 The following costs and expenses shall not be recoverable or allowable whether directly as such or indirectly as part of any other charges or expense for cost

recovery and profit sharing purposes under the Contract i ii iii iv v vi costs and charges incurred before the Effective Date including costs in respect of preparation signature or ratification of this

Contract; expenditures in respect of any financial transaction to negotiate float or otherwise obtain or secure funds for Petroleum Operations including but not limited to interest commission brokerage

and fees related to such transactions as well as exchange losses on loans or other financing whether between Affiliates or otherwise; costs of marketing or transportation of Petroleum beyond

the Delivery Point; expenditures incurred in obtaining furnishing and maintaining the guarantees required under the Contract and any other amounts spent on indemnities with regard to

nonfulfillment of contractual obligations; attorneys fees and other costs and charges in connection with arbitration proceedings and sole expert determination pursuant to the Contract; fines interest

and penalties imposed by Courts of law of the Republic of India; donations and contributions; vii viii

expenditures on creation of any partnership or joint venture arrangement; ix x amounts paid with respect to nonfulfillment of contractual obligations; costs incurred as a result of failure to insure where insurance is required pursuant to the Contract or of failure to follow procedures laid down by an insurance policy or where the Contractor has elected to self insure or has underinsured; costs and expenditures incurred as a result of misconduct or negligence of the Contractor; and expenses of the members of the Management Committee as per Article 6.12. xi xii 3.3 Other costs recoverable and allowable only with Management Committee approval 120 Any other costs and expenditures not included in Section 3.1 or 3.2 of this Accounting Procedure but which have been incurred by the Contractor for the necessary and proper conduct of Petroleum Operations shall be allowed to be recovered only with the express prior approval in writing of the Management Committee. 3.4 Inental Income and Credits All inental income and proceeds received from Petroleum Operations under the Contract including but not limited to the items listed below shall be credited to the accounts under the Contract and shall be taken into account for cost recovery and Profit Petroleum sharing purposes in the manner described in Articles 15 and 16 of the Contract i ii The proceeds of any insurance or claim or judicial awards in connection with Petroleum Operations under the Contract or any assets charged to the accounts under the Contract where such operations or assets have been insured and the premia charged to the accounts under the Contract; Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Contract; from the by suppliersmanufacturers or their agents in connection with defective material the cost of which was previously charged by the Contractor to the accounts under the Contract; the Contractor adjustment received iii Any v iv Rentals refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Contract; Prices originally charged to the accounts under the Contract for materials subsequently exported from the Republic of India without being used in Petroleum Operations under the Contract; Proceeds from the sale or exchange by the Contractor of assets plant or facilities the acquisition costs of which have been charged to the accounts under the Contract; vi vii Legal costs charged to

the accounts under Section 3.1.11 of this Accounting Procedure and subsequently recovered by the Contractor. 3.5 NonDuplication of Charges and Credits Notwithstanding any provision to the contrary in this Accounting Procedure it is the objective of the Parties that there shall be no duplication of charges or credits to the accounts under the Contract. 121 SECTION 4 RECORDS AND INVENTORIES OF ASSETS 4.1 4.1.1 Records The Contractor shall keep and maintain detailed records of property and assets in use for or in connection with Petroleum Operations under the Contract in accordance with normal practices in exploration and production activities of the international petroleum industry. Such records shall include information on quantities location and condition of such property and assets and whether such property or assets are leased or owned. 4.2 4.2.1 Inventories The Contractor shall a b not less than once every twelve 12 Months with respect to movable assets; and not less than once every three 3 Years with respect to immovable assets take an inventory of the assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Government together with a written statement of the principles upon which valuation of the assets mentioned in such inventory has been based. The Contractor shall give the Government at least thirty 30 days notice in writing in the manner provided for in the Contract of its intention to take the inventory referred to in Section 4.2.1 and the Government shall have the right to be represented when such inventory is taken. When an assignment of rights under the Contract takes place a special inventory shall be taken by the Contractor at the request of the assignee provided that the cost of such inventory is borne by the assignee and paid to the Contractor. In order to give effect to Article 27 of the Contract the Contractor shall provide the Government with a comprehensive list of all relevant assets when requested by the Government to do so. 4.2.2 4.2.3 4.2.4 122 SECTION 5 PRODUCTION STATEMENT 5.1 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 5.1.6 5.1.7 5.1.8 5.1.9 From the date of first production of Petroleum from the Contract Area the Contractor shall submit a monthly Production Statement to Government showing the following information separately of each producing Field and in aggregate for the Contract Area The quantity of Crude Oil and Condensate produced and saved.

The quality and characteristics of such Crude Oil and Condensate produced and saved. The quantity of Associated Natural Gas and Non Associated Natural Gas produced and saved. The quality characteristics and composition of such Natural Gas produced and saved separately. The quantities of Crude Oil Condensate and Natural Gas used for the purposes of carrying on drilling and production operations and pumping to field storage as well as quantities reinjected. The quantities of Crude Oil Condensate and Natural Gas unavoidably lost. The quantities of Natural Gas flared and vented. The size of Petroleum stocks held on the first day of the Month in question. The size of Petroleum stocks held on the last day of the Month in question. 5.1.10 The quantities of Natural Gas reinjected into the Petroleum Reservoir. 5.1.11 The number of days in the Month during which Petroleum was produced from each Field. 5.1.12 The GasOil ratio for each Reservoir and Field for the relevant Month. 5.1.13 Water production water injection and Reservoir pressure data for each Reservoir and Field. 123 5.2 5.3 5.4 5.5 All quantities shown in this Statement shall be expressed in both volumetric terms barrels of Oil and cubic metres of Gas and in the case of Oil in weight metric tonnes. For the purpose of reporting Field production quantities pursuant to this Section the Contractor shall agree with the Management Committee on the exact area to be designated as Development Area. The Government may direct in writing that the Contractor include other reasonable particulars relating to the production of Petroleum in its monthly Production Statement and the Contractor shall comply with such direction. The Production Statement for each Month shall be submitted to Government no later than fifteen 15 days after the end of such Month. 124 6.1 6.1.1 6.1.2 6.1.3 6.1.4 6.1.5 6.1.6 6.1.7 6.2 SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT The Contractor shall for the purposes of Article 19 of the Contract prepare a Statement providing calculations of the value of Crude Oil and Condensate produced and saved during each Month. This Statement shall contain the following information The quantities prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate to third parties made during the Month in question. The quantities prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate made during the Month in question

other than to third parties if any. The quantities of Crude Oil and Condensate appropriated by the Contractor to refining or other processing without otherwise being disposed of in the form of Crude Oil or Condensate. The value of stocks of Crude Oil and Condensate on the first day of the Month in question. The value of stocks of Crude Oil and Condensate on the last day of the Month in question. The percentage volume of total sales of Crude Oil and Condensate made by the Contractor during the Month that are Arms Length Sales to third parties. Information available to the Contractor insofar as required for the purposes of Article 19 of the Contract concerning the prices of competitive crude oils produced by the main petroleum producing and exporting countries including contract prices discounts and premia and prices obtained on the spot markets. The Contractor shall for the purpose of Article 21 of the Contract prepare a Statement providing calculations of the value of Associated Natural Gas and Non Associated Natural Gas produced flared internally used saved and sold during each Month. This Statement shall contain all information of the type specified in Section 6.1 for Crude Oil as is applicable to Gas and such other relevant information as may be required by Government.

125 6.3 6.4 The Statements required pursuant to Sections 6.1 and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil Condensate Associated Natural Gas and Non Associated Natural Gas pursuant to the provisions of Articles 19 and 21. The Value of Production and Pricing Statement for each Month shall be submitted to Government not later than thirty 30 days after the end of such Month.

126 SECTION 7 STATEMENT OF COSTS EXPENDITURES AND RECEIPTS 7.1 7.1.1 7.1.2 7.1.3 7.1.4 7.2 The Contractor shall prepare with respect to each Quarter a Statement of Costs Expenditures and Receipts under the Contract using mercantile basis of accounting. The Statement shall distinguish between Exploration Costs Development Costs and Production Costs and shall separately identify all significant items of costs and expenditure as itemised in Section 3 of this Accounting Procedure within these categories. The Statement of receipts shall distinguish between income from the sale of Petroleum and inental income of the sort itemised in Section 3.4 of this Accounting Procedure. If the Government is not satisfied with the degree of disaggregation within the categories it shall be entitled to request a more

detailed breakdown. The Statement shall show the following Actual costs expenditures and receipts for the Quarter in question. Cumulative costs expenditures and receipts for the Year in question. Latest forecast of cumulative costs expenditures and receipts at the Year end. Variations between budget forecast and latest forecast and explanations thereof. The Statement of Costs Expenditures and Receipts of each Quarter shall be submitted to Government not later than thirty 30 days after the end of such Quarter.

127 SECTION 8 COST RECOVERY STATEMENT 8.1 The Contractor shall prepare with respect to each Calendar Quarter a Cost Recovery Statement containing the following information

8.1.1 Unrecovered Contract Costs carried forward from the previous Quarter if any.

8.1.2 Contract Costs for the Quarter in question.

8.1.3 Total Contract Costs for the Quarter in question Section 8.1.1 plus Section 8.1.2.

8.1.4 Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Quarter in question.

8.1.5 Contract Costs recovered during the Quarter in question as per Article 15.

8.1.6 Total cumulative amount of Contract Costs recovered up to the end of the Quarter in question.

8.1.7 Amount of Contract Costs to be carried forward into the next Quarter.

8.2 The Cost Recovery Statement for each Quarter shall be submitted to Government not later than thirty 30 days after the end of such Quarter.

128 SECTION 9 PROFIT SHARING STATEMENT 9.1 9.1.1 The Contractor shall prepare with respect to each Quarter a Profit Sharing Statement containing the following information The calculation of the applicable net cash flows as defined in Appendix D for the Quarter in question.

9.1.2 The value of the Investment Multiple applicable in the Quarter in question.

9.1.3 9.1.4 9.1.5 9.1.6 9.1.7 9.2 Based on Section 9.1.2 and Article 16 the appropriate percentages of Profit Petroleum for the Government and the Contractor in the Quarter in question. The total amount of Profit Petroleum to be shared between the Government and the Contractor in the Quarter in question. Based on Sections 9.1.3 and 9.1.4 the amount of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor in the Quarter in question. The actual amounts of Petroleum taken or payment received by Government and the Contractor as well as by each constituent of the Contractor during the Quarter in question to satisfy their entitlements pursuant to Section 9.1.5. Adjustments to be made if

any in future Quarters in the respective amounts of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor on account of any differences between the amounts specified in Sections 9.1.5 and 9.1.6 as well as any cumulative adjustments outstanding from previous Quarters. The Profit Sharing Statement shall be submitted to Government not later than thirty 30 days after the end of such Quarter. Any amount due or adjustment required in profit sharing among the Parties shall be made within thirty 30 days from the submission of the Statement to the Government.

129 SECTION 10 LOCAL PROCUREMENT STATEMENT 10.1 In furtherance of the obligation in Article 23 of the Contract for the Contractor to give preference to the procurement of Indian goods and services the Contractor shall prepare in respect of each Year a local procurement statement containing the following information a b c d e The amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on goods supplied produced or manufactured in India; the amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on services provided by Indian entities; the respective percentages that the expenditures recorded under items a and b above represent of the Contractors total expenditures; a detailed description of the procedures adopted during the Year to identify and purchase goods and services from Indian suppliers; and a detailed exposition of how the local purchases for the Year as recorded under items a and b above compared with the projected purchases included in the budget statement for that Year pursuant to Section 12.1.3 with explanations for any significant variations; 10.2 The local procurement statement shall be submitted to the Government within sixty 60 days after the end of each Year.

130 SECTION 11 END OF YEAR STATEMENT 11.1 The Contractor shall prepare a definitive End of Year Statement. The Statement shall contain aggregated information in the same format as required in the Production Statement Value of Production and Pricing Statement Statement of Costs Expenditures and Receipts Cost Recovery Statement and Profit Sharing Statement but shall be based on actual quantities of Petroleum produced income received and costs and expenditures incurred. Based upon this Statement any adjustments that are necessary shall be made to the transactions concerned under

the Contract. [Explanation End of year Statement shall further contain the item wise justification for the variation between the actual costs and expenditure incurred and included in the statement of costs expenditure and receipts visvis the Budgets for corresponding line items.] 11.2 The End of Year Statement for each Year shall be submitted to Government within ninety 90 days of the end of such Year.

131 SECTION 12 BUDGET STATEMENT 12.1 The Contractor shall prepare a Budget Statement for each Year. This Statement shall distinguish between budgeted Exploration Costs Development Costs and Production Costs and shall show the following 12.1.1 Forecast costs expenditures and receipts for the Year in question. 12.1.2 12.1.3 12.2 A schedule showing the most important individual items of total costs expenditures and receipts for the said Year. Estimated amounts to be spent in the Year on procuring goods and services in India. The Budget Statement shall be submitted to Government with respect to each Year not less than ninety 90 days before the start of the said Year provided that in the case of the Year in which the Effective Date falls the Budget Statement shall be submitted within ninety 90 days of the Effective Date.

132 APPENDIXD CALCULATION OF THE INVESTMENT MULTIPLE FOR PRODUCTION SHARING PURPOSES 1. In accordance with the provisions of Article 16 the share of the Government and the Contractor respectively of Profit Petroleum from the Contract Area in any Year shall be determined by the Investment Multiple earned by the Contractor from the then Petroleum Operations at the end of the preceding Year. These measures of profitability shall be calculated on the basis of the appropriate net cash flows as specified in this Appendix D. 2. The Net Cash Income of the Contractor from their Petroleum Operations in any particular Year is the aggregate value for the Year of the following i Cost Petroleum entitlement of the Contractor as provided in Article 15; plus ii Profit Petroleum entitlement of the Contractor as provided in Article 16; plus iii the Contractors all inental income of the type specified in section 3.4 of the Accounting Procedure arising from Petroleum Operations; less iv the Contractors Production Costs and royalty payments Article 17 incurred on or in the Contract Area; 3. The Investment made by the Contractor in the Contract Area in any particular Year is the aggregate value for the Year of i the Contractors Exploration Costs incurred on or in the

Contract Area pursuant to Article 15 plus ii the Contractors Development Costs incurred on or in the Contract Area. 4. For the purposes of the calculation of the Investment Multiple costs or expenditures which are not allowable as provided in the Accounting Procedure shall be excluded from Contract Costs and be disregarded. 133 5. 6. The Investment Multiple ratio earned by the Contractor as at the end of any Year shall be calculated by dividing the aggregate value of the addition of each of the annual Net Cash Incomes accumulated without interest up to and including that Year starting from the Year in which Production Costs were first incurred or Production first arose by the aggregate value of the addition of each of the annual Investments accumulated without interest up to and including that Year starting from the Year in which Exploration and Development Costs were first incurred. Profit Petroleum from the Contract Area in any Year shall be shared between the Government and the Contractor in accordance with the value of the Investment Multiple earned by the Contractor as at the end of the previous Year pursuant to Articles 16.2 to 16.5. 134

APPENDIXE1 FORM OF PARENT COMPANY FINANCIAL AND PERFORMANCE GUARANTEE to be furnished pursuant to Article 29.1 b of the Contract WHEREAS a company duly organised and existing under the laws of having its registered office at hereinafter referred to as the Guarantor which expression shall include its successors and assigns is [the indirect owner of one hundred percent 100 of the capital stock of XYZ Company and direct owner of its parent company;] and of an offshore WHEREAS XYZ Company is signatory to a Production Sharing Contract in as Block respect onshore the to as Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as XYZ which expression shall include its successors and permitted assigns; and area hereinafter identified referred WHEREAS the Guarantor wishes to guarantee the performance of XYZ Company or its Affiliate Assignee under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows The Guarantor hereby unconditionally and irrevocably guarantees to the Government that it will make available or cause to be made available to XYZ Company or any other directly or indirectly owned Affiliate of XYZ Company to which any part or all of XYZ Companys rights or interest under

the Contract may subsequently be assigned Affiliate Assignee financial technical and other resources required to ensure that XYZ Company or any Affiliate Assignee can carry out its obligations as set forth in the Contract. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by XYZ Company or any Affiliate Assignee of any obligations of XYZ Company or any Affiliate Assignee under the Contract. The Guarantor hereby undertakes to the Government that if XYZ Company or any Affiliate Assignee shall in any respect fail to perform its obligations under the Contract or commit any breach of such obligations then the Guarantor shall fulfil or cause to be fulfilled the said obligations in place of XYZ Company or any Affiliate Assignee and will indemnify the Government against all losses 1. 2. 3. 135 4. 5. 6. 7. damages costs expenses or otherwise which may result directly from such failure to perform or breach on the part of XYZ Company. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company or its Affiliate Assignee under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or the Guarantor or in any instrument establishing the Company or Guarantor. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity; or d the dissolution amalgamation reconstruction or reorganisation of XYZ Company. This guarantee shall be governed by and construed in accordance with the laws of India. IN WITNESS WHEREOF its duly authorised the Guarantor representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200. through 136 APPENDIXE2 FORM OF COMPANY FINANCIAL AND PERFORMANCE GUARANTEE to be furnished pursuant to Article 29.1 b of the Contract WHEREASXYZ Company duly organised and existing under the laws of having its registered office at hereinafter referred to as

the Guarantor which expression shall include its successors and assigns is signatory to a Production Sharing Contract in respect of an offshore onshore area identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as XYZ which expression shall include its successors and permitted assigns; and WHEREAS the Guarantor wishes to guarantee its performance under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows The Guarantor hereby unconditionally and irrevocably guarantees to the Government that it will make available or cause to be made available financial technical and other resources required to ensure that XYZ Company can carry out its obligations as set forth in the Contract. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by it of any obligations under the Contract. The Guarantor hereby undertakes to the Government that it shall fulfill or cause to be fulfilled all its obligations under the Contract and if it fails to perform its obligations under the Contract or commits any breach of such obligations then it shall indemnify the Government against all losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on its part. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder. 137 1. 2. 3. 4. 5. 6. 7. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or in any instrument establishing the Company. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity. This guarantee shall be governed by and construed in accordance with the laws of India. IN WITNESS WHEREOF its duly authorised the Guarantor representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200.

OBJECTIVES The objectives of these procedures are to a ensure that the goods and services acquired by the Operator for carrying out the Petroleum Operations are acquired at the optimum cost taking into consideration all relevant factors including price quality delivery time and the reliability of potential suppliers. b ensure that goods and services are delivered in a timely manner taking into consideration the consequences of delays in the acquisition of these goods and services on the project as a whole. c ensure that the provisions of Article 23 of the Contract are implemented.

II PRINCIPLES The principles upon which these procedures are based are a The Parties must be satisfied that the Operator is working to an agreed procedure for acquiring goods and services which is auditable and in accordance with the provisions of the Contract. b The Operator must have the ability to acquire goods and services expeditiously so that the project schedules in respect of Approved Work Programmes are maintained. **III PROCEDURES** The procedures to be adopted by

the Operator for the acquisition of goods and services shall be as follows Applicable to Exploration Appraisal Development and Production operations Procedure A 50000 to less than 200000 Procedure B 200000 to less than 500000 Procedure C Equal to or more than 500000 139 For

contracts valued at less than US 5000 The Operator will be at liberty to determine the procurement procedures and methods to procure goods and services valued at less than US Dollars five thousand US5000. For Contracts valued at US 5000 and above but less than US 50000 The Operator will be at liberty to determine the preferred method of acquiring goods and services valued at US Dollars five thousand US 5000 and above but less than US Dollars fifty thousand US 50000 provided that at least three 3 quotations from selected suppliers including at least one 1 Indian supplier will be obtained. For items valued at greater than US Dollars twenty thousand US 20000

Operator is required to report to the Operating Committee if the quote accepted exceed the lowest quote by more than twenty 20 percent. Operator will promptly report to the Operating Committee the Operators reasons for not selecting the lowest quote. Procedure A Operator shall 1 2 3 4 5 6 7

provide the constituents of the Contractor with a list of all the entities approved by the Operating

Committee as per AppendixF V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender; add to such list the entities whom other Party requests for adding within five 5 Business Days on receipt of such lists; if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with AppendixFIV to perform under the contract; complete the tendering process within a reasonable period of time; circulate to all constituents of the Contractor a comparative bid analysis stating Operators choice of the entity for award of contract. Provide also reasons for such choice in case entity chosen is not the lowest bidder; inform all the constituents of the Contractor of the entities to whom the contract has been awarded; and upon the request of a Party provide such Party with a copy of the final version of the contract awarded. Procedure B Operator shall 1 provide the Parties with a list of all the entities approved by the Operating Committee as per AppendixF V for the applicable category of the contract 140 along with other entities if any from whom the Operator proposes to invite tender; add to such list the entities whom a Party requests for adding within five 5 Business Days on receipt of such list; if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with AppendixF IV to perform under the contract; complete the tendering procedure within a reasonable period of time; circulate to all constituents of the Contractor a comparative bid analysis stating Operators choice of the entity for award of contract. Provide also reasons for such choice in case the entity chosen is not the lowest bidder. If the bid selected is not the lowest bid obtain prior approval of the Operating Committee for award of contract; award the contract accordingly and inform all the members of the Management Committee of the entities to whom the contract has been awarded; and upon the request of a Party provide such Party with a copy of the final version of the contract awarded. 2 3 4 5 6 7 Procedure C Operator shall 1 2 3 4 5 6 7 publish invitations for parties to prequalify for the proposed contract in at least three 3 daily national Indian newspaper. Provide to NonOperating Companies a list of responding parties and an analysis of their qualifications for the

contract being contemplated to be awarded. Include those who qualify as per the prequalification criteria approved as per AppendixF IV in the list of entities from whom Operator proposes to invite tender for the said contract; provide the members of the Management Committee with a total list of all the entities selected as 1 above and all the entities approved by the Operating Committee as per AppendixFV for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender; add to such entities whom a Party requests for adding within five 5 Business Days on receipt of such list; if and when any Party so requests Operator shall evaluate any entity listed in 2 and 3 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with AppendixFIV to perform under the contract; prepare and dispatch the tender documents to the entities as finally listed and to Parties; after the expiration of the period allowed for tendering consider and analyse the details of all bids received; prepare and circulate to the constituents of the Contractor a comparative bid analysis stating Operators recommendation as to the entity to whom the contract 141 should be awarded the reasons therefor and the technical commercial and contractual terms to be agreed upon; obtain the approval of the Operating Committee to the recommended bid. However failing Operating Committee approval any Company may refer the issue to the Management Committee for decision; and award the contract accordingly and upon the request of a Party provide such Party with a copy of the final version of the contract; 8 9 IV. V. A set of vendor qualifications criteria for each major category contractsupply shall be proposed by the Operator and approved by the Operating Committee within thirty 30 days of its submission. In the event the Operating Committee fails to approve vendor qualification criteria within thirty 30 days of the date the same is first submitted by the Operator the matter shall be referred to the Management Committee for decision. The Operating Committee may revise the qualification criteria. It is anticipated that in order to expedite joint operations contracts will be awarded to qualified vendorscontractors who are identified as approved vendors for the specified activities. A list of such approved vendors shall first be established as follows Operator shall 1 2 3 provide the constituents of the Contractor with a list of the entities from whom Operator proposes to invite tender

for contracts; and add to such list entities whom a Company requests for adding within fourteen 14 days on receipt of such list; and obtain approval of the Operating Committee. Such list shall thereafter be maintained by the Operator. The Operating Committee may add to or delete vendors from such list. 142 1. 2. APPENDIXG PERFORMA OF BANK GUARANTEE TO BE PROVIDED

PURSUANT TO ARTICLE 29 In consideration of Government of India hereinafter referred to as Government having entered into a Production Sharing Contract for the block dated hereinafter referred to as Contract which expression shall include all the amendments agreed to between the Government and the Contractor thereto with Ms having its registered office at hereinafter referred to as which expression unless repugnant to the context or meaning thereof include all its successors administrators executors and assigns which is a constituent of the Contractor and the Government have agreed that the Company shall furnish to Government a bank guarantee hereinafter referred to as Guarantee towards its obligations as provided in the Contract for USfor Foreign CompaniesUS equivalent in Indian Rupees for Indian Companies for the performance of its obligations under the Contract. We name of the Bank registered under the Law of and having its registered office at hereinafter referred to as the Bank which expression shall unless repugnant to the context or meaning thereof includes all its successors administrators executors and assigns do hereby guarantee and undertake to pay immediately on the fist demand in writing and anyall moneys to the extent of Indian RupeesUS in figures and Indian RupeesUS in words without any demur reservation contest or protest andor without any reference to the Company. Any such demand made by Government on the Bank by serving a written notice shall be conclusive and binding without any proof on the Bank as regards the amount due and payable notwithstanding any disputes pending before any court tribunal arbitrator sole expert conciliator or any other authority andor any other matter or thing whatsoever as liability under these presents being absolute and unequivocal. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable until it is discharged by Government in writing. This Guarantee shall not be determined discharged or affected by the liquidation winding up dissolution or insolvency of the Contractor and shall remain

valid binding and operative against the Bank. 3. The Bank also agree that Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor in the first instance without proceeding against the Company and notwithstanding any security or other guarantee that Government may have in relation to the Companys liabilities. 143 4. 5. 6. 7. 8. 9. The Bank further agree that Government shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Company from time to time or to postpone for any time or from time to time exercise of any of the powers vested in Government against the said Company and to forebear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Company or for any forbearance act or omission on the part of Government or any indulgence by Government to the said Company or any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us. The Bank further agree that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the Contract and all dues of Government under or by virtue of this Contract have been fully paid and its claim satisfied or discharged or till Government discharges this Guarantee in writing whichever is earlier. This Guarantee shall not be discharged by any change in our constitution in the constitution of Company or that of the Contractor. The Bank confirm that this Guarantee has been issued with observance of appropriate laws of the country of issue. The Bank also agree that this Guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian courts at India. Notwithstanding any thing contained herein above our liabilities under this Guarantee is limited to Indian RupeesUS in figures Indian RupeesUS in words and our Guarantee shall remain in force upto and including sixty 60 days after the expiry dateextended date. Any claim under this Guarantee must be received before the expiry of sixty 60 days or before the expiry of sixty 60 days from the extended date if any. If no such claim has been received by us within sixty 60 days after the said dateextended date the Governments

right under this will cease. However if such a claim has been received by us within and upto sixty 60 days after the said dateextended date all the Governments rights under this Guarantee shall be valid and shall not cease until we have satisfied that claim. 144 In witness whereof the Bank through its authorised officers has set its hand and stamp on this day of 200 at . The seal of was hereto duly affixed by this day of 200 in accordance with its byelaws and this Guarantee was duly signed by and as required by the said byelaws. Secretary President Director Witness 145 Licence P2516 Petroleum Act 1998 SEAWARD PRODUCTION LICENCE THE OIL AND GAS AUTHORITY and PARKMEAD EP LIMITED PHARIS ENERGY LTD LICENCE to search and bore for and get petroleumSs Licence P2516 For the purposes of section 41e of the Petroleum Act 1998 the model clauses applicable to this licence are the model clauses set out in The Petroleum Licensing Production Seaward Areas Regulations 2008 as amended by The Petroleum and Offshore Gas Storage and Unloading Licensing Amendment Regulations 2017. This Licence made 5 MAGA 2024 between the Oil and Gas Authority of the one part and the companies listed in Schedule 4 of the other part witnesseth as follows Interpretation etc. 1. 1 In this licence the following expressions have the following meanings the Act means the Petroleum Act 1998; Block means an area comprised in this licence which is delineated on the reference map deposited at the principal office of the OGA and to which a reference number was assigned at the date of this licence; Development Scheme has the meaning given by clause 27; Early Surrender Area means the area if any specified as such in Schedule 5 to this licence; Early Surrender Period means the period if any specified as such in Schedule 5 to this licence; Fragmented Licensed Area means a Licensed Area consisting in two or more areas any one or more of which is separated from the others; Half Year means the period from 1st January to 30th June in any year and the period from 1st July to 31st December in any year; Initial Licensed Area means the area described in Schedule 1 to this licence on the date it was granted; Initial Term means the period beginning with the date on which this licence is granted and ending on the last day of Phase C; Licensed Area means the area for the time being in which the Licensee may exercise the rights granted by this licence; the Licensee means the person or persons

to whom this licence is granted his personal representatives and any person or persons to whom the rights conferred by this licence may lawfully have been assigned; Mandatory Surrender Area means the area specified as such in Schedule 5 to this licence; the Minister means the Secretary of State for Business Energy and Industrial Strategy; the OGA means the Oil and Gas Authority; Oil Field has the meaning given in clause 27; Petroleum includes any mineral oil or relative hydrocarbon and natural gas existing in its natural condition in strata but does not include coal or bituminous shales or other stratified deposits from which oil can be extracted by destructive distillation; Phase A means the period if any of the Initial Term specified as such in Schedule 5 to this licence; Phase B means the period if any of the Initial Term specified as such in Schedule 5 to this licence; Phase C means the period of the Initial Term specified as such in schedule 5 to this licence; Second Term means the period specified as such in Schedule 5 to this Page 2 of 37GS Licence P2516 licence; Section means a part of a Block comprising an area bounded by minute lines of latitude and longitude one minute apart respectively; Start Date means the date specified as such in Schedule 5 to this licence; Third Term means the period specified as such in Schedule 5 to this licence; Well includes borehole; Work Programme means the programme set out in Schedule 3 to this licence.

2 Any obligations which are to be observed and performed by the Licensee shall at any time at which the Licensee is more than one person be joint and several obligations.

Grant of Licence 2. In consideration of the payments hereinafter provided for and the performance and observance by the Licensee of all the terms and conditions hereof the OGA in exercise of the powers conferred upon it by the Act hereby grants to the Licensee exclusive licence and liberty during the continuance of this licence and subject to the provisions hereof to search and bore for and get Petroleum in the sea bed and subsoil under the area described in Schedule 1 to this licence provided that nothing in this licence shall affect the right of the OGA to grant a methane drainage licence in respect of the whole or any part of the Licensed Area or affect the exercise of any rights granted under any such methane drainage licence.

Term of Licence 3. 1 This licence shall commence on the date on which it is granted. 2 Unless sooner determined under any of its provisions this licence shall continue a for the Initial Term

subject to clause 10 and where applicable clauses 4 and 5; b for the Second Term subject to clauses 6 and 10; c for the Third Term subject to clauses 8 and 10. 3 On expiry of the Third Term this licence shall determine unless extended in accordance with clause 9. Initial Term 4. 1 Where a Phase A is specified but no Phase B is specified this licence shall unless the OGA in its discretion dees otherwise automatically cease and determine on the expiry of Phase A in the event of failure by the Licensee before expiry of that phase to a take the actions that are described in the section of the Work Programme applicable to Phase A; 6 undertake to complete before the expiry of Phase C the work described in the section of the Work Programme applicable to Phase C; and c demonstrate to the satisfaction of the OGA whose decision shall be final i the financial capacity of the Licensee to meet the obligations undertaken under subparagraph b in addition to all of the obligations imposed by this licence; and Page 3 of 37S Licence P2516 ii the competence of the relevant persons to organise and supervise any of the operations of searching or boring for Petroleum. 2 Where no Phase A is specified but a Phase B is specified this licence shall unless the OGA in its discretion dees otherwise automatically cease and determine on the expiry of Phase B in the event of failure by the Licensee before expiry of that phase to a take the actions that are described in the section of the Work Programme applicable to Phase B; b undertake to complete before expiry of Phase C the work described in the section of the Work Programme applicable to Phase C; and c demonstrate to the satisfaction of the OGA whose decision shall be final i the financial capacity of the Licensee to meet the obligations undertaken under subparagraph b in addition to all of the obligations imposed by this licence; and ii the competence of the relevant persons to organise and supervise any of the operations of searching or boring for Petroleum. 3 Where both a Phase A and a Phase B are specified a this licence shall unless the OGA in its discretion dees otherwise automatically cease and determine on the expiry of Phase A in the event of failure by the Licensee before expiry of that phase to i take the actions that are described in the section of the Work Programme applicable to Phase A; and ii undertake to complete before the expiry of Phase B the work described in the section of the Work Programme applicable to Phase B; and b if this licence continues to Phase B

this licence shall unless the OGA in its discretion dees otherwise automatically cease and determine on the expiry of Phase B in the event of failure by the Licensee before expiry of that phase to i take the actions that are described in the section of the Work Programme applicable to Phase B; ii undertake to complete before the expiry of Phase C the work described in the section of the Work Programme applicable to Phase C; and iii demonstrate to the satisfaction of the OGA whose decision shall be final aa the financial capacity of the Licensee to meet the obligations undertaken under paragraph ii in addition to all of the obligations imposed by this licence; and bb the competence of the relevant persons to organise and supervise any of the operations of searching or boring for Petroleum. 4 Where a deadline specified in the Work Programme for any action to be taken does not coine with the date of expiry of any of Phases A B and C this licence shall unless the OGA in its discretion dees otherwise automatically cease and determine on the expiry of that deadline in the event of failure by the Licensee to take the action required by that deadline. 5 The OGA may dee that this licence shall not automatically cease and determine in accordance with paragraphs 1 to 4 of this clause only if the Licensee Page 4 of 37Ss Licence P2516 consents. 6 The relevant persons referred to in paragraphs 1cii 2cii and 3biiibb of this clause are a any persons nominated by the Licensee for approval under clause 24 of this licence; or b the Licensee where the Licensee is one person and the Licensee has not nominated anybody for such approval. 4A. Amendments to the Work Programme 1 This clause applies to any amendment to be made to the of the Work Programme including to the deadline for taking an action. 2 At any time not later than three months before the deadline for taking an action in the Work Programme the Licensee may give notice in writing to the OGA that the Licensee desires an amendment regarding that action and the notice shall describe the proposed amendment. 3 The OGA may in its discretion permit a shorter notice period than the period of three months specified in paragraph 2. 4 Where notice is given the OGA may in its discretion direct in writing that the Work Programme be amended as proposed. Surrender during Initial Term 5. 1 This clause shall apply where an Early Surrender Area and an Early Surrender Period are specified. 2 No later than one month before the expiry of the Early

Surrender Period the Licensee may give notice in writing to the OGA indicating a that he will determine this licence in relation to a part of the Licensed Area which when taken together with any one or more areas previously surrendered in accordance with clause 10 is no less than the Early Surrender Area; and b the date no later than the expiry of the Early Surrender Period on which the surrender of that part of the Licensed Area shall take effect. 3 This licence shall automatically cease and determine on the expiry of the Early Surrender Period unless a the Licensee has given notice in accordance with paragraph 2; or b at the request of the Licensee the OGA has directed that the licence shall continue without such notice having been given. Option to continue licence into a Second Term 6. 1 At any time not later than one month before the expiry of Phase C of the Initial Term or such shorter notice period as the OGA in its discretion may permit the Licensee may a subject to payment of the sums specified in Schedule 2 and to performance of the terms and conditions contained in this licence including without limitation those conditions set out in paragraph 3 of this clause; and Page 5 of 37S Licence P2516 b conditional upon due performance by the Licensee of the Work Programme before the expiry of Phase C of the Initial Term give notice in writing to the OGA in the manner hereinafter provided that he desires this licence to continue in force in relation to part of the Licensed Area the Continuing Part. 2 Where the Licensee gives notice to the OGA in accordance with paragraph 1 of this clause such notice must indicate that he will determine this licence in relation to such part of the Licensed Area as shall be described by the Licensee in the notice the Surrendered Part in accordance with the requirements of paragraph 3 of this clause. 3 Subject to paragraph 4 of this clause the Surrendered Part must consist in an area which when taken together with any one or more areas previously surrendered is no less than the Mandatory Surrender Area. 4 The Licensee shall not be obliged to surrender so much of the Licensed Area that following such surrender the Licensed Area comprises less than thirty Sections. 5 Any notice served in accordance with paragraph 1 of this clause shall specify a date not later than the expiry of Phase C of the Initial Term on which the Surrendered Part is to be surrendered. 6 This licence shall upon the option conferred by this clause being duly exercised but subject to the

provisions of clause 3 of this licence continue in respect of the Continuing Part for the Second Term.

Extension of the Initial or Second Term 7. 1 This clause applies to an extension to be made to Phase A or as the case may be to Phase B or Phase C of the Initial Term or to the Second Term the relevant phase or term. 2 At any time not later than three months before the expiry of the relevant phase or term or such shorter notice period as the OGA in its discretion permit the Licensee may subject to the payment of the sums specified in Schedule 2 and to performance of the terms and conditions herein contained give notice in writing to the OGA that the Licensee desires that phase or term to be extended for a further period. 3 Where such notice is given the OGA may in its discretion direct in writing that the relevant phase or term be extended; and paragraph 2 of this clause shall apply to that phase or term as extended. 4 Any extension shall be for a period and subject to such conditions as the OGA may determine. 5 Where Phase C of the Initial Term or where the Second Term is extended clause 3 shall apply in respect of the Initial Term or the Second Term as extended. 6 Where Phase A or Phase B of the Initial Term is extended by a period the subsequent phase of the Initial Term shall without prejudice to paragraph 2 be reduced by the same amount.

Page 6 of 37 Licence P2516 7 Where Phase C of the Initial Term is extended by a period the Second Term shall without prejudice to paragraph 2 be reduced by the same amount. 8 Where the Second Term is extended by a period the Third Term shall be reduced by the same amount. Option to continue the Licence into a Third Term 8. 1 At any time not later than three months before the expiry of the Second Term or such shorter notice period as the OGA may in its discretion permit the Licensee may subject to payment of those sums specified in Schedule 2 and to performance of the terms and conditions herein contained give notice in writing to the OGA that he desires this licence to continue as to a part of the Licensed Area the Producing Part. 2 Such notice shall describe the Producing Part which shall be an area that comprises no Section that is not wholly or in part the subject of a consent approval or programme described in paragraph 3 of this clause. 3 If such notice is given this licence shall continue in force after the expiry of the Second Term as provided by the following paragraphs of this clause in the event that before such expiry a the OGA has given a

consent in pursuance of clause 171 of this licence and such consent is still in force upon expiry of the Second Term; or b the OGA has in pursuance of clause 174 of this licence approved a programme submitted to it in pursuance of clause 172 and such approval is still in force upon expiry of the Second Term; or c the OGA has served a programme on the Licensee in pursuance of clause 176 of this licence and such programme is still in force upon expiry of the Second Term. 4 Where this licence continues in force by virtue of this clause it shall subject to the provisions of clause 3 of this licence so continue during the Third Term. Power further to extend term of Licence 9. 1 Where this Licence is continued in force by virtue of clause 8 of this Licence to the end of the Third Term the OGA on application being made to it in writing not later than three months before the expiry of such period may in its discretion agree with the Licensee that this Licence shall continue in force thereafter for such further period as the OGA and the Licensee may agree and subject to such modification of the terms and conditions of this licence which modification may include making provision for any further extension of the term of this licence as the OGA and the Licensee may then agree is appropriate. 2 The OGA may in its discretion accept an application for extension of this licence made less than three months before the expiry of the Third Term. Right of Licensee to determine Licence or surrender part of Licensed Area 10. Without prejudice to any obligation or liability imposed by or incurred under the terms hereof the Licensee may at any time by giving to the OGA not less than one Page 7 of 37S Licence P2516 months notice in writing to that effect determine this licence or surrender any part of the Licensed Area being a part which complies with clause 11 hereof. Areas surrendered 11. 1 Any area surrendered by the Licensee pursuant to clause 5 6 or 10 of this licence and any area accordingly retained by him shall unless the OGA has otherwise agreed in writing before the date on which the appropriate notice is given by the Licensee to the OGA a be bounded by minute lines of latitude extending not less than two minutes of longitude and minute lines of longitude extending not less than two minutes of latitude; b consist of not less than thirty Sections; and c subject always to paragraph 2 of this clause have boundaries which whether they run north and south or east and west either coine with the corresponding

boundaries of the Block or are not less than two Sections distant from those boundaries. 2 The surrender by the Licensee of any area pursuant to clause 5 6 or 10 of this licence shall not unless the OGA has otherwise agreed in writing before the date on which the appropriate notice is given by the Licensee to the OGA result in the creation of a Fragmented Licensed Area. 3 Upon the date on which any determination of this licence or any surrender of part of the Licensed Area in the manner provided for by any clause of this licence is to take effect the rights granted by this licence shall cease in respect of the Licensed Area or of the part so surrendered as the case may be but without prejudice to any obligation or liability imposed upon the Licensee or incurred by him under the terms of this licence prior to that date. Payment of consideration for Licence 12. 1 The Licensee shall make to the OGA as consideration for the grant of this Licence payments in accordance with Schedule 2 to this Licence. 2 The Licensee shall not by reason of determination of this Licence or surrender of any part of the Licensed Area be entitled to be repaid or allowed any sum payable to the OGA pursuant to this licence before the date of determination or surrender. Provision of contact details to OGA 13. 1 A notice direction or other document authorised or required in whatever terms to be given to the Licensee by virtue of this licence is treated as given to the Licensee if it is given to the person specified by the Licensee under paragraph 2 at the address so specified. 2 The Licensee must supply the OGA with the name and address of a person to whom notices directions and other documents are to be given. 3 The Licensee must ensure that where there is a change in the person to whom or the address to which information should be sent in accordance with paragraph 2 the OGA is notified of the change as soon as is reasonably practicable. Page 8 of 37 Licence P2516 4 If the Licensee fails to comply with paragraph 2 the OGA may give the Licensee a notice which a requires the Licensee to comply with paragraph 2 within the period of 30 days beginning with the date of the notice; and b states that if the Licensee fails to do so the Licensee will be treated as having supplied under paragraph 2 the name and address specified by the OGA in the notice. Measurement of Petroleum obtained from the Licensed Area 14. 1 The Licensee shall measure or weigh by a method or methods customarily used in good oilfield practice and from time to time

approved by the OGA all Petroleum won and saved from the Licensed Area. 2 If and to the extent that the OGA so directs the duty imposed by paragraph 1 of this clause shall be discharged separately in relation to Petroleum won and saved a from each part of the Licensed Area which is an Oil Field for the purposes of the Oil Taxation Act 1975; b from each part of the Licensed Area which forms part of such an Oil Field extending beyond the Licensed Area; and c from each Well producing Petroleum from a part of the Licensed Area which is not within such an Oil Field. 3 If and to the extent that the OGA so directs the preceding provisions of this clause shall apply as if the duty to measure or weigh Petroleum included a duty to ascertain its quality or composition or both; and where a direction under this paragraph is in force the following provisions of this clause shall have effect as if references to measuring or weighing included references to ascertaining quality or composition. 4 The Licensee shall not make any alteration in the method or methods of measuring or weighing used by him or in any appliances used for that purpose without the consent in writing of the OGA and the OGA may in any case require that no alteration shall be made save in the presence of a person authorised by the OGA. 5 The OGA may from time to time direct that any weighing or measuring appliance shall be tested or examined in such manner upon such occasions or at such intervals and by such persons as may be specified by the OGAs direction. 6 If any measuring or weighing appliance shall upon any such test or examination as is mentioned in paragraph 5 of this clause be found to be false or unjust the same shall if the OGA so determines after considering any representations in writing made by the Licensee be deemed to have existed in that condition during the period since the last occasion upon which the same was tested or examined pursuant to paragraph 5 of this clause.

Keeping of accounts 15. 1 The Licensee shall keep within the United Kingdom full and correct accounts in a form from time to time approved by the OGA of a the quantity of Petroleum in the form of gas won and saved; b the quantity of Petroleum in any other form won and saved; c the name and address of any person to whom any Petroleum has been

Page 9 of 37S Licence P2516 supplied by the Licensee the quantity so supplied the price thereof or other consideration therefor and the place to which the Petroleum was

conveyed pursuant to the agreement for such supply; and d such other particulars as the OGA may from time to time direct.

2 The quantities of Petroleum stated in such accounts may exclude any water separated from the Petroleum and shall be expressed as volumes in cubic metres measured at or calculated as if measured at a temperature of 15 Celsius and a pressure of 1.0132 bar but if the OGA serves notice in writing on the Licensee determining any other manner in which any quantity of Petroleum or any quantity of any form of Petroleum is to be expressed that quantity shall be so expressed.

3 Such accounts shall state separately the quantities of petroleum used for the purposes of carrying on drilling and production operations and pumping to field storage and quantities not so used and in the case of Petroleum not in the form of gas shall state the specific gravity of the Petroleum and if Petroleum of different specific gravities has been won and saved the respective quantities of Petroleum of each specific gravity.

4 The Licensee shall within two months after the end of each Half Year in which this licence is in force and within two months after the expiration or determination of this licence deliver to the OGA an abstract in a form from time to time approved by the OGA of the accounts for that Half Year or for the period prior to such expiration or determination as the case may be.

Working obligations

16. 1 The Licensee shall before the expiry of Phase C of the Initial Term carry out the Work Programme.

2 If at any time the OGA serves a notice in writing on the Licensee requiring him to submit to the OGA before a date specified in the notice an appropriate programme for exploring for Petroleum in the Licensed Area during a period so specified the Licensee shall comply with the notice; and for the purposes of this paragraph an appropriate programme is one which any person who if he a were entitled to exploit the rights granted by this licence; and b had the competence and resources needed to exploit those rights to the best commercial advantage; and c were seeking to exploit those rights to the best commercial advantage could reasonably be expected to carry out during the period specified in the notice and that period must be within the term of this licence.

3 If a programme is submitted to the OGA in consequence of a notice served by it in pursuance of paragraph 2 of this clause then a it shall not be entitled to revoke this licence on the ground that the programme does not satisfy the requirements

of that paragraph the Relevant Requirements; but b if it is of the opinion that the programme does not satisfy the Relevant Requirements it may serve a notice in writing on the Licensee stating its opinion and the reasons for it. 4 Where notice in respect of a programme is served on the Licensee in pursuance Page 10 of 37S Licence P2516 of paragraph 3 of this clause the Licensee shall either a within 28 days beginning with the date of service of the notice refer to arbitration in the manner provided by clause 43 of this licence the question whether the programme satisfies the Relevant Requirements; or b within a reasonable period beginning with the date of service of such notice submit to the OGA a further programme which satisfies the Relevant Requirements and where it is determined in consequence of any reference to arbitration in pursuance of subparagraph a of this paragraph that the programme in question does not satisfy the Relevant Requirements the Licensee shall submit to the OGA as soon as possible after the date of the determination a further programme which satisfies the Relevant Requirements. 5 The Licensee shall carry out any programme submitted by him in pursuance of this clause as to which either a the OGA serves notice in writing on the Licensee stating that the OGA approves the programme; or b it is determined in consequence of any reference to arbitration in the manner provided by clause 43 of this licence that the programme satisfies the Relevant Requirements and any programme approved by the OGA in pursuance of this paragraph shall be deemed for the purposes of this licence to satisfy the Relevant Requirements. 6 Where in consequence of any breach or nonobservance by the Licensee of any provision of paragraph 2 4 or 5 of this clause the OGA has power by virtue of paragraph 1 of clause 41 of this licence to revoke this licence it may if it thinks fit exercise that power in relation to such part only of the Licensed Area as it may specify; and where it does so the rights granted by this licence shall cease in respect of the specified part of that area without prejudice to any obligation or liability imposed upon the Licensee or incurred by him under the terms of this licence. 7 Where the Licensee has a duty by virtue of this clause to carry out a programme during a part of the term of this licence the OGA may serve notice in pursuance of paragraph 2 of this clause in respect of another part of that term. Development and production programmes 17. 1 The Licensee shall not a

erect or carry out any Relevant Works either in the Licensed Area or elsewhere for the purpose of getting Petroleum from that area or for the purpose of conveying to a place on land Petroleum got from that area; or b get Petroleum from that area otherwise than in the course of searching for Petroleum or drilling Wells except with the consent in writing of the OGA or in accordance with a programme which the OGA has approved or served on the Licensee in pursuance of the following provisions of this clause.

2 The Licensee shall prepare and submit to the OGA in such form and by such time and in respect of such period during the term of this licence as the OGA may direct a programme specifying

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a the Relevant Works which the Licensee proposes to erect or carry out during that period for either of the purposes mentioned in paragraph 1a of this clause; b the proposed locations of the works the purposes for which it is proposed to use the works and the times at which it is proposed to begin and to complete the erection or carrying out of the works; c the maximum and minimum quantities of Petroleum in the form of gas and the maximum and minimum quantities of Petroleum in other forms which i in each calendar year; or ii in each such period of more or less than one calendar year as may be specified by the OGA the Licensee proposes to get as mentioned in paragraph 1b of this clause.

3 If the OGA directs the Licensee

a to prepare different programmes in pursuance of paragraph 2 of this clause in respect of Petroleum from such different parts of the Licensed Area as are specified in the direction; or b where a programme approved or served in pursuance of this clause relates to a particular period during the term of this licence to prepare a programme or programmes in pursuance of paragraph 2 of this clause in respect of a further period or further periods during that term the Licensee shall comply with the direction.

4 It shall be the duty of the OGA expeditiously to consider any programme submitted to it in pursuance of paragraph 2 of this clause and when it has done so to give notice in writing to the Licensee stating

a that the OGA approves the programme; or b that the OGA approves the programme subject to the condition that such of the Relevant Works as are specified in the notice shall not be used before the expiration of the period so specified in relation to the works or shall not be used without the consent in writing of the OGA; or c that the OGA rejects the

programme on one or both of the following grounds namely i that the carrying out of any proposals included in the programme in pursuance of paragraph 2 of this clause would be contrary to good oilfield practice; ii that the proposals included in the programme in pursuance of the subparagraph c of the said paragraph 2 are in the opinion of the OGA not in the national interest and a notice in pursuance of subparagraph b of this paragraph may contain different conditions in respect of different works but shall not be given unless the OGA is satisfied that the condition mentioned in the notice is required in the national interest. 5 Where the OGA gives notice of rejection of a programme in pursuance of subparagraph c of paragraph 4 of this clause then a if the grounds of the rejection consist of or include the ground mentioned in paragraph i of that subparagraph it shall include in the notice a statement of the matters in consequence of which it rejected the programme on that ground; and b if the grounds of the rejection consist of or include the ground mentioned Page 12 of 37 Licence P2516 in paragraph ii of that subparagraph it shall include in the notice a statement of the rates at which it considers that in the national interest Petroleum should be got from the area to which the programme relates; and c the Licensee shall prepare and submit to the OGA before the time specified in the notice i where the notice contains such a statement as is mentioned in subparagraph a above modifications of the programme which ensure that the carrying out of the programme with those modifications would not be contrary to good oilfield practice; ii where the notice contains such a statement as is mentioned in subparagraph b above modifications of the programme which ensure the getting of Petroleum from the area to which the programme relates at the rates specified in the statement and which except so far as may be necessary in order to get Petroleum at those rates are not such that the carrying out of the programme with those modifications would be contrary to good oilfield practice but the Licensee shall not be required by virtue of paragraph i of this subparagraph to submit modifications if it is determined in consequence of any reference to arbitration in the manner provided by clause 43 of this licence that the carrying out of the programme without modifications would not be contrary to good oilfield practice. 6 If the OGA gives notice in writing to the Licensee that the OGA approves the modifications of a

programme which have been submitted to it in pursuance of subparagraph c of paragraph 5 of this clause the programme with those modifications shall be deemed to be approved by the OGA; but if the Licensee fails to perform the duty imposed on him by that subparagraph the OGA may if it thinks fit instead of revoking this licence in consequence of the failure serve on the Licensee such a programme as the OGA considers that the Licensee should have submitted to it in respect of the area and period to which the rejected programme related. 7 Where the OGA proposes to approve a programme subject to a condition in pursuance of paragraph 4b of this clause or to reject a programme in pursuance of paragraph 4c of this clause or to serve a programme on the Licensee in pursuance of paragraph 6 of this clause it shall before doing so a give the Licensee particulars of the proposal and an opportunity to make representations to the OGA about the technical and financial factors which the Licensee considers are relevant in connection with the proposal; and b consider any such representations then made to it by the Licensee. 8 The Licensee shall carry out any programme approved or served on him by the OGA in pursuance of this clause or if such a programme is varied in pursuance of clause 18 of this licence the programme as so varied except in so far as the Licensee is authorised in writing by the OGA to do otherwise or is required to do otherwise by such a condition as is mentioned in paragraph 4b of this clause; but if it is necessary to carry out certain works in order to comply with provisions included in a programme by virtue of paragraph 5c of this clause or provisions of a programme served on the Licensee in pursuance of paragraph 6 of this clause or provisions of a programme as varied in pursuance of clause 18 of this licence then notwithstanding anything in the programme as to the time when those provisions are to be complied with the Licensee shall not be treated as having failed to comply with those provisions before the expiration of the period reasonably required for carrying out the works. Page 13 of 37 Licence P2516 9 In this clause Relevant Works means any structures and any other works whatsoever which are intended by the Licensee to be permanent and are neither designed to be moved from place to place without major dismantling nor intended by the Licensee to be used only for searching for Petroleum. Provisions supplementary to clause 17 18. 1 A consent given by the

OGA in pursuance of clause 171 of this licence may be given subject to such conditions as are specified in the document signifying the consent and may in particular without prejudice to the generality of the preceding provisions of this paragraph be limited to a period so specified. 2 Where a the OGA gives notice in respect of a programme in pursuance of paragraph 4a or b or paragraph 6 of clause 17 of this licence or serves a programme in pursuance of the said paragraph 6; or b it is determined in consequence of any reference to arbitration in the manner provided by clause 43 of this licence that the Licensee is not required by virtue of paragraph i of clause 175c of this licence to submit modifications of a programme in respect of which notice of rejection containing such a statement as is mentioned in the said paragraph i was given by the OGA in pursuance of clause 174c of this licence the OGA may give to the Licensee with the notice given or the programme served as mentioned in subparagraph a of this paragraph or in a case falling within subparagraph b of this paragraph within the period of three months beginning with the date of the arbitrators or arbiters determination a notice hereafter in this clause referred to as a Limitation Notice authorising the OGA by a further notice given to the Licensee from time to time after the expiration of the period specified in the Limitation Notice to provide that the programme to which the Limitation Notice relates shall have effect while the further notice is in force with the substitution for any quantity of Petroleum or any period specified in the programme in pursuance of clause 172c of this licence of a different quantity of Petroleum or a different period specified in the further notice. 3 A quantity or period specified in such a further notice as that to be substituted for a quantity or period which is specified in the programme in question shall be such as to secure that the expenditure to be incurred by the Licensee in complying with the further notice in a case where an effect of the notice is to increase the quantity of Petroleum which the Licensee is required to get from the Licensed Area in any period is less than the cost of drilling a new Well in the Licensed Area at the time when the further notice is given. 4 Where the OGA proposes to give a Limitation Notice or any such further notice as aforesaid it shall before doing so a give the Licensee particulars of the proposal and an opportunity to make representations to the OGA about the technical and financial factors which the

Licensee considers are relevant in connection with the proposal; and b consider any such representations then made to it by the Licensee and the OGA shall not give such a further notice of which an effect is to increase the quantity of Petroleum which the Licensee is required to get from the Licensed Area Page 14 of 37S Licence P2516 during any period unless the OGA is satisfied that the notice is required by reason of a national emergency and shall not give any other such further notice as aforesaid unless it is satisfied that the notice is required in the national interest. 5 A Limitation Notice or any such further notice as aforesaid may specify any quantity or period by reference to such factors as the OGA thinks fit; and b in the case of such a further notice contain provisions as to i the date when the notice is to come into force; ii the date when the notice is to cease to be in force and specify different dates in pursuance of this subparagraph for different provisions of the notice and the OGA may revoke such a further notice at a particular time by serving on the Licensee a notice in writing stating that the further notice is revoked at that time. 6 Any question arising under clause 17 of this licence or this clause as to what is or is not or is required in the national interest or as to what is or is not or is required by reason of a national emergency shall be determined by the OGA. 7 The Licensee shall ensure that any conditions to which an approval is subject in pursuance of clause 174b of this licence or to which a consent is subject in pursuance of paragraph 1 of this clause are complied with. 8 If in respect of part of the Licensed Area a consent has been given in pursuance of paragraph 1 of clause 17 of this licence; or b the Licensee has submitted to the OGA in accordance with a direction given by virtue of paragraph 3a of that clause a programme in pursuance of paragraph 2 of that clause i as respects which the OGA has served notice in pursuance of paragraph 4a or b or paragraph 6 of that clause; or ii in consequence of which the OGA has served a programme on the Licensee in pursuance of the said paragraph 6; or iii in respect of which it has been determined in consequence of any reference to arbitration in the manner provided by clause 43 of this licence that the Licensee is not required by virtue of paragraph 5ci of that clause to submit modifications paragraph 1 of clause 41 of this licence shall not authorise the OGA to revoke this licence in relation to that part of the Licensed Area in consequence of any

breach or nonobservance while the consent is in force or during the period to which the programme relates of any provision of the said clause 17 in connection with a different part of the Licensed Area. 9 Where in consequence of any breach or nonobservance by the Licensee of any provision of clause 17 of this licence the OGA has power by virtue of paragraph 1 of clause 41 of this licence to revoke this licence or in consequence of paragraph 8 of this clause to revoke it in respect of part only of the Licensed Area it may if it thinks fit a in a case where it has power to revoke this licence exercise the power in relation to such part only of the Licensed Area as it may specify; and b in a case where by virtue of the said paragraph 8 it has power to revoke Page 15 of 37S Licence P2516 it in respect of part only of the Licensed Area exercise the power in relation to such portion only of that part as it may specify and where in consequence of the said paragraph 8 or by virtue of the preceding provisions of this paragraph the OGA revokes this licence in respect of a part or portion of the Licensed Area the rights granted by this licence shall cease in respect of that part or portion without prejudice to any obligation or liability imposed upon the Licensee or incurred by him under the terms of this licence.

Commencement and abandonment and plugging of Wells 19. 1 The Licensee shall not commence or recommence the drilling of any Well without the consent in writing of the OGA. 2 Subject to paragraph 6 the Licensee shall not abandon any Well without the consent in writing of the OGA. 3 The Licensee shall ensure compliance with any conditions subject to which any consent under either of the foregoing paragraphs is given. 4 If any such condition under paragraph 1 of this clause relates to the position depth or direction of the Well or to any casing of the Well or if any condition under either paragraph 1 or paragraph 2 of this clause relates to any plugging or abandoning of the Well the OGA may from time to time direct that the Well and all records relating thereto shall be examined in such manner upon such occasions or at such intervals and by such person as may be specified by the OGAs direction and the Licensee shall pay to any such person or to the OGA such fees and expenses for such examination as the OGA may specify. 5 The plugging of any Well shall be done in accordance with a specification approved by the OGA applicable to that Well or to Wells generally or to a class of Wells to which that Well belongs and

shall be carried out in an efficient and workmanlike manner. 6 The OGA may at any time give the Licensee a notice requiring a well drilled pursuant to this licence to be plugged and abandoned in accordance with paragraph 5 within the period specified in the notice but this paragraph is subject to paragraphs 8 and 9. 7 The Licensee shall comply with any notice under paragraph 6. 8 A notice under paragraph 6 may not be given less than one month before the expiry or determination of the Licensees rights under this licence in relation to the area or the part of the area in which the well is drilled. 9 A notice under paragraph 6 may be given only in relation to a well from which the Licensee has not extracted any petroleum within the period of one month ending with the day on which the notice is given. 10 Subject to paragraphs 6 to 7 and 11 and 12 of this clause any Well drilled by the Licensee pursuant to this licence shall be plugged and abandoned in accordance with paragraphs 2 3 4 and 5 of this clause not less than one month before the expiry or determination of the Licensees rights in respect of the Page 16 of 37S Licence P2516 area or part thereof in which that Well is drilled. 11 A direction by the OGA may be given by notice in writing to the Licensee not less than one month before the Licensees rights in respect of the area or part thereof in which the Well is situate expire or determine so as to relieve the Licensee of the obligation imposed by paragraph 10 of this clause to plug and abandon the Well. 12 Where the OGA revokes this licence any Well drilled by the Licensee pursuant to this licence shall a be plugged and abandoned in accordance with paragraphs 2 3 4 and 5 of this clause as soon as reasonably practicable; or b if the Minister so directs at the time of revocation be left in good order and fit for further working together with all casings and any Well head fixtures the removal whereof would cause damage to such Wells. 13 Any well that pursuant to a direction by the OGA under paragraph 11 of this clause has not been plugged and abandoned shall be left in good order and fit for further working together with all casings and any Well head fixtures the removal whereof would cause damage to such wells. 14 All casings and fixtures forming part of a Well and left in position at the expiry or determination whether by revocation or otherwise of the Licensees rights in respect of the area or part thereof in which that Well is drilled or at the completion of any works required of the Licensee under paragraph 12 of this

clause whichever is the later shall be the property of the OGA. Distance of Wells from boundaries of Licensed Area 20. No Well shall except with the consent in writing of the OGA be drilled or made so that any part thereof is less than one hundred and twentyfive metres from any of the boundaries of the Licensed Area. Control of Development Wells 21. 1 The Licensee shall not suspend work on the drilling of a Development Well or having suspended it in accordance with this paragraph shall not begin it again except with the consent in writing of the OGA and in accordance with the conditions if any subject to which the consent is given. 2 When work on the drilling of a Development Well is suspended in accordance with paragraph 1 of this clause the Licensee shall forthwith furnish the OGA with such information relating to the Well as the OGA may specify. 3 The Licensee a shall not do any Completion Work in respect of a Well in the Licensed Area except in accordance with a programme of Completion Work approved by the OGA in respect of the Well b shall furnish to the OGA in accordance with the provisions of such a programme particulars of any Completion Work done by him in respect of a Well in the Licensed Area; and c shall not remove or alter any casing or equipment installed by way of Completion Work in respect of a Well except with the consent in writing of the OGA and in accordance with the conditions if any subject to which the Page 17 of 37S Licence P2516 consent is given. 4 In this clause Completion Work in relation to a Well means work by way of the installation of a casing or equipment or otherwise after the Well has been drilled for the purpose of bringing the Well into use as a Development Well; and Development Well means a Well which the Licensee uses or intends to use in connection with the getting of Petroleum in the Licensed Area other than a Well which for the time being he uses or intends to use only for searching for Petroleum. Provision of storage tanks pipes pipelines or other receptacles 22. The Licensee shall use methods and practice customarily used in good oilfield practice for confining the Petroleum obtained from the Licensed Area in tanks gasholders pipes pipelines or other receptacles constructed for that purpose. Avoidance of harmful methods of working 23. 1 The Licensee shall maintain all apparatus and appliances and all Wells in the Licensed Area which have not been abandoned and plugged as provided by clause 19 of this licence in good repair and condition and

shall execute all operations in or in connection with the Licensed Area in a proper and workmanlike manner in accordance with methods and practice customarily used in good oilfield practice and without prejudice to the generality of the foregoing provision the Licensee shall take all steps practicable in order a to control the flow and to prevent the escape or waste of Petroleum discovered in or obtained from the Licensed Area; b to conserve the Licensed Area for productive operations; c to prevent damage to adjoining Petroleumbearing strata; d to prevent the entrance of water through Wells to Petroleumbearing strata except for the purposes of secondary recovery; and e to prevent the escape of Petroleum into any waters in or in the vicinity of the Licensed Area. 2 The Licensee shall comply with any instructions from time to time given by the Minister or the OGA in writing relating to any of the matters set out in the foregoing paragraph. If the Licensee objects to any such instruction on the ground that it is unreasonable he may within fourteen days from the date upon which the same was given refer the matter to arbitration in manner provided by clause 43 of this licence. 3 Notwithstanding anything in the preceding provisions of this clause the Licensee shall not a flare any gas from the Licensed Area; or b use gas for the purpose of creating or increasing the pressure by means of which Petroleum is obtained from that area except with the consent in writing of the OGA and in accordance with the conditions if any of the consent. 4 An application for consent in pursuance of paragraph 3 of this clause must be made in writing to the OGA and must specify the date on which the Licensee Page 18 of 37Ss Licence P2516 proposes to begin the flaring or use in question; and subject to paragraph 5 of this clause that date must not be before the expiration of the period of two years beginning with the date when the OGA receives the application. 5 If the OGA gives notice in writing to the Licensee stating that in consequence of plans made by the Licensee which the OGA considers are reasonable the OGA will entertain an application for consent in pursuance of paragraph 3 of this clause which notice specifies a date after the expiration of a period mentioned in the notice which is shorter than the period mentioned in paragraph 4 of this clause an application made in consequence of the notice may specify as the date on which the applicant proposes to begin the flaring or use in question a date after the expiration of that shorter

period. 6 Before doing to withhold consent or to grant it subject to conditions in pursuance of paragraph 3 of this clause the OGA shall give the Licensee an opportunity to make representations in writing to the OGA about the technical and financial factors which the Licensee considers are relevant in connection with the case and shall consider any such representations then made to it by the Licensee. 7 Consent in pursuance of paragraph 3 of this clause shall not be required for any flaring which in consequence of an event which the Licensee did not foresee in time to deal with it otherwise than by flaring is necessary in order a to remove or reduce the risk of injury to persons in the vicinity of the Well in question; or b to maintain a flow of Petroleum from that or any other Well but when the Licensee does any flaring which is necessary as aforesaid he shall forthwith inform the OGA that he has done it and shall in the case of flaring to maintain a flow of Petroleum stop that flaring upon being directed by the OGA to do so. 8 The Licensee shall give notice to the OGA of any event causing the escape or waste of Petroleum damage to Petroleumbearing strata or the entrance of water through Wells to Petroleumbearing strata except for the purposes of secondary recovery forthwith after the occurrence of that event and shall forthwith after the occurrence of any event causing the escape of Petroleum into the sea give notice of the event to the Chief Inspector of Her Majesty's Coastguard. 9 The Licensee shall comply with any reasonable instructions from time to time given by the OGA with a view to ensuring that funds are available to discharge any liability for damage attributable to the release or escape of Petroleum in the course of activities connected with the exercise of rights granted by this licence; but where the OGA proposes to give such instructions it shall before giving them a give the Licensee particulars of the proposal and an opportunity to make representations to the OGA about the proposal; and b consider any representations then made to it by the Licensee about the proposal.

Appointment of operators 24. 1 The Licensee shall ensure that another person including in the case where the Licensee is two or more persons any of those persons does not exercise any function of organising or supervising all or any of the operations of searching or Page 19 of 37S Licence P2516 boring for or getting Petroleum in pursuance of this licence unless that other person is a person approved in writing by the OGA and

the function in question is one to which that approval relates. 2 The OGA shall not refuse to give its approval of a person in pursuance of paragraph 1 of this clause if that person is competent to exercise the function in question but where an approved person is no longer competent to exercise that function the OGA may by notice in writing given to the Licensee revoke its approval. Fishing and navigation 25. The Licensee shall not carry out any operations authorised by this licence in or about the Licensed Area in such manner as to interfere unjustifiably with navigation or fishing in the waters of the Licensed Area or with the conservation of the living resources of the sea. Training 26.

1 The Minister or the OGA may from time to time give to the Licensee instructions in writing as to the training of persons employed or to be employed whether by the Licensee or by any other person in any activity which is related to the exercise of the rights granted by this licence and the Licensee shall ensure that any instructions so given are complied with. 2 The Minister or the OGA shall not give instructions in pursuance of paragraph 1 of this clause unless the Minister or the OGA as applicable has consulted as to the provisions proposed to be included in such instructions the Petroleum Industry Training Board or such other body of a like nature as may from time to time be carrying on activities of a substantially similar kind to those at present performed by the said Board.

3 The Licensee shall furnish the Minister or the OGA with such information relating to the training of persons referred to in paragraph 1 of this clause as the Minister or the OGA may from time to time request. Unit development 27. 1 If at any time at which this licence is in force the OGA shall be

satisfied that the strata in the Licensed Area or any part thereof form part of a single geological Petroleum structure or Petroleum field hereinafter referred to as an Oil Field other parts whereof are formed by strata in areas in respect of which other licences granted in pursuance of the Act are then in force and the OGA shall consider that it is in the national interest in order to secure the maximum ultimate recovery of Petroleum and in order to avoid unnecessary competitive drilling that the Oil Field should be worked and developed as a unit in cooperation by all persons including the Licensee whose licences extend to or include any part thereof the following provisions of this clause shall apply. 2 Upon being so required by notice in writing by the OGA the Licensee shall cooperate with

such other persons being persons holding licences under the Act in respect of any part or parts of the Oil Field hereinafter referred to as the other Licensees as may be specified in the said notice in the preparation of a scheme hereinafter referred to as a Development Scheme for the working and development of the Oil Field as a unit by the Licensee and the other Licensees in cooperation and shall jointly with the other Licensees submit such scheme for the approval of the OGA. 3 The said notice shall also contain or refer to a description of the area or areas in respect of which the OGA requires a Development Scheme to be submitted and shall state the period within which such scheme is to be submitted for approval by the OGA. 4 If a Development Scheme is not submitted to the OGA within the period so stated or if a Development Scheme so submitted is not approved by the OGA the OGA may itself prepare a Development Scheme which shall be fair and equitable to the Licensee and all other Licensees and the Licensee shall perform and observe all the terms and conditions thereof. 5 If the Licensee objects to any such Development Scheme prepared by the OGA he may within 28 days from the date on which notice in writing of the said scheme shall have been given to him by the OGA refer the matter to arbitration in the manner provided by clause 43 of this licence. 6 Any such Development Scheme or the award of any arbitrator or arbiter in relation thereto shall have regard to any direction pursuant to clause 28 of this licence in force at the date of such scheme.

Directions as to Oil Fields across boundaries

28. 1 Where the OGA is satisfied that any strata in the Licensed Area or any part thereof form part of an Oil Field other parts whereof are in an area to which the OGAs powers to grant licences pursuant to the Act do not apply and the OGA is satisfied that it is expedient that the Oil Field should be worked and developed as a unit in cooperation by the Licensee and all other persons having an interest in any part of the Oil Field the OGA may from time to time by notice in writing give to the Licensee such directions as the OGA may think fit as to the manner in which the rights conferred by this licence shall be exercised. 2 The Licensee shall observe and perform all such requirements in relation to the Licensed Area as may be specified in any such direction. 3 Any such direction may add to vary or revoke the provisions of a Development Scheme.

Licensee to keep records

29. 1 The

Licensee shall keep accurate records in a form from time to time approved by the OGA of the drilling deepening plugging or abandonment of all Wells and of any alterations in the casing thereof. Such records shall contain particulars of the following matters a the site of and number assigned to every Well; b the subsoil and strata through which the Well was drilled; c the casing inserted in any Well and any alteration to such casing; d any Petroleum water mines or workable seams of coal encountered in the course of such activities; and e such other matters as the OGA may from time to time direct.

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37Ss Licence P2516 2 The Licensee shall keep within the United Kingdom accurate geological plans and maps relating to the Licensed Area and such other records in relation thereto as may be necessary to preserve all information which the Licensee has about the geology of the Licensed Area.

3 The Licensee shall deliver copies of the said records plans and maps referred to in the two foregoing paragraphs to the OGA when requested to do so either a within any time limit specified in the request; or b if there is no time limit specified within four weeks of the request.

Returns 30. 1 The Licensee shall furnish to the OGA on the first anniversary of the Start Date and at intervals of three months thereafter during the period in which this licence is in force a return in a form from time to time approved by the OGA of the progress of his operations in the Licensed Area. Such return shall contain a a statement of all geological work including surveys and tests which has been carried out and the areas in which and the persons by whom the work has been carried out and the results thereof; b the number assigned to each Well and in the case of any Well the drilling of which was begun or the number of which has been changed during such period of three months the site thereof; c a statement of the depth drilled in each Well; d a statement of any Petroleum water mines or workable seams of coal or other minerals encountered in the course of the said operations; and e a statement of all Petroleum won and saved.

2 Within two months after the end of each calendar year which falls wholly or partly within the period in which this licence is in force and within two months after the expiration or determination of this licence or any renewal thereof the Licensee shall furnish to the OGA an annual return in a form from time to time approved by the OGA of the operations conducted in the Licensed Area during that year or the period prior to

such expiration or determination as the case may be together with a plan upon a scale approved by the OGA showing the situation of all Wells. The Licensee shall also indicate on the said plan all development and other works executed by him in connection with searching boring for or getting Petroleum. 3 The Licensee shall furnish the OGA with such information as the OGA may from time to time request about any aspect of activities of the Licensee which are attributable directly or indirectly to the grant of this licence except that the Licensee shall not by virtue of this paragraph be required to furnish information in respect of his activities in connection with any crude oil after he has appropriated it for refining by him. 3A The functions of the OGA under paragraph 3 shall be exercisable concurrently by the Chancellor of the Exchequer. 4 The Licensee shall comply with any request for information made in accordance with paragraph 3 above either a within any time limit specified in the request; or b if there is no time limit specified within four weeks of the request. Page 22 of 37S Licence P2516 Licensee to keep samples 31. 1 As far as reasonably practicable the Licensee shall correctly label and preserve for reference for a period of five years samples of the sea bed and of the strata encountered in any Well and samples of any Petroleum or water discovered in any Well in the Licensed Area. 2 The Licensee shall not dispose of any sample after the expiry of the said period of five years unless a he has at least six months before the date of the disposal given notice in writing to the OGA of his intention to dispose of the same; and b the OGA has not within the said period of six months informed the Licensee in writing that it wishes the sample to be delivered to it. 3 The OGA shall be entitled at any time a to inform the Licensee in writing that it wishes the whole or any part of any sample preserved by the Licensee to be delivered to it; or b to inspect and analyse any sample preserved by the Licensee. 4 The Licensee shall forthwith comply with any request for the delivery of the whole or any part of any sample which is made in accordance with the preceding provisions of this clause. Reports to be treated as confidential 32. All records returns plans maps samples accounts and information in this clause referred to as the specified data which the Licensee is or may from time to time be required to furnish under the provisions of this licence shall be supplied at the expense of the Licensee and

shall not except with the consent in writing of the Licensee which shall not be unreasonably withheld be disclosed to any person not in the service or employment of the OGA or the Crown Provided that a the OGA shall be entitled at any time to make use of any of the specified data for the purpose of preparing and publishing such returns and reports as may be required of the OGA by law; b the OGA shall be entitled at any time to furnish any of the specified data to the Natural Environment Research Council and to any other body of a like nature as may from time to time be carrying on activities of a substantially similar kind to the geological activities at present carried on by the said Council; c the OGA the said Council and any such other body shall be entitled at any time to prepare and publish reports and surveys of a general nature using information derived from any of the specified data; d the OGA the said Council and any other such body shall be entitled to publish any of the specified data of a geological scientific or technical kind either i after the expiration of the period of three years beginning with the date when the data were due to be supplied to the OGA in accordance with clause 29 or 30 of this licence or if earlier the date when the OGA received those data; ii after the licence ceases to have effect whether because of its determination revocation or the effluxion of time; or Page 23 of 37S Licence P2516 iii after the expiration of such longer period as the OGA may determine after considering any representations made to it by the Licensee about the publication of data in pursuance of this subparagraph. Inspection of records etc. 33. The Licensee shall a permit any person who is appointed by the OGA for the purpose to inspect and to take copies of and make notes from all books papers maps and other records of any kind kept by the Licensee in pursuance of this licence or in connection with activities about which the OGA is entitled to obtain information in pursuance of clauses 263 and 303 of this licence; and b furnish that person at reasonable times with such information and provide him at reasonable times with such reasonable assistance as he may request in connection with or arising out of an inspection in pursuance of this clause. Rights of access 34. Any person or persons authorised by the Minister or the OGA shall be entitled at all reasonable times to enter into and upon any of the Licensees installations or equipment used or to be used in connection with searching boring for or getting

Petroleum in the Licensed Area for the purposes hereinafter mentioned a to examine the installations Wells plant appliances and works made or executed by the Licensee in pursuance of the licence and the state of repair and condition thereof; and b to execute any works or to provide and install any equipment which the OGA may be entitled to execute or provide and install in accordance with the provisions hereof. Power to execute works 35. If the Licensee shall at any time fail to perform the obligations arising under the terms and conditions of any of clauses 14 19 22 or 23 of this licence the OGA shall be entitled after giving to the Licensee reasonable notice in writing of its intention to execute any works and to provide and install any equipment which in the opinion of the OGA may be necessary to secure the performance of the said obligations or any of them and to recover the costs and expenses of so doing from the Licensee. Right of distress 36. 1 This clause applies in respect of any part of the Licensed Area situated within the English or Northern Irish areas as defined in article 12 of the Civil Jurisdiction Offshore Activities Order 1987. 2 If and whenever any of the payments mentioned in clause 121 of this licence or any part thereof shall be in arrear or unpaid for 28 days next after any of the days whereon the same ought to be paid whether the same shall have been legally demanded or not then and so often as the same may happen the OGA may as an additional remedy and without prejudice to any other rights and remedies to which it would be entitled enter into and upon any of the Licensees installations and equipment used or to be used in connection with searching boring for or getting Page 24 of 37 Licence P2516 Petroleum in the Licensed Area and may seize and distrain and sell as a landlord may do for rent all or any of the stocks of Petroleum engines machinery tools implements chattels and other effects belonging to the Licensee which shall be found in or upon or about any of the Licensees installations and equipment so entered upon and out of the moneys arising from the sale of such distress may retain and pay all the arrears of the said payments and also the costs and expenses of and inent to such distress and sale and shall pay the surplus if any to the Licensee. Diligence 37. 1 This clause applies in respect of any part of the Licensed Area situated within the Scottish area as defined in article 12 of the Civil Jurisdiction Offshore Activities Order 1987. 2 If and whenever any of the payments mentioned in

clause 121 of this licence or any part thereof shall be in arrear or unpaid for 28 days next after any of the days whereon the same ought to be paid whether the same shall have been legally demanded or not then and so often as the same may happen the OGA may as an additional remedy and without prejudice to any other rights and remedies to which it would be entitled do diligence in respect thereof in like manner as a landlord may do diligence in respect of unpaid arrears of rent and such diligence shall be effectual to attach all or any of the stocks of Petroleum engines machinery tools implements and other effects belonging to the Licensee which shall be found on or about any of the Licensees installations and equipment used or to be used in connection with searching boring for or getting Petroleum in the Licensed Area and where in pursuance of such a diligence a sale of such effects as shall have been attached thereby takes place the OGA may out of the proceeds thereof retain and pay all the arrears of the said payments and also the expenses of such inent to such diligence and sale and shall pay the surplus thereof if any to the Licensee.

Indemnity against third party claims 38. The Licensee shall at all times keep the OGA effectually indemnified against all actions proceedings costs charges claims and demands whatsoever which may be made or brought against the OGA by any third party in relation to or in connection with this licence or any matter or thing done or purported to be done in pursuance thereof. Advertisements prospectuses etc. 39. No statement shall be made either in any notice advertisement prospectus or other document issued by or to the knowledge of the Licensee or in any other manner claiming or suggesting whether expressly or by implication that the OGA has formed or expressed any opinion that the Licensed Area is from its geological formation or otherwise one in which Petroleum is likely to be obtainable. Restrictions on assignment etc. 40. 1 The Licensee shall not except with the consent in writing of the OGA and in accordance with the conditions if any of the consent do anything whatsoever whereby under the law including the rules of equity of any part of the European Union or of any other place any right granted by this licence or derived from a right so granted becomes exercisable by or for the benefit of or in accordance with the Page 25 of 37 Licence P2516 directions of another person. 2 An agreement permitting the carrying out of geological surveys by

physical or chemical means in the Licensed Area is not prohibited by paragraph 1 of this clause if the person by whom such surveys are to be carried out is a the holder of a licence granted by the OGA of the right in common with all other persons to whom the like right may have been granted to search for Petroleum in respect of an area which would include the Licensed Area but for a proviso therein excluding the exercise of such right in the Licensed Area without the consent of the Licensee; or b the holder of a licence granted by the OGA to search and bore for and get Petroleum in an area adjacent to the Licensed Area and if the information intended to be obtained by such survey is reasonably necessary to enable that holder more efficiently to exercise the rights granted by the licence which he holds from the OGA. 3 The Licensee shall not enter into any agreement providing for a person other than the Licensee to become entitled to or to any proceeds of sale of any Petroleum which at the time when the agreement is made has not been but may be won and saved from the Licensed Area unless the terms of the agreement have been approved in writing by the OGA either unconditionally or subject to conditions but the preceding provisions of this paragraph do not apply to a an agreement for the sale of such Petroleum under which the price is payable after the Petroleum is won and saved; and b an agreement in so far as it provides that after any Petroleum has been won and saved from the Licensed Area it shall be exchanged for other Petroleum. 4 The Licensee shall not without the consent of the OGA dispose of any Petroleum won and saved in the Licensed Area or any proceeds of sale of such Petroleum in such a manner that the disposal does to the knowledge of the Licensee or without his knowing it fulfil or enable another person to fulfil obligations which a person who controls the Licensee or a person who is controlled by a person who controls the Licensee is required to fulfil by an agreement which if the person required to fulfil the obligations were the Licensee would be an agreement of which the terms require approval by virtue of paragraph 3 of this clause; and for the purposes of this paragraph whether a person has control of another person is to be determined as if sections 4502 to 4 and 4511 to 5 of the Corporation Tax Act 2010 apply subject to the following modifications a for the words the greater part wherever they occur in section 4503 there are substituted the words onethird

or more; b in section 4514 and 5 for the word may there is substituted the word must; and c in section 4514 and 5 any reference to an associate of a person is to be construed as including only i a relative as defined in section 4482 of that Act of the person; ii a partner of the person; and iii a trustee of a settlement as defined in section 620 of the Income Tax Trading and Other Income Act 2005 of which the person is a beneficiary.

5 Where the Licensee is two or more persons then without prejudice to the Page 26 of 37GS Licence P2516 preceding provisions of this clause none of those persons shall enter into an agreement with respect to the entitlement of any of them to a the benefit of any right granted by this licence; or b any Petroleum won and saved from the Licensed Area; or c any proceeds of sale of such Petroleum unless the terms of the agreement have been approved in writing by the OGA but the preceding provisions of this paragraph do not apply to an agreement for the sale or for the proceeds of such sale of such Petroleum under which the price is payable after the Petroleum is won and saved and an agreement in so far as it provides that after any Petroleum has been won and saved from the Licensed Area it shall be exchanged for other Petroleum.

Power of revocation 41. 1 If any of the events specified in the following paragraph shall occur then and in any such case the OGA may revoke this licence and thereupon the same and all the rights hereby granted shall cease and determine but subject nevertheless and without prejudice to any obligation or liability incurred by the Licensee or imposed upon him by or under the terms and conditions hereof.

2 The events referred to in the foregoing paragraph are a any payments mentioned in clause 121 of this licence or any part thereof being in arrear or unpaid for two months next after any of the days whereon the same ought to have been paid; b any breach or nonobservance by the Licensee of any of the terms and conditions of this licence; c in Great Britain the bankruptcy or sequestration of the Licensee; d in Great Britain the making by the Licensee of any arrangement or composition with his creditors; e in Great Britain if the Licensee is a company the appointment of a receiver or administrator or any liquidation whether compulsory or voluntary; f in a jurisdiction other than Great Britain the commencement of any procedure or the making of any arrangement or appointment substantially corresponding to any of those mentioned in

subparagraphs c to e of this paragraph; g any breach or nonobservance by the Licensee of the terms and conditions of a Development Scheme; h if the Licensee is a company the Licensees ceasing to direct and control either i its operations under the licence; or ii any commercial activities in connection with those operations from a fixed place within the United Kingdom; i any breach of a condition subject to which the OGA gave its approval in pursuance of clause 403 of this licence; j any breach of clause 405 of this licence and where two or more persons are the Licensee any reference to the Licensee in subparagraphs c to h of this paragraph is a reference to any of those persons.

3 The OGA may revoke this licence with the like consequences as are mentioned in paragraph 1 of this clause if a the Licensee is a company; and Page 27 of 37S Licence P2516 b there is a change in the control of the Licensee; and c the OGA serves notice in writing on the Licensee stating that the OGA proposes to revoke this licence in pursuance of this paragraph unless such a further change in the control of the Licensee as is specified in the notice takes place within the period of three months beginning with the date of service of the notice; and d that further change does not take place within that period.

4 There is a change in the control of the Licensee for the purposes of paragraph 3b of this clause whenever a person has control of the Licensee who did not have control of the Licensee when this licence was granted or if there has been an assignment or assignation of rights conferred by this licence when those rights were assigned to the Licensee; and sections 4502 to 4 and 4511 to 5 of the Corporation Tax Act 2010 shall apply for the purpose of determining whether for the purposes of this paragraph a person has or had control of the Licensee with the modifications specified in clause 404 of this licence.

5 Where two or more persons are the Licensee and any of them is a company paragraphs 3 and 4 of this clause shall have effect as if a subparagraph a of paragraph 3 were omitted; b in subparagraph b of that paragraph after the word of there were inserted the words any company included among the persons who together constitute; and c for the word Licensee in any other provision of those paragraphs there were substituted the word company.

Power of partial revocation 42. 1 This clause applies in a case where two or more persons are the Licensee and a an event mentioned in clause 412c d e f or h occurs in relation to

one of those persons; or b the conditions specified in clause 413 are satisfied in relation to one of those persons. 2 Where this clause applies the OGA may exercise the power of revocation in clause 41 to revoke the licence in so far as it applies to the person mentioned in paragraph 1a or b. 3 If the OGA exercises the power in paragraph 2 the rights granted to the person under this licence cease but without prejudice to any obligation or liability incurred by the person or imposed under the terms and conditions of this licence. 4 Where this licence is revoked in relation to one person under this clause it continues to have effect in respect of the other person who constitutes or persons who together constitute the Licensee and in relation to whom it is not revoked.

Arbitration 43. 1 If at any time any dispute difference or question shall arise between the Minister or the OGA and the Licensee as to any matter arising under or by virtue of this licence or as to their respective rights and liabilities in respect thereof then the same shall except where it is expressly provided by this licence that the matter or Page 28 of 37S Licence P2516 thing to which the same relates is to be determined deed directed approved or consented to by the Minister or the OGA be referred to arbitration as provided by the following paragraphs. 2 The arbitration referred to in the foregoing paragraph shall be by a single arbitrator who in default of agreement between the Minister or the OGA and the Licensee and in the case of arbitration in relation to a Development Scheme other Licensees affected by that scheme as to his appointment shall be appointed by the Lord Chief Justice of England for the time being. 3 To the extent that this clause applies to any part of the Licensed Area situated within the Scottish area as defined in article 12 of the Civil Jurisdiction Offshore Activities Order 1987 this clause shall have effect as if a for the word arbitrator wherever it occurs in paragraphs 2 and 5 of this clause there were substituted the word arbiter; and b for the words the Lord Chief Justice of England in paragraph 2 there were substituted the words the Lord President of the Court of Session. 4 To the extent that this clause applies to any part of the Licensed Area situated within the Northern Irish area as defined in article 12 of the Civil Jurisdiction Offshore Activities Order 1987 this clause shall have effect as if for the words the Lord Chief Justice of England in paragraph 2 there were substituted the words the Lord Chief Justice of Northern Ireland.

5 In the case of any such arbitration which relates to a Development Scheme the Licensee shall unless the arbitrator otherwise determines perform and observe the terms and conditions of the Development Scheme pending the decision of the arbitrator. Ministry of Defence 44. 1 The Licensee shall give the Ministry of Defence six months prior notice of any installation movements within a Block. 2 The Licensee shall give the Ministry of Defence six weeks prior notice of any seismic survey within a Block. 3 The Licensee shall at his own expense install and maintain underwater sonar beacons to Ministry of Defence specifications on any structures that may be temporarily within a Block provided that there shall be no requirement to fit such beacons to fixed and charted installations. Relationship with fishing industry 45. 1 The Licensee shall appoint a fisheries liaison officer who shall agree suitable arrangements with the seismic survey and supply vessel owners employed by the Licensee their masters and the organisations which represent the local fishing industry in order to promote good working relationships between the various parties. The setting up of the arrangements shall be the responsibility of the Licensee. In particular the Licensee shall a consult the organisations which represent the local fishing industry about the sea routes to be used by supply vessels; b after informing the OGA of the result of such consultations agree with it Page 29 of 37S Licence P2516 which routes shall be used to minimise interference with fishing activities without thereby unreasonably increasing transit times; c ensure that the agreed routes are used unless safety of navigation or security of cargo considerations dictate otherwise; and d take all reasonable steps to ensure that a responsible person who is fluent in English is a member of the crew of the supply vessel. 2 The Licensee shall make every effort to locate and remove without unreasonable delay any debris resulting from the licensed activities. The Licensee shall consult the relevant fishing organisations on the method of clearance and inform the OGA of the result of such consultation. If as a result of such consultation the OGA determines that the method of clearance of debris should be modified such modifications shall be observed by the Licensee. 3 Claims for damage to or loss of gear or loss of fishing time arising from reported debris shall be dealt with promptly by the Licensee. Straight to Second Term Licence 46. 1 If no Initial Term is specified in

Schedule 5 to this licence this licence applies with the following modifications. 2 In clause 11 the following definitions are omitted a Early Surrender Area; b Early Surrender Period; c Initial Licensed Area; d Initial Term; e Mandatory Surrender Area; f Phase A; g Phase B; h Phase C; and i Work Programme. 3 For clause 32 there is substituted 2 Unless sooner determined under any of its provisions this licence shall continue a for the Second Term subject to clause 10; b for the Third Term subject to clauses 8 and 10. 4 The following clauses are omitted a clause 4 b clause 4A c clause 5 and d clause 6. 5 For clause 7 there is substituted 7 Extension of the Second Term 1 This clause applies to an extension to be made to the Second Term. 2 At any time not later than three months before the expiry of the Second Term or such shorter notice period as the OGA may in its discretion permit the Licensee may subject to payment of the sums specified in Schedule 2 and to performance of the terms and Page 30 of 37S Licence P2516 conditions herein contained give notice in writing to the OGA that the Licensee desires that term to be extended for a further period. 3 Where such notice is given the OGA may in its discretion direct in writing that the Second Term be extended; and paragraph 2 of this clause shall apply to that term as extended. 4 Any extension shall be for a period and subject to such conditions as the OGA may determine. 5 Where the Second Term is extended clause 3 shall apply in respect of that term as extended. 6 Where the Second Term is extended by a period the Third Term shall be reduced by the same amount. 6 In clause 11 1 and 2 5 6 or is omitted. 7 Clause 161 is omitted. IN WITNESS WHEREOF these presents consisting of this and the preceding pages together with the Schedules annexed are executed as follows Signed for and on behalf of the Oil and Gas Authority by Director Secretary Authorised Signatory delete as appropriate on date at town In the presence of this witness eC... Page 31 of 37S Licence P2516 Signed AD EP LIMITED by cnet TT cone Director Secretary other authorised person delete as appropriate on S9 fo 202 date at ABEDEN town and either signature full name Director other authorised person delete as appropriate on date at town full name a... Director Secretary other authorised person delete as appropriate on 25 ZO2 date town and either Director other authorised person delete as appropriate on 25 207 date a town or in the presence of this witness signature full

name of address. Two persons must sign this document for each company Where the law of Scotland applies which will normally be where the licensed area lies within the Scottish area as defined by S.I. 19872197 one of the persons must be an authorised signatory who may be a director of the company the company secretary or another person authorised to sign on the companyas behalf. The second person may be either an authorised signatory or another person who signs the document as a witness. Page 32 of 37S Licence P2516 THIS IS SCHEDULE 1 REFERRED TO IN THE FOREGOING LICENCE BETWEEN THE OIL AND GAS AUTHORITY AND PARKMEAD EP LIMITED AND PHARIS ENERGY LTD Description of Licensed Area Block 1516g is the region bounded by the following coordinates 1 583000.000N 00000.000E 2 583000.000N 00200.000E 3 582800.000N 00200.000E 4 582800.000N 00000.000E 5 583000.000N 00000.000E The above coordinates were specified using European Datum 1950. The lines joining coordinates 1 to 5 are navigated as loxodromes. Block 1420g is the region bounded by the following coordinates 1 583000.000N 00500.000W 2 583000.000N 00000.000E 3 582800.000N 00000.000E 4 582800.000N 00200.000W 5 582900.000N 00200.000W 6 582900.000N 00500.000W 7 583000.000N 00500.000W The above coordinates were specified using European Datum 1950. The lines joining coordinates 1 to 7 are navigated as loxodromes. Signed for the Oil and Gas Authority Signed for PARKMEAD EP LIMITED Signed for PHARIS ENERGY LTD Page 33 of 37GS Licence P2516 THIS IS SCHEDULE 2 REFERRED TO IN THE FOREGOING LICENCE BETWEEN THE OIL AND GAS AUTHORITY AND PARKMEAD EP LIMITED AND PHARIS ENERGY LTD Consideration for Licence 1 On the Commencement Date and on each anniversary of the Start Date the Licensee shall pay the OGA sums Periodic Payments calculated as the following amounts multiplied by the Area Factor a on each such date during Phase A 15; b on each such date during Phase B 30; c on each such date during Phase C 150; d on each subsequent date after the Initial Term i on the 1st such date 300; ii on the 2nd such date 900; iii on the 3rd such date 1800; iv on the 4th such date 2700; v on the 5th such date 3900; vi on the 6th such date 5100; vii on the 7th such date 6300; viii on the 8th such date 6900; ix on the 9th such date and every subsequent such date

7500; 2 The Periodic Payments shall be subject to variation in accordance with the following provisions a The Periodic Payments shall be increased or subsequently reduced in line with movements in the Index of the Price of Crude Oil acquired by Refineries published in the Digest of UK Energy Statistics if the OGA so determines. The OGA shall give notice of any such determination biennial determination not less than one month before the date on which such payment falls due and shall specify in the notice the increase or reduction in the amount payable. Movements in the Index shall be calculated by reference to a comparison between the arithmetic mean of the Index levels for the two latest calendar years for which figures are available at the time when the determination is made and the arithmetic mean of the Index levels for the two latest calendar years before the Start Date. In the event that the Index of the Price of Crude Oil acquired by Refineries ceases to be published the OGA may substitute arrangements for redetermination of periodic payments having substantially similar effect to those set out above. b The increase or reduction specified in a biennial determination shall be payable or take effect on the anniversary of the Start Date next following the date of the relevant determination. c No biennial determination shall have effect so as to reduce the Periodic Payments below the levels set out in subparagraph 1 above. d The Minister shall not make a biennial determination increasing or reducing the amounts payable where that increase or reduction would be 5 or less of the levels set following the previous biennial determination. 3 In this Schedule a Commencement Date means the date specified in clause 31 of the licence; b the Initial Term means the period specified as such in Schedule 5 on the date that this Licence was granted; c Periodic Payments means the payments set out at paragraphs 1 and 2 above; and d Phase A Phase B and Phase C are as defined at Schedule 3 of the licence; and e the Area Factor means the number of square kilometres comprised in the Licensed Area at the date upon which the Periodic Payment in question becomes due. Page 34 of 37S Licence P2516 THIS IS SCHEDULE 3 REFERRED TO IN THE FOREGOING LICENCE BETWEEN THE OIL AND GAS AUTHORITY AND PARKMEAD EP LIMITED AND PHARIS ENERGY LTD Work Programme Phase A Firm Commitment The Licensee shall a Invert 175 sq kms 3D seismic data

focusing on the Tertiary; b Invert 40 sq kms 3D seismic data focusing on the Jurassic; c complete a viability study focussing on the commercialisation of the Beaulieu heavy oil discovery; d complete a biostratigraphic study to define the chronostratigraphic age of the Paleocene Mey sand interval; e complete petrophysical study of Tertiary sand discoveries; There is no Phase B Phase C The Licensee shall drill a well to 3000ft TVDSS or 50ft below the base of the Beaulieu Formation whichever is the shallower True Vertical Depth SubSea Nothing here fetters the OGAs discretion when considering whether to consent to any specific activity. Page 35 of 37 Licence P2516 THIS IS SCHEDULE 4 REFERRED TO IN THE FOREGOING LICENCE BETWEEN THE OIL AND GAS AUTHORITY AND PARKMEAD EP LIMITED AND PHARIS ENERGY LTD Companies PARKMEAD EP LIMITED with registered address of 4 QUEENS TERRACE ABERDEEN AB10 1XL registered number SC397002. PHARIS ENERGY LTD with registered address of 70 CLAREMONT ROAD SURBITON SURREY ENGLAND KT6 4RH registered number 08954960. Page 36 of 37s Licence P2516 THIS IS SCHEDULE 5 REFERRED TO IN THE FOREGOING LICENCE BETWEEN THE OIL AND GAS AUTHORITY AND PARKMEAD EP LIMITED AND PHARIS ENERGY LTD Timing and mandatory surrender provisions The Start Date is 1 December 2020. The Mandatory Surrender Area is an area comprising 50 of the Initial Licensed Area. Phase A is the period of 3 years beginning at the Start Date. There is no Phase B. Phase C is the period of 3 years beginning with the day after Phase A ends. The Second Term is the period of 6 years beginning with the day after the Initial Term ends. The Third Term is the period of 18 years beginning with the day after the Second Term ends. Page 37 of 37a

ii QW4 PETROLEUM AGREEMENT n.0 pr6S03 Att. Fees So Reg Fee o BETWEEN Stamp Dutyios Copys 0 THE MINISTER RESPONSIBLE FOR LI fa PETROLEUM REPRESENTING THE GOVERNMENT OF THE REPUBLIC OF GUYANA AND AND Article 1 Definitions 3 Article 2 Agreement the Operator Liabilities and Indemnitiesscssersscsesssscsensseneess 9 Article 3 Petroleum Prospecting Licence and Guarantee 11 Article 4 Exploration Programme and Expenditure Obligation.scersaseeeecereeesers 12 Article 5 Relinquishment of Areas 16 Article 6 Delegation; Cooperation between Contractor and

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Minister to grant Petroleum Prospecting Licences and Petroleum Production Licences 43 Section 10 of the Act authorizes the Minister to enter into an agreement with any j Petroleum Agreement Government of Guyana Ratio v5 6 Y 8 person with respect to inter alia the grant of a Licence the conditions to be included in a Licence the procedure to be followed by the Minister while exercising any discretion conferred upon him by or under the Act and the manner in which the discretion shall be exercised and any matter incidental to or connected therewith; Ratio Energy has submitted to the Government a Proposal the proposal for a Production Sharing Agreement in respect of a certain offshore area of Guyana on terms and conditions specified in the proposal; GGMC has been authorized by the Minister to negotiate this Agreement subject to the provisions of the Act and Regulations and to the final written approval of the Minister of its execution thereof and to assist in the administration and implementation thereof; Ratio Energy will have or will acquire the financial resources the managerial technical and industrial competence and the experience to carry out Petroleum Operations and will provide a guarantee in accordance with section 13 of the Act Pursuant to the aforesaid recitals Ratio Energy made an application to the Minister for a Petroleum Prospecting Licence in accordance with regulation 13 of the Regulations as hereinafter defined over the area described in Annex A and shown on the map attached as Annex B subject to the terms and conditions herein set forth and subject to the provisions of the Act and Regulations and Ratio Energy has agreed by execution of this Agreement to accept the said Licence on the said terms and conditions and provisions. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows Petroleum Agreement Government of Guyana Ratio Article 1 Definitions 1.1 In this Agreement unless the context otherwise requires . SA Accounting Procedure means the procedure set out in Annex C; Act means the Petroleum Exploration and Production Act No.3 of 1986; Affiliated Company in relation to the Contractor means a company or corporation; i which is directly or indirectly controlled by the Contractor; or ii which directly or indirectly controls the Contractor; or iii which is directly or indirectly controlled by a company or corporation that also directly or indirectly controls the Contractor. For the

purpose of this definition control means the right to exercise a vote of fifty per cent 50 or more of all the voting shares; Agreed Interest Rate means interest computed on a monthly basis at the rate per annum equal to the average London Interbank Offer Rate LIBOR for six 6 months United States dollar deposits as published by the Wall Street Journal on the first Business Day of such month being calculated plus three 3 percentage raisal Programme means a programme carried out following a discovery of eum in the Contract Area for the purpose of delineating the Petroleum rvoir as defined in the Act to which that discovery relates in terms of kness and lateral extent and estimating the quantity of recoverable Petroleum erein prior to declaration of commerciality; Appraisal Well means a well drilled for the purpose of an Appraisal Programme; Article means an Article of this Agreement; Associated Gas means all Natural Gas produced from any Petroleum Reservoir of which the predominant production is Crude Oil and includes the gascap which overlies and is in contact with Crude Oil; Barrel means a quantity consisting of fortytwo 42 United States gallons liquid measure measured at standard conditions of atmospheric pressure and temperature 14.7 lbssq. inch absolute or 1 Kgsq. cm. absolute and corrected to a temperature of sixty 60 degrees Fahrenheit or fifteen 15 degreesCelsius bs Petroleum Agreement Government of Guyana RatioBusiness Day means a day on which the banks in Georgetown Guyana are customarily open for business. Calendar Month or Month means any of the twelve months of the Calendar Year; Calendar Quarter or Quarter means a period of three 3 consecutive months beginning on the first day of January April July or October; Calendar Year or Year means a period of twelve 12 consecutive Months commencing on January and ending on the succeeding December 31 provided however that a Year of a term of a Licence shall be the period specified in section 2 2 b of the Act; Commercial Discovery means any discovery which the Contractor in its sole judgement considers economic to develop and produce pursuant to the terms of the Agreement; Contract Area means G on the Effective Date the area described in Annex A and shown on the map in Annex B and the subject of the Petroleum Prospecting Licence granted to the Contractor pursuant to Article 3; and thereafter any areas which at any particular time are subject to the Petroleum Prospecting Licence

or Petroleum Production Licences granted to the Contractor under Article 8; Cost Gas has the meaning assigned in Article 11; Cost Oil has the meaning assigned in Article 11; Crude Oil or Oil means crude mineral oil asphalt ozokerite distillates condensates and all kinds of hydrocarbons and bitumens both in solid and liquid forms at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or Kgsq. cm; Delivery Point means in the case of Crude Oil the inlet flange of the lifting tankship; in the case of Natural Gas shall be the sales point and the point at which custody transfers from seller to buyer. In the case of LNG sales the Delivery Point shall be the inlet loading flange for the LNG tanker. In the case of pipeline deliveries the Delivery Point shall be the inlet flange to buyers pipeline or 4 Petroleum Agreement Government of Guyana Ratiodistribution system or the inlet to a third partys pipeline transporting buyers Natural Gas. The Delivery Point for LPGs shall be the sales point and the point at which custody transfers from seller to buyer. In the case of LPG exports the Delivery Point shall be the inlet loading flange for the LPG tanker or truck. In the case of pipeline deliveries of LPGs the Delivery Point shall be the inlet flange to buyers pipeline or distribution system or the inlet to a hi Wipeline transporting buyers LPGs; or in any case such other economically viable point for export of Petroleum in the Republic Of Guyana which shall be agreed to by the Contractor and the Minister; Development Costs means the expenditure so categorized in Annex C Development Plan means the plan referred to in Article 8.4; Development Well means any well drilled as part of a Development Plan; Discovery Area means an area which is part of a Prospecting Area consisting of a Discovery Block or Blocks in respect of which the Minister has been informed under section 30 of the Act; xpatriate Employee means any employee other than a Guyanese citizen not permanently resident in Guyana who is engaged under a contract of service for the purpose of Petroleum Operations; Exploration Costs means those expenditures so categorized in Annex C; Exploration Period means the initial period andor the first renewal period andor the second renewal period referred to in Article 4.1 as the case may be; Exploration Well means a well drilled which is not a Development Well with the objective of exploring for Petroleum on a geological entity he it of

structural stratigraphic facies or pressure nature to a depth or stratigraphic level specified in the work programme for the exploration work programme or such other depth or stratigraphic level resulting from information encountered during the drilling of such well; Field means an area within the Contract Area consisting of a Petroleum Reservoir or multiple Petroleum Reservoirs all grouped on or related to the same individual geological structural features or stratigraphic conditions from which 5 Petroleum Agreement Government of Guyana Ratio Petroleum may be produced commercially; General and Administrative Costs and Annual Overhead Charge means the expenditures so categorised in Annex C; Geologic Basement means any igneous or metamorphic rock or any stratum in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected; Government means the Government of the Republic of Guyana and its ministries and agencies; GGMC means the Guyana Geology and Mines Commission established under section 3 of the Guyana Geology and Mines Commission Act 1979; GGMC Act means the Guyana Geology and Mines Commission Act 1979 Licence means the Petroleum Prospecting Licence and/or the Petroleum Production Licences or both as the context requires; Lifting Entitlement means the quantity of Crude Oil to which a Party shall be entitled in any given period pursuant to Article 11; Minister means the Minister assigned responsibility for Petroleum or where there is no such Minister the President; Natural Gas or Gas means all hydrocarbons which at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 psia gas dry mineral gas and casing head gas all substances contained therein including helium which are produced from an oil or gas well in their natural state residue gas remaining after extraction of NGLs from wet gas. For purposes of 4 Agreement Natural Gas shall also include liquefiable hydrocarbons obtained from Natural Gas by condensation or extraction including ethane propane butane pentanes and heavies Natural Gas Liquids or NGLs. Liquefied methane shall not be considered an NGL but rather Natural Gas in the liquid state. . NonAssociated Gas means Natural Gas or Gas other than

Associated Gas; NonResident SubContractor shall mean a SubContractor the control and management of whose business are exercised outside Guyana. Operating Costs means those costs so categorized in Annex C; Petroleum Agreement Government of Guyana Ratio¹⁴ Operator shall have the meaning assigned to it in Article 2.2a; Parties means the Government Ratio Energy and Ratio Guyana and includes their successors and permitted assignees and a Party shall mean any of the Parties; Petroleum Operations mean Prospecting Operations and/or Production Operations as defined in the Act; Petroleum Prospecting Licence means a Licence issued by the Government under the Act and the Regulations to Licensee for carrying out Prospecting Operations and set forth in Form C of the schedule as specified in the Regulations; Petroleum Production Licence means a Licence to be issued by the Government under the Act and the Regulations to Licensee for carrying out Production Operations and set forth in Form D of the schedule as specified in the Regulations; Profit Gas has the meaning assigned in Article 1] Profit Oil has the meaning assigned in Article 11; SubContractor means any company or entity which provides services to the Contractor in connection with Petroleum Operations; Third Party Sales means third party arms length sales made by i Contractor or ii Affiliated Company of Contractor to a third party for an armslength price which is disclosed to the Minister. The words and terms used in this Agreement but not defined herein shall if meanings have been assigned to them under section 2 of the Act have for the purposes of this Agreement the same meanings. The provision of this Agreement relating to the Petroleum Prospecting Licence shall be read as part of the provisions of such Licence. The provision of this Agreement relating to any Petroleum Production Licence shall be read as part of the provisions of such Licence. 7 Petroleum Agreement Government of Guyana Ratio^{1.5} The provisions in the Act and Regulations dealing with rights and obligations of the Contractor shall be read as part of but not nullify the provisions of this Agreement and any Licence issued to the Contractor. Petroleum Agreement Government of Guyana RatioArticle 2 Agreement the Operator Liabilities and indemnities 2.1 2.4 Agreement This Agreement constitutes an agreement made under section 10 of the Act consistent with the Act and the Regulations and is a production sharing agreement the

objective of which is the exploration for development and production of Petroleum in the Contract Area by the Contractor subject to the terms hereof and the provisions of the Act and Regulations under which the Contractor shall have an economic interest in the development of Petroleum from the Contract Area. The Operator a Ratio Guyana shall be the Operator charged with conducting the day to day activities of the Contractor under this Agreement. No transfer of operatorship to another party not being one of the Parties comprising the Contractor shall take effect unless it has been approved by the Minister which approval shall not be unreasonably withheld. The Minister shall be notified of any change of operatorship to another party not being one of the Parties comprising the Contractor in writing. The Contractor shall provide the Minister with a memorandum summarizing the operating arrangements between the Operator and the Contractor including any Party comprising the Contractor for the conduct of Petroleum Operations which will include inter alia a provision whereby the Operator agrees to conduct the Petroleum Operations in accordance with this Agreement the Licences and any applicable laws of Guyana. Liability The duties obligations and liabilities of the Parties comprising the Operator and the Contractor under this Agreement and under any Licence issued pursuant hereto shall be joint and several. Indemnity The Contractor shall at all times keep Government indemnified against all actions claims and the demands that may be brought or made against Government by a third party by reason of negligence any act or omission or reckless disregard of harmful consequences which results in damage to a third party by the Contractor or the Operator in the exercise or purported exercise of the rights of the Contractor under the Act or the Licence provided however that nothing in this Article shall require the Contractor to give the said indemnity for any claim or demand in respect of Petroleum taken by the Minister pursuant to 9 Petroleum Agreement Government of Guyana RatioArticle 1] after title has passed to the Minister at the Delivery Point or in respect of assets acquired by the Minister pursuant to Article 20 from and after the date of acquisition. Liability by the Contractor to the Government for damages in respect of Petroleum Operations under this Agreement is limited to insurance required in accordance with Article 20.2 a provided however that the Contractor shall not be liable to the

Government for indirect punitive or consequential damages including but not limited to production or loss of profits. 10 Petroleum Agreement Government of Guyana RatioArticle 3 Petroleum Prospecting Licence and Guarantee 3.1 Petroleum Prospecting Licence a On the date of this Agreement the Minister in accordance with the Act the Regulations and the terms of this Agreement shall grant to the Contractor the Petroleum Prospecting Licence for an initial period of four 4 years commencing three 3 months from the Effective Date over the area described in Annex A and shown on the map attached as Annex B hereto. b Subject to Article 4 and the other terms of this Agreement such Petroleum Prospecting Licence may be renewed but not more than twice at the election of the Contractor for consecutive periods of up to three 3 years each in accordance with the provisions of the Act and the Regulations. Guarantee The Contractor shall on or before the Effective Date during year one 1 of the initial period in accordance with Article 4.1 hereunder and thereafter no later than ninety 90 days after the commencement of all subsequent work commitment periods as specified in Article 4.1 provide an Affiliated Company guarantee or other form of guarantee acceptable to the Minister in the amount of ten 10 of the budget submitted by the Contractor pursuant to Article 7.1 for each specific work commitment period but not more than for one year each time. Notwithstanding the foregoing if the Contractor exceeds its minimum work commitment in any phase specified in Article 4.1 the completion of such work commitment shall constitute a waiver of such proportion of the requirement of the guarantee for any subsequent period by the Minister which is the equivalent of the excess work previously completed but which is applicable to the subsequent work commitment phase. If the guarantees are Affiliated Company guarantees they shall be in lieu of and satisfy any obligation to provide a guarantee and/or bond pursuant to the Act Regulations or this Agreement on the part or on behalf of the Contractor. il Petroleum Agreement Government of Guyana RatioArticle 4 Exploration Programme and Expenditure Obligation 4.1 Exploration Programme Subject to the provisions of this Agreement in discharge of its obligations to carry out Prospecting Operations in the Contract Area the Contractor shall carry out the minimum work commitments during the periods into which Prospecting Operations are divided hereunder a

The initial period of four 4 years shall be divided into two 2 phases. Each phase shall consist of twenty four 24 months duration. i Phase One 24 months During phase one 1 of the initial period the Contractor shall acquire all available 2D seismic data from previous surveys conducted over the Contract Area process and/or reprocess as necessary and interpret same. At the end of phase one 1 of the initial period the Contractor shall either elect to relinquish the entire Contract Area except for any Discovery Area in respect of which the Minister is informed under section 30 of the Act and the area contained in any Petroleum Production Licence or subject to Article 5. relinquish twenty five 25 percent of the Contract Area and commit to the Work Programme in phase two 2. Phase two 24 months During phase two 2 of the initial period the Contractor shall conduct a survey to acquire a minimum one thousand 1000 line kilometers of new marine 2D seismic and/or five hundred square kilometers 500 sq. km of new 3D seismic over the Contract Area process and interpret same. At the end of the initial period of four 4 years the Contractor shall elect either to relinquish the entire Contract Area or subject to Article 5 relinquish twenty percent 20 of the Contract Area except for any Discovery Area in respect of which the Minister is informed under section 30 of the Act and the area contained in any Petroleum Production Licence and renew the Petroleum Prospecting Licence for a further period of three 3 years. b The first renewal period of three 3 years shall be considered a single phase. 4 During the first renewal period the Contractor shall drill one 1; 12 Petroleum Agreement Government of Guyana Ratioexploration well in accordance with Article 4.2 within the Contract Area. At the end of the first renewal period of three 3 years the Contractor shall elect either to relinquish the entire Contract Area except for any Discovery Area in respect of which the Minister is informed under section 30 of the Act and the area contained in any Petroleum Production Licence or subject to Article 5 relinquish twenty percent 20 of the Contract Area and renew the Petroleum Prospecting Licence for a second period of three 3 years. c Second renewal period of three 3 years. The second renewal period of three 3 years shall be divided into two 2 phases. Phase one 1 will consist of twelve 12 months duration while phase two 2 will consist of twentyfour 24 months duration i Phase one 1 12 months During phase one the Contractor shall review the outcome from the

Exploration Well drilled in the previous period analyze all data therefrom and determine the merits for drilling .a second Exploration Well in the Contract Area for which planning to drill shall commence where sound merit for such drilling is established. At the end of phase one 1 of the second renewal period the Contractor shall elect either to relinquish the entire Contract Area except for any Discovery Area in respect of which the Minister is informed under section 30 of the Act and the area contained in any Petroleum Production Licence or commit to the Work Programme in phase two 2. i Phase two 2 24 months During phase two 2 of the second renewal period the Contractor shall drill one 1 Exploration Well in accordance with Article 4.2 within the Contract Area. At the end of the second renewal period of three 3 years. the Contractor shall relinquish the entire Contract Area except for i any Discovery Area in respect of which the Minister is informed under section 30 of the Act and ii the area contained in any Petroleum Production Licence and any other portion of the Contract Area on which the Minister agrees to permit the Contractor to conduct further exploration activities. ad The minimum work commitment for a given phase or period referred to in Article 4.1a b and c may be undertaken in an earlier phase or period 13 Petroleum Agreement Government of Guyana Ratio4.2 in whole or in part and in such a case the work commitment with respect to the subsequent period shall be deemed to be satisfied accordingly in whole or in part as the case may be. Contractor may conduct additional work beyond the minimum work commitment in accordance with the terms and conditions of this Agreement which shall be subject to Cost ARecovery. . or e Subject to Article 24 herein and section 43 of the Act the Minister may extend any Exploration Period pursuant to a showing of good cause by the Contractor. No Exploration Well drilled by the Contractor shall be treated as discharging any obligation of the Contractor to drill such Exploration Well unless either it has been drilled to the depth or formation agreed with the Minister and specified in the annual work programme or before reaching such depth or formation provided however that a the Contractor has expended on such well and any substitute well drilled pursuant to Article 4.2 d below the amount for such work commitment in the budget submitted by the Contractor and approved by the Minister as specified in Article 7.1; or b the Geologic Basement is encountered or c

a Discovery is made and the Minister is informed thereof; or d if insurmountable technical problems are encountered which in accordance with good oilfield practice make further drilling impractical provided that if the said Well is abandoned owing to the said problems before reaching the Geologic Basement the Contractor shall drill a substitute well in the Contract Area to the same minimum depth as aforesaid unless otherwise agreed with the Minister or until the amount in Article 4.2 a less any amounts actually expended on the abandoned well is reached or one of the criteria listed at Articles 4.2 b to d is satisfied and the Contractor shall be entitled to a reasonable extension of time considering the availability of drilling equipment manpower and materials to complete the minimum work commitment accordingly in order to drill the substitute Well.

Expenditure Obligation The sum actually spent in fulfillment of the work obligation in a specific phase or period shall be deemed to have satisfied the Contractor's minimum expenditure obligation for that phase or period. For the avoidance of doubt, in the event the Contractor has performed its work obligations; for an amount less than the amount specified in an annual work programme and budget submitted under the Petroleum Agreement Government of Guyana Ratio Article 7 Contractor shall be deemed to have fulfilled its expenditure obligation for that phase or period. Petroleum Agreement Government of Guyana Ratio Article 5 Relinquishment of Areas Or b) If prior to the end of the first phase of the initial period of the Petroleum Prospecting Licence issued to the Contractor under Article 3.1 the Contractor elects not to relinquish the entire Contract Area Contractor shall relinquish twentyfive 25 percent of the Contract Area less the exclusions provided for in Article 5.4 If prior to the end of the initial period of the Petroleum Prospecting Licence issued to the Contractor under Article 3.1 an application is made by the Contractor for renewal of the Licence under section 24 1 of the Act the Contractor shall relinquish at the end of the initial period an area equal to at least twenty percent 20 of the Contract Area less the exclusions provided for in Article 5.4 If prior to the end of the first renewal period of the Petroleum Prospecting Licence an application is made by the Contractor for a second renewal of the Licence under section 241 of the Act the Contractor shall then relinquish at the end of this first renewal period an area equal to at least twenty percent 20 of the Contract Area

less the exclusions provided for in Articles 5.4 The areas to be relinquished pursuant to Articles 5.1 5.2 and 5.3 shall a comprise Blocks as defined in the Act; b exclude any Discovery Area together with a reasonable area of protective acreage surrounding the Discovery Area; c exclude any Production Area; be selected by Contractor so that the area relinquished shall comprise one 1 discrete area having regard to any representations made by the Minister with respect to location shape and size; the Blocks to be retained for and during the remainder of the initial period and the first renewal period pursuant to Articles 5.1 5.2 and 5.3 shall constitute one 1 discrete area unless otherwise agreed to by the Minister. In the event that an area or areas cannot be identified for relinquishment in accordance with this Article without including in such area or areas in whole or in part a subsisting Discovery Area or Production Area or the Minister is of the opinion that the areas to be relinquished will not enable licensing separately or jointly with contiguous unlicensed areas then the Minister and Contractor shall 16 Petroleum Agreement Government of Guyana Ratioconsult together with a view to agreeing on the areas to be relinquished in the light of the circumstances then prevailing. If after sixty 60 days from receiving notice of the Contractor's proposed relinquishments the Parties cannot agree on a proposed relinquishment the Parties shall refer the matter to a sole expert pursuant to Article 26. 5.6 For the purpose of this Article a Discovery Area shall not include any Discovery Block which relates to a Discovery in respect of which the Contractor has notified the Minister that the Discovery is not of potential commercial interest pursuant to section 31 1 of the Act unless such Discovery Block forms a part and only to that extent of another subsisting Discovery Area. 5.7 If a Petroleum Prospecting Licence ceases to have effect with respect to Discovery Blocks pursuant to section 32 1 of the Act such reduction in size of the Contract Area shall be treated as an advance relinquishment under this Article and shall reduce the area next required to be relinquished accordingly. 5.8 Without prejudice to the obligations undertaken in Article 4 the Contractor may at any time during the period of the Petroleum Prospecting Licence on giving the Minister no less than three 3 months notice in writing of its intention to do so relinquish any Block or Blocks in the Contract Area pursuant to section 28 of the

Act and in accordance with Articles 5.5 and 5.6. Any such relinquishment shall count towards any subsequent mandatory relinquishments required under Articles 5.1 5.2 or 5.3 above as the case may be.

Petroleum Agreement Government of Guyana Ratio

Article 6 Delegation; Cooperation between Contractor and GGMC

6.1 6.4 The Minister may subject to the provisions of the Act or any other law delegate any person to exercise and perform any of the Ministers functions under this Agreement and anything done by the delegate in pursuance of the delegation shall have the same validity and effect as it would have if done by the Minister. The Minister has delegated GGMC the Delegate to perform inter alia the following functions

- a to monitor in consultation and coordination with the Operator and/or the Contractor the Petroleum Operations carried out by the Contractor;
- b to review any proposed exploration work programme and budgets presented by Contractor under Article 7 and any Appraisal Programme presented by the Contractor under Article 8;
- c to review any Development Plan submitted by the Contractor in connection with an application for a Petroleum Production Licence pursuant to section 34 of the Act to ensure the maintenance and availability for inspection of operating records and reports for Petroleum Operations maintained in accordance with good oilfield practice ; to ensure the Parties compliance with the provisions of this Agreement Petroleum Act and Regulations. The Contractor and the Delegate shall cooperate in good faith in order to enable the Delegate the exercise of the Ministers functions delegated pursuant to this Article and the Contractor shall keep the Delegate advised periodically of all relevant activities taking place during the course of Petroleum Operations and shall provide the Delegate with all available relevant information relating to Petroleum Operations as the Minister or the Delegate may reasonably require. Towards this end the Delegate and the Contractor shall meet at regular intervals but at least once every year to review the progress and results of the Petroleum Operations and to discuss the work programme and other activities to be undertaken in the ensuing months With respect to the matters to be reviewed pursuant to Article 6.3 should the Delegate wish to make any specific proposals or revisions thereto the Delegate shall so notify the Contractor in writing specifying its reasons therefor;

within 18 Petroleum Agreement Government of Guyana Ratio

6.5 6.6

6.7 reasonable time thereafter the Contractor and the Delegate shall meet and endeavour to agree on the proposals or revisions. The Contractor shall consider and take into account the proposals of the Delegate and shall attempt in good faith to reach agreement on such proposals. If the Contractor and the Delegate fail to agree within sixty 60 days of submission by the Contractor the exploration work programme and budget including as appropriate any minimum work programme to be undertaken pursuant to Article 4 submitted pursuant to Article 7 and the Appraisal Programme except in the case of Gas to which the provision of Article 12 shall apply submitted pursuant to Article 8 revised in accordance with any amendments or additions thereto agreed by the Delegate and the Contractor shall] be deemed adopted. Nothing herein above provided shall preclude the right of the Minister to delegate any additional function to the Delegate or subject to Article 6.1 to delegate from time to time any functions including those herein contained to any other agency of Government. A delegation shall not increase the obligations or liabilities of the Contractor and written notice of any delegation shall be given promptly to the Contractor. Any approvals required by the Minister or delegates of the Minister shall not be unreasonably withheld or delayed. If the Contractor requests required approval from the Minister or delegates of the Minister such approval shall be deemed as granted if no response is provided within sixty 60 days of the request. In the event due to operational constraints an approval is required within less than sixty 60 days the Delegate upon the request of the Contractor. will make every reasonable effort so that the Minister will favorably consider granting such approval within the required shortened timetable. The Minister and the Delegate shall upon request either provide to the Contractor or assist the Contractor in obtaining the assistance required for the following approvals and/or permits to facilitate the Contractor to fulfill requirements of the contract including but not limited to the following a all approvals to be issued by Government agencies or local government institutions which are required to conduct Petroleum Operations including. without derogating from the generality of the aforesaid. chartering supply boats and allowing them to sail to and from the License Area hiring helicopters and allowing them to fly to and from the License Area use of explosives as well as approvals

necessary to import goods and services free from duties and taxes; approvals for easements and rightofway to enable Contractors to conduct operations; c approvals for security for field operations and personnel 19 Petroleum Agreement Government of Guyana Ratio f g h i G permission for entry and exit visas and working permits for Contractors employees subcontractors and their dependents; supply reports analyses samples geological geophysical and production data necessary to Contractor from areas inside and outside the Contract Area; approvals to export hydrocarbons. and use essential infrastructure necessary for the economic export of hydrocarbons at normal commercial terms. Environmental approvals required in order to conduct Petroleum Operations in the License area or which are required to conduct operations elsewhere that are associated with said Petroleum Operations; Communications permits to allow for international communications from the License area including mobile phones land line phones highspeed internet connections facsimile transmissions. etc.; Permits to erect refining facilities. laying pipes for transporting oil and gas and erecting LNG facilities; In the event pursuant to Section 59 of the Act the Minister grants any person the right to carry on geological geophysical surveys and investigations in any block included in the License area the raw data of those surveys and investigations will promptly after their completion be made available without any charge to the Contractor. 20 Petroleum Agreement Government of Guyana RatioArticle 7 Annual Work Programme and Budget 7.1 Within sixty 60 days after the Effective Date. the Contractor shall prepare and submit to the Minister in detail a work programme and budget setting forth the Prospecting Operations which the Contractor proposes to carry out including as appropriate any minimum work obligations to be undertaken pursuant to Article 4 during the remaining portion of the Calendar Year. In subsequent years no less than one 1 month before the beginning of the Calendar Year the Contractor shall prepare and submit to the Minister a work programme and budget setting forth Petroleum Operations which the Contractor proposes to conduct during the upcoming Calendar Year. The Contractor may. for good cause amend the details of any work programme ur budget submitted to the Minister pursuant to Article 7.1 provided that a notice of the details of the reasons for the amendments is given to the Minister; b such amendments

shall not have the effect of reducing the minimum work obligations undertaken under Article 4 without the prior consent in writing of the Minister; c any proposed amendment shall be subject to review pursuant to Article 6. Petroleum Agreement Government of Guyana RatioArticle 8 Discovery and Development 8.1 Where pursuant to section 30 of the Act notice has been given to the Minister of a Discovery in the Contract Area the Contractor shall forthwith inform the Minister of the steps it proposes to take to satisfy the requirements of section 30 1 a iii of the Act. 8.2 Where the Contractor pursuant to section 31 1 of the Act has informed the Minister that in its opinion the Discovery is of potential commercial interest the Contractor shall as soon as practicable thereafter submit for the consideration of the Minister its proposals for an Appraisal Programme to meet the requirements of section 30 1 b of the Act. 8.3. Where an Appraisal Programme has been adopted by the Contractor pursuant to Article 8.2 the Minister may on application by the Contractor pursuant to section 31 2 of the Act. stating reasons therefor extend the period within which application may be made by the Contractor for a Petroleum Production License. 8.4 Where the Contractor has made an application to the Minister for a Petroleum Production Licence in respect of any part of the Contract Area in accordance with section 34 1 of the Act such application shall be accompanied by the proposals required under section 34 3 of the Act hereinafter referred to as the Development Plan and shall satisfy the provisions of section 36 of the Act and in consultation with GGMC prepare and implement a programme for g and employment of Guyanese nationals in each phase and level of pum Operations and for the development of management and technical or the safe and efficient conduct of Petroleum Operations. fhe application and GGMC and Contractor shall meet to discuss the application with a view to ensuring that the requirements of Article 8.4 are met. In the event that the Parties are unable to agree on amendments to the application to meet such requirements within sixty 60 days from the date of aforesaid application or such longer period as the Parties shall agree. or where the Minister fails to respond to or act on the aforesaid application within sixty 60 days. the Contractor may refer the matter to a sole expert pursuant to Article 26 for determination within sixty 60 days of appointment of such expert or such other time period as may be agreed between the

Contractor and the Minister. 8.6 Where the Minister considers that the aforesaid application has met the requirements of Article 8.4 he shall within sixty 60 days of receipt thereof so notify the Contractor. In such event or where in the event of a dispute it is 22 Petroleum Agreement Government of Guyana Ratio 8.7 8.8 determined by the sole expert pursuant to Article 26 that the Contractor has made an application which meets the requirements of Article 8.4 provided the Contractor is not in default under this Agreement the Minister shall grant within sixty 60 days of such notification or determination as the case may be to Contractor a Petroleum Production Licence in the Form D of the schedule as specified in the Regulations over the area for which the application has been made on terms and conditions consistent with this Agreement and the Act and Regulations which will enable the Contractor to carry on Petroleum Operations in the Production Area in accordance with the Development Plan wherein the level of production set shall be consistent with the maximum efficient rate of production which conforms to sound reservoir engineering principles in accordance with good international petroleum industry practice. In the event the Minister imposes policybased production limits on production below those consistent with maximum efficiency rates for the field or fields any such production limits will be imposed countrywide and shall be allocated proportionately based upon demonstrable verifiable field production capacities. While the Contractor holds a Petroleum Prospecting Licence or has made an application pursuant to Article 8.4 and in accordance with section 34 1 of the Act the Minister shall not grant a Petroleum Production Licence in respect of all or part of the Contract Area or area covered by such application whether on a geographical or geological basis to any third party. Where the Contractor pursuant to section 31 1 of the Act has served notice on the Minister that in its opinion a Discovery made in the Contract Area is not of potential commercial interest the provisions of section 32 1 of the Act shall apply. The Contractor may apply for a renewal of a Petroleum Production Licence for a maximum ten 10 years. The application for renewal shall be granted as long as the Contractor is in good standing under the Licence. Natural Gas. In the event of any NonAssociated Gas discovery within the Contract Area in recognition of the fact that Natural Gas

projects enerally have much longer lead times from discovery to first commercial roduction than is the case for Crude Oil projects the Minister shall grant ontractors request for the maximum ten 10 year Petroleum Production icence renewal so long as Contractor is in good standing under the a7 Licence. oO The Minister shail not refuse to grant the renewal of a Petroleum Production Licence under section 401 of the Act without first providing the Contractor; ii Notice stating the grounds of the intended refusal and Petroleum Agreement Goverment of Guyana RatioGi Ninety 90 calendar days following the date of the notice referenced in Article 8.9bi to respond to or remedy the stated grounds for refusal. Petroleum Agreement Goverment of Guyana RatioArticle 9 Records Reports and Information; Confidentiality 9.1 Records Reports and Information a b f The Contractor shall at all times while this Agreement is in force maintain and submit to the Minister in accordance with the provisions of the Act and the Regulations the Petroleum Production Licence and this Agreement full and accurate reports. records retums and accounts of Petroleum Operations in the Contract Area. All data well logs maps magnetic tapes cuts of cores and cutting samples and all other geological and geophysical information obtained by the Contractor in the course of carrying out Petroleum Operations hereunder and all geological technical financial and economic reports studies and analyses generated in relation thereto hereinafter referred to as Petroleum Data shall be submitted to the Minister in accordance with the Regulations. The Contractor may freely export for processing or laboratory examination or analysis samples or other origina materials constituting Petroleum Data provided that samples equivalent in size and quality or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Minister. Petroleum Data shall be the joint property of the Minister and the Contractor but shall become the sole property of the Minister with respect to any area which ceases to be part of the Contract Area whether as result of relinquishment or expiry surrender or termination of a Licence or otherwise in accordance with the Act from the date on which such area ceases to be part of the Contract Area. The Minister through duly appointed representatives upon providing the Contractor with at least seven 7 days written notice shall be entitled to observe the Petroleum Operations conducted by the Contractor at his sole

cost and expense and at all reasonable times to inspect all assets records and data kept by the Contractor relating to such Petroleum Operations. In the exercise of such rights under this paragraph the Minister shall not unduly interfere with the Contractors Petroleum Operations under this Agreement. Nothing in this Article shall be construed as requiring the Contractor or any of the Parties comprising the Contractor to disclose any of its proprietary technology or that of its Affiliated Companies which is not acquired in the course of Petroleum Operations under this Agreement. 25

Petroleum Agreement Government of Guyana Ratio9.2 Confidentiality a All Petroleum Data information and reports obtained or prepared by the Contractor hereunder shall so long as they relate to any part of the Contract Area be treated as confidential and each of the Parties undertakes not to publish reproduce or otherwise deal with such Petroleum Data or to disclose the same or the thereof to any other person without the consent in writing of the other Parties such consent not to be unreasonably withheld provided however that subject to Article 9.2 b this Article shall not i prevent disclosure by the Contractor aa bb ce dd ee Petroleum Agreement Government of Guyana Ratio to an Affiliated Company or employees of an Affiliated Company; to consultants professional advisers data processing centres laboratories and SubContractors where disclosure is essential to work for Contractor; to a bank or other financial institution where disclosure is essential to obtain financing for Contractor or Affiliated Company of Contractor; to the extent required by any applicable law or the regulations of any stock exchange upon which the shares of the Contractor or an Affiliated Company are quoted by applicable law or by governmental order decree regulation or rule or to the extent required under any legal proceeding or any court order binding on Contractor or Affiliated Company of Contractor; to bona fide prospective assignees or transferees of an interest hereunder of the Licence or of the Contractor or in connection with merger consolidation or a sale of stock of the Contractor or an Affiliated Company thereof in connection with data trades of data information and reports already known to the Operator or the Contractor or Affiliated Company prior to the Effective Date; or of data information and reports acquired independently from a third party that represents that it has the right to disseminate such data at the time it is acquired by the 26b c d e Petroleum

Agreement Government of Guyana Ratio Contractor or Affiliated Company; ii prevent disclosure pursuant to section 4 of the Act provided however that neither the Minister nor Contractor shall disclose Petroleum Data relating to any area subject to a Licence to a competitor of the Contractor without the prior written consent of the other Party; or iii be construed as imposing on any Party any obligation hereunder with respect to any petroleum data information or reports which are without disclosure by such Party generally known to the public. Any petroleum data information or reports disclosed by the Operator or the Contractor pursuant to this Article shall be disclosed on terms which ensure that the data information or reports aforesaid are treated as confidential by the recipient except for disclosures made pursuant to Article 9.2 a i dd and prompt notice of all disclosures shall be given to the Minister. All petroleum data which becomes the sole property of the Minister pursuant to Article 9.1 d shall continue to be treated as confidential by the Contractor for a period of one 1 year from the date on which it became the sole property of the Minister but may be used by the Contractor in connection with data trades with the prior written consent of the Minister such consent not to be unreasonably withheld subject however to Article 9.2 b. Where a Licence ceases to be in force with respect to any area except if Contractor was granted a Petroleum Production Licence with respect to part of such Licence area. the Contractor shall deliver to the Minister originals of all petroleum data and other information relating 10 such areu pursuant to regulation 26 of the Regulations provided however that. un application duly made to him pursuant to regulation 28 of the Regulations the Minister shall permit the Contractor to retain copies of petroleum data and information relating to the Contract Area subject to Article 9.2 b. Notwithstanding the provisions of Article 9.1 d all the Contractors proprietary technology except technology for which the cost of development has been approved as Recoverable Contract Cost under this Agreement shall remain of the Contractor. Article 10 Annual Licence Rental Charge The Contractor shall pay to the Government without demand on the Effective Date of this Agreement in the first astance and in each subsequent year thereafter on the anniversary date of the Petroleum Prospecting Licence or the date of grant of any Petroleum Production Licence as the case may be

so long as the said Licence remains in force an annual Licence rental charge of two hundred thousand United States Dollars US200000. in respect of the Contract Area for the entire Exploration Period and such payments shall apply to those areas remaining after taking into account any relinquishments pursuant to Article 5 as specified below. Payments under this Article 10 shall be paid directly into bank accounts held and controlled by GGMC. Contractor shall verify such bank accounts and GGMC agrees to cooperate. assist and provide Contractor any information it requires to conduct such verification.

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Article 11 Cost Recovery and Production Sharing

11.1 Subject to the terms and conditions of this Agreement the Contractor shall bear and pay all Contract Costs incurred in carrying out Petroleum Operations and shall recover Contract Costs only from Cost Oil and/or Cost Gas as herein provided.

11.2 All Recoverable Contract Costs incurred by the Contractor shall, subject to the terms and conditions of any agreement relating to Non-Associated Gas made pursuant to Article 12 be recovered from the value determined in accordance with Article 13 of Crude Oil hereinafter referred to as Cost Oil and/or Natural Gas Cost Gas produced and sold from the Contract Area and limited in any Month to an amount which equals seventy-five percent 75 of the total production from the Contract Area for such Month excluding any Crude Oil and/or Natural Gas used in Petroleum Operations or which is lost.

Recoverable Contract Costs means such costs as the Contractor is permitted to recover as from the date they have been incurred. pursuant to the provisions of Annex C. To the extent that in any Month Recoverable Contract Costs exceed the value of Cost Oil and/or Cost Gas determined in accordance with Article 13 and/or Article 12 the unrecoverable amount shall be carried forward and subject to the limitation stipulated in Article 11.2 shall be recoverable in the immediately succeeding Month and to the extent not then recovered in the subsequent Month recoverable Contract Costs have been satisfied to the extent aforesaid hereinafter referred to as Profit Oil and/or Profit Gas as the case may be shall be shared between the Government and the Contractor for each Field in the following proportions Contractor fifty percent 50 and Minister fifty percent 50.

11.5 The quantity of Cost Oil and/or Cost Gas actually utilized in satisfying the Recoverable Contract Costs may be

allocated by the Contractor to production costs and be calculated as specified in Section 11.9 below.

11.6 Subject to the provision of Article 14, the Profit Oil and Profit Gas shall be shared between the Government and Contractor on a Monthly basis according to their respective entitlements as set

out in Article 11.4. 11.7 . To the extent that the actual quantities and costs required to determine

Cost Oil and Cost Gas and Profit Oil and Profit Gas for the Month in question are not known

Crude Oil and Natural Gas sharing shall be calculated on an interim basis each Month using the

following 29 Petroleum Agreement Government of Guyana Ratio a unrecovered Recoverable

Contract Cost; b estimated current Recoverable Contract Cost by reference to the agreed work

programme and budget supplemented by any other relevant documents or information which are

accepted by Contractor and Minister as being reliable indicators of the actual position for the Month

in question; c estimated production for the Month in question; d Crude Oil and Natural Gas price

from the previous Month. 12.8 Retroactive adjustments shall be made to the Crude Oil and Natural

Gas entitlements and shall be agreed with the Minister based on recalculations utilizing actual

quantities of Crude Oil and Natural Gas produced and saved and Recoverable Contract Costs.

Any revised entitlements shall be made subject to any applicable lifting agreements as soon as

practicable after such elements have definitely been determined. 11.9 The Contractor shall have the

right to use in any Petroleum Operations as much of the production as may reasonably be required

by it therefor and the quantities so used or lost shall be excluded from any calculations of Cost Oil

and Cost Gas and Profit Oil and Profit Gas entitlement. Petroleum Agreement Government of

Guyana Ratio Article 12 Associated and Non Associated Gas. 12.1 Associated Gas a The

Associated Gas produced from any Oil Field within the Contract Area shall be insofar as practical

from technical or environmental considerations with priority used for the purposes related to the

operations of production and production enhancement of Oil Fields such as Gas Injection Gas

Lifting and power generation. b Based on the principle of full utilisation of the Associated Gas

provided that such utilisation is commercially viable and with no impediment to normal production of

Crude Oil a plan of utilisation of the Associated Gas shall be included in the Development Plan of

each Oil Field. If there is any excess Associated Gas in the Oil Field after utilisation pursuant to Article 12.1 a the Contractor shall carry out a feasibility study regarding the utilisation of such excess Associated Gas of such Oil Field. Such feasibility study if carried out before submission of the Development Plan of an Oil Field shall be included in the Development Plan. In the event that the Contractor conducts a further feasibility study of the utilisation of the excess Associated Gas of such Oil Field such further feasibility study shall be submitted to the GGMC for review and discussion. If the excess Associated Gas in any Oil Field is utilized the construction of facilities or such utilisation and the production of excess Associated Gas shall be carried out while a Petroleum Production Licence continues in force. If the Contractor believes that excess Associated Gas of an Oil Field has commercial value the Contractor shall be entitled, but not required, to make further investment to utilise such excess Associated Gas subject to terms at least as attractive as those established for Crude Oil in Article 11 including but not limited to cost recovery for such further investment. If the Contractor believes improved terms are necessary the Parties shall carry out friendly negotiations in a timely manner to find a new solution to the utilisation of the said excess Associated Gas and reach an agreement in writing. a If the Contractor does not believe that the Associated Gas has commercial value but the Minister believes the Associated Gas does have commercial value the Government may utilise the Associated Gas provided there is no impediment to normal production of Crude Oil. All handling from the point of separation of Crude Oil shall be at the sole risk and expense of the Government and will not affect the amount of Cost Oil and Profit Oil due to Contractor. . e Expenses incurred by the Contractor in the production and use of the Associated Gas of an Oil Field as stipulated in Article 12.1 and those 31 Petroleum Agreements Government of Guyana Ratiof incurred in carrying out any feasibility study on the utilisation of the excess Associated Gas shall be charged to the development cost of the Oil Field and shall be cost recoverable. If the Parties agree that the excess Associated Gas of an Oil Field has no commercial value then such Gas shall be disposed of by the Contractor provided that there is no impediment to normal production of the Crude Oil in the most economic manner consistent with good international

petroleum industry practice. 12.2. Non Associated Gas a When the Contractor in accordance with Article 8.2 has informed the Minister of any Non Associated Gas discovery within the Contract Area that is of potential commercial interest the Contractor shall inform the Minister whether Contractor believes such discovery is potentially commercial under the current Agreement terms. If the Contractor believes that the fiscal terms will have to be revised in order to economically commercialize the NonAssociated Gas discovery the Contractor shall propose revisions to the fiscal terms as the basis for entering into good faith negotiations to reach mutually acceptable terms for developing the NonAssociated Natural Gas discovery. The agreement which shall form an annex to this Agreement. shall be based on and include the following principles For a period of six 6 months from the date of the notice delivered to the Minister under Article 8.2 the Contractor and the Minister shall engage in good faith negotiations of such revisions to Article 11 that would be necessary in order to provide the Contractor with project economics that will provide the Contractor with an annual rate of return of not less than eighteen percent 18. The Parties recognize that in order to achieve an economically viable development of NonAssociated Natural Gas different fiscal regimes may have to be considered. In the event the Parties cannot agree upon the necessary revisions to Article 11 a sole expert shall be engaged pursuant to Article 26.3. Once the sole expert renders its decision the Contractor shall review the decision and shall notify the Minister as to whether it shall proceed with the development of the NonAssociated Gas discovery under the terms of the sole expert decision. In the event the Contractor elects not to proceed the Contractor shall relinquish the nonAssociated Gas discovery to the Government. iii The time period between the notice of discovery provided for in section 311 of the Act and the application for grant of a Petroleum Production Licence shall be extended pursuant to 32 Petroleum Agreement Government of Guyana Ratiosection 312 of the Act if necessary to provide reasonable time as agreed between the Parties to conduct an Appraisal Programme develop a Gas market and design and construct facilities necessary to commercialize the Natural Gas. b Following the signature of the agreement pursuant to subparagraph a above the Contractor shall work out an Appraisal Programme for the discovered

Gas Field according to the terms and conditions determined in the said agreement and submit it to the GGMC for review pursuant to Article 6.4. The Contractor shall carry out the Appraisal Programme which was reviewed and agreed upon with GGMC. The expenses incurred in carrying out the said Appraisal Programme by the Contractor shall be charged to the Exploration Costs of the Contract Area and shall be cost recoverable as permitted under the terms of Annex C. c After completion of the Appraisal Programme of a Gas Field. the Contractor shall submit a report on the Appraisal Programme to GGMC for its review and discussion. If the Contractor retains a Gas Field beyond the expiration of the Exploration Period pursuant to Article 12.2 the Contractor shall pay to the Minister at the commencement of each year of the retention period an annual rental to be arrived at through friendly negotiations but which shall be no less than Twentyfive thousand United States Dollars US25000. The holding fee shall be refunded to Contractor on a pro rata daily basis in the event the Contractor relinquishes the Gas Field or declares such Gas discovery to be a commercial discovery prior to the end of such year. 2.3 General Conditions Applicable to Natural Gas a Subject to the Governments election to take its production in kind and. reserving its rights to market its own production the Contractor shall have the sole responsibility for marketing all the available Natural Gas from the Contract Area and for negotiating for the sale thereof on a joint basis at fair market prices and terms common to both the Minister and the Contractor in accordance with Third Party Sales principles. The Contractor will pursue markets both within and outside Guyana and seek to market Natural Gas to the highest realization outlets afier deduction of development. production and transportation costs. Insofar as possible. depending upon the market for natural gas and the cost of development production and processing thereof the Contractor will seek to recognize Natural Gas potential value at the international value of alternative fuels in the end user market of the buyers. b The Contractor shall have the right but not the obligation to process 22 33 Petroleum Agreement Government of Guyana RatioNatural Gas for conversion to liquids chemicals or similar Gas utilisation projects and Contractor shall have the right to dispose of the liquids or products therefrom. The Contractor shall have the right to process Natural Gas for recovery of the liquids

contained therein. Natural Gas Liquids NGLs recovered and sold shall be valued based upon the international value of such products 48 published in Platts and adjusted to reflect the fair market value of such products FOB Guyana. In addition the Contractor shall have the right to liquefy the Natural Gas for sale as LNG and/or the right to compress the Natural Gas to accommodate sales as compressed natural gas CNG. c The Contractor shall have the right to use Natural Gas both Associated Gas and NonAssociated Gas as may be required for Oil Field and Gas Field operations including the right to reinject for pressure maintenance and enhanced recovery without charge fee or royalty.

12.4 General Conditions Related to Petroleum Operations

a Subject to the approvals of appropriate governmental authorities which approvals shall not be unreasonably withheld, the Contractor shall have the right to construct operate and maintain roads, drill water wells and to place and/or construct onshore and offshore fixtures and installations necessary to conduct the Petroleum Operations including but not limited to storage tanks trunk pipelines shipment installations pipelines floating or fixed platforms cables or similar lines liquefaction processing and compression located inside or outside the Contract Area as well as construct operate and maintain or lease facilities for the transportation of Crude Oil and Natural Gas from the Contract Area. Any required governmental approvals may be conditional on the use by other producers of the excess capacity if any of those facilities for a price to be agreed upon from time to time by the Contractor. Where the Minister and Contractor agree that a mutual economic benefit can be achieved by constructing and operating common facilities the Contractor shall use its reasonable efforts to reach agreement with other producers on the construction and operation of such common facilities.

b Subject to negotiations on a reasonable price and available capacity rights the Contractor may have access to and use of any export facility or pipeline or other facilities or infrastructure built by the Government or by any wholly or partially owned Guyana state enterprises on terms no less favorable than those of any other party having access or use of such facility.

c Subject to negotiations as to a reasonable price and ownership interest in the facilities the Contractor may have the right to participate in the construction ownership and operation of any of the types of facilities

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Guyana Ratiodescribed in subclause 12.4a above that are built by the Government or by any wholly or partially owned state enterprises or by any third parties on terms no less favorable than those of any other party participating therein. as JO Petroleum Agreement Government of Guyana RatioArticle 13 Valuation of Crude Oil or Natural Gas 13.1 Where one hundred percent 100 of the sales of Crude Oil or Natural Gas made by the Contractor during a Calendar Month are Third Party Sales then the price shall be determined as the net realized price i.e. after deducting commissions and brokerages for that sale at the F.O.B. point of delivery. Where Crude Oil or Natural Gas is sold by the Contractor other than in one hundred percent 100 Third Partv Sales during a Calendar Month then that Crude Oil or Natural Gas shall be valued at the following applicable price b the prices aforesaid shall be determined as follows i in the event that fifty percent 50 or more of the total volume of sales by the Contractor during the Calendar Month of Crude Oil or Natural Gas of a given quality produced hereunder from a Field were Third Party Sales as hereinafter defined the price of all Crude Oil or Natural Gas from such Field of that quality shall be deemed to be the simple arithmetic average price actually realised. calculated by dividing the total receipts from all such sales calculated FOB the Delivery Point by the total number of Barrels of Crude Oil or Mcfs of Natural Gas sold from such Field in such sales; in the event that less than fifty percent 50 of the total volume of sales by the Contractor during the Calendar Month of Crude Oil or Natural Gas of a given quality produced hereunder from a Field were Third Party Sales the price of all Crude Oil or Natural Gas from such Field of that quality will be determined by the arithmetic average of aa The simple arithmetic average price actually realised in the Third Party Sales during the Calendar Month of such Crude Oil produced hereunder if any calculated by dividing the total receipts from all such sales calculated FOB at the Delivery Point by the total number of barrels of Crude Oil sold in such sales from such Field; and bb The simple arithmetic average price per barrel at which one or more crude oils of similar qualitiv to the Crude Oil are being sold. such price being determined by calculating the average for the Month in which production takes place uf the mean of the high and low FOB price or prices for each day of those crude oils as quoted in Platts Crude Oil Market Wire daily publication. In

the event that Platts 36 Petroleum Agreement Government of Guyana Ratio ceases to be published or is not published for a period of thirty 30 consecutive days then the Parties shall agree on an appropriate alternative publication. In determining the final price account shall be taken of any differences between the Crude Oil and the crude oils quoted in Platts for quality API gravity sulphur pour point product yield as well as differences in quantity delivery time payment and other contract terms to the extent known. Allowance will also be made to take account of the market area into which the Crude Oil is sold should it be different from the area used for Platts. The selected crude oils will be agreed between Contractor and the Minister in advance for each Calendar Year and in making the selection preference will be given to crude oils of similar quality to Crude Oil from the relevant Field. The arithmetic average aforesaid will be determined by the percentage volume of total sales of Crude Oil by Contractor that are and that are not as the case may be Third Party Sales during the Calendar Month in question. In the case of Natural Gas, the Contractor and the Minister shall agree on a methodology for valuation of Natural Gas under this Article 13.1bii which represents the fair market value of the calorific value of alternative fuels in the end user market of the buyers such as Natural Gas FOB Guyana taking into account composition of the Natural Gas. This methodology will be reviewed annually and modified if necessary. iii all such prices will be adjusted to FOB Delivery Point. iv for the purposes of this Article Third Party Sales of Crude Oil or Natural Gas made by the Contractor shall include any Third Party Sales made by the Contractor or an Affiliated Company of Contractor on the Minister's behalf pursuant to Article 14 but shall exclude aa Petroleum Agreement Government of Guyana Ratio sales whether direct or indirect through brokers or otherwise of any seller to any Affiliated Company of such seller unless at demonstrably arm's length price for example where an Affiliated Company of Contractor buys and then resells to a third party at an arm's length price which is disclosed to the Minister; and b Crude Oil or Natural Gas exchanges barter deals or restricted aa distress transactions or any Crude Oil or Natural Gas transaction which is motivated in whole or in part by considerations other than the usual economic incentives for commercial arm's length crude oil or natural gas sales; and c Government

to government sales. Contractor shall be responsible for determining the relevant prices for sales of Crude oil or Natural Gas that are not Third Party Sales in accordance with this Article. The calculation basis of calculation and the price arrived at shall be supplied to the Minister and shall be subjected to agreement by the Minister before it is finally determined. Pending final determination the last established average Crude Oil or Natural Gas price shall be used. During the first Calendar Year of production from the Contract Area the Contractor and the Minister will meet in order to establish a provisional selection of the crude oils and an appropriate mechanism for the purposes of giving effect to Article 13.1 bii1 above. This selection will be reviewed annually and modified if necessary. In the event of any difference or dispute between the Contractor and the Minister concerning selection of the crude oils or natural gas the calculation or the basis of calculation of the prices and the prices arrived at or generally about the manner in which the prices are determined according to the provisions of this Article the matter or matters in issue shall finally be resolved by a sole expert appointed pursuant to Article 26.3. For the purposes of this Article. in determining the quality of a Crude Oil regard shall be given to all relevant characteristics including but not limited to gravity sulphur and metal pour point and product yield. In the case of Natural Gas quality of the Natural Gas shall be determined based on its composition.

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Article 14 Disposal of Production 14.1 14.2 14.3 Each of the Parties shall have the right to take in kind at the Delivery Point and separately dispose of its share of the total quantities of production available under this Agreement. The Contractor shall have the right to use as much production as may be needed in any Petroleum Operations within the Contract Area and also within the transportation and terminal system. In the event of third party usage of the transportation terminal systems the quantities so used or lost outside the Contract Area shall be proportionate to. aggregate use of that transportation and terminal system. All quantities so used or lost shall be excluded from any calculations of entitlement pursuant to Article 11. Unless the Government requests the Contractor to sell the Governments share of Profit Oil or Profit Gas as provided in Section 14.3 below the quantity of production to which the Government is entitled pursuant to Article

11 shall be measured and delivered to the Government at the Delivery Point and the Government shall be responsible for all costs and risks associated with the Government's Lifting Entitlement from and after the Delivery Point. Within twelve 12 months after the Minister's approval of a Development Plan or within a later period as may be agreed between the Parties but in any event no longer than three 3 months before the first scheduled lifting of Crude Oil the Contractor shall propose to the Minister off taking procedures to govern the method whereby the Parties will nominate and lift their respective shares of Crude Oil. The details of such procedures shall be discussed and agreed upon between Minister and Contractor. The major principles of such procedures shall include the following Lifting shall be carried out so as to avoid interference with Petroleum Operations. In the event that any Party shall find itself unable for any reason to lift such quantities of Crude Oil as are to be lifted in accordance with procedures it shall forthwith notify the other Party to that effect. Such procedures shall include such deterrents as the Parties may agree to prevent a Party from delaying the lifting of any quantities of Crude Oil not so lifted. to a later period. c In the absence of any agreement to the contrary between the Parties the Contractor and the Minister shall share in each type of grade of Crude Oil in proportion to their respective Lifting Entitlement. The Contractor shall if requested by the Minister use reasonable efforts to market abroad on competitive terms all or part of the Minister's Lifting Entitlement subject to payment by Minister of costs normally borne by a seller in such transactions and on other terms to be agreed including an agreed marketing fee in respect thereof. The Minister shall provide the Contractor with at least 39 Petroleum Agreement Government of Guyana 6 months notice before changing between receiving payments in kind as provided under Article 14.1 and seeking the Contractor to market the Minister's Lifting Entitlement under this Article. 14.4 Subject to the provisions of Article 17 hereof the Contractor shall have the right to export at the export point chosen for this purpose all Petroleum to which it is entitled under this Agreement free of any duty tax or other financial impost and to receive and retain abroad all proceeds from the sale of such Petroleum. 14.5 The Contractor agrees to abide by the laws regulations orders directives and notifications of Guyana which shall also apply to its Affiliated

Companies engaged in Petroleum Operations in Guyana. 40 Petroleum Agreement Government of Guyana

Article 15 Taxation and Royalty

15.1 Subject to Article 32 and except as provided in Article 15.2 15.8 and except as otherwise set forth in this Article 15.1 no tax other than tax on income and corporate tax which shall be paid for by the Minister in accordance with Section 15.4 below value added tax excise tax duty fee charge or other impost shall be levied at the date hereof or from time to time thereafter on the Contractor any of its shareholders members partners parties comprising the Contractor or Affiliated Companies in respect of income derived from Petroleum Operations or in respect of any property held transactions undertaken or activities performed for any purpose authorised or contemplated hereunder other than a subject to the provisions of Article 21 import duties at the rates specified from time to time in the Customs Act Cap. 8201; b taxes duties fees or other imposts for income derived from specific services performed by the Contractor for the public or commercial enterprises and which is unrelated to income derived from Petroleum Operations under this Agreement; c rent due to Government in respect of any land rights granted or assigned to the Contractor annual licence rental charges due under Article 10; subject to Article 15.7 local government rates or taxes being rates or taxes not calculated by reference to income under laws of general application and which are nondiscriminatory are commercially reasonable and do not result in a rate or tax to Contractor in excess of those generally applicable in Guyana; i stamp duties ii registration fees. 111 licence fees. and iv any other similar duty. fee or other impost of a minor nature. provided the above referenced categories are imposed under laws of general application.

15.2 Except as provided in this Article 15 Contractor Affiliated Companies Sub Contractors and individuals who are expatriates shall be subject to the income tax laws of Guyana including the Income Tax Act of Guyana Cap. 8101 and the Corporation Tax Act of Guyana Cap. 8103 and shall separately comply with the requirements of those laws in particular with respect to filing returns assessment of tax and keeping and showing of books and records. co 7A us The taxable income of the Operator and the Contractor arising in each year of assessment under this Agreement for purposes of the income tax laws of Guyana including the Income Tax Act and the

Corporation Tax Act referred to in Article 15.2 shall include the amounts of Contractors income tax and corporation tax 4] Petroleum Agreement Government of Guyana Ratio15.4 15.5 paid pursuant to Article 15.4. The Minister hereby agrees a that a sum equivalent to the tax assessed pursuant to Article 15.2 and 15.3 will be grossed up so that Operator and the Contractor will not be liable to pay any tax in excess of the tax paid on their behalf by the Minister hereunder and the grossed up amount will be paid by the Minister to the Commissioner General Guyana Revenue Authority on behalf of the Contractor and that the amount of such sum will be considered income of the Contractor; and b that the appropriate portion of the Governments share of Profit Oil delivered in accordance with the provisions of this Agreement shall be accepted by the Minister as payment in full by the Contractor of Contractors share of each of the following levies whatsoever the applicable rate of such levies may be which the Minister shall then pay and such levies shall be deemed paid on behalf of the Contractor under Article 15.4 a to the Commissioner General. Guyana Revenue Authority a the share of royalty payable by Contractor pursuant to Article 15.6; ii the Contractors and Operators share of the income taxes imposed by the laws of Guyana including but not limited to income tax imposed by the Income Tax Act and corporation tax imposed by the Corporation Tax Act and payable at the date hereof or from time to time thereafter and any other levy or charge on income or profits which may become payable from time to time under any laws acts. statutes regulations or orders by the Government and iii any other similar charge imposed and payable in respect of Petroleum Operations at the date hereof or from time to time hereafter except charges of the type specified in Article 15.1 ab. The Operator and the Contractor shall provide the Minister with the Operators and the Contractors income tax returns to be submitted by the Minister to the Commissioner General Guyana Revenue Authority so the Minister can pay income tax on behalf of the Operator and the Contractor as provided under Article 15.4 a. On such returns the Minister shall note that he is paying the income taxes on behalf of the Operator and the Contractor. so that the Commissioner General Guyana Revenue Authority can properly prepare the receipts required under this Article 15.5. Within one hundred and eighty 180 days following the end of each year of

assessment the Minister shall furnish to Operator and the Contractor proper tax certificates in the Operators and the Contractors name from the Commissioner General Guyana Revenue Authority evidencing the payment 42 Petroleum Agreement Government of Guyana Ratio of the Operators and the Contractors income tax under the Income Tax Act and corporation tax under the Corporation Tax Act. Such certificates shall state the amount of tax paid individually on behalf of Operator Contractor or parties comprising the Contractor and other particulars customary for such certificates.

15.6 The Governments share of Profit Oil specified in Article 11 includes royalty payable by the Contractor at the rate of one percent 1 of Crude Oil produced and sold and delivery to the Minister pursuant to Article 14 of his share of Profit Oil equivalent to royalty shall constitute payment of such royalty in kind. Within one hundred and eighty 180 days following the end of each year of assessment receipts evidencing payment of Contractors royalty shall be furnished by the Minister to the Contractor stating the amount and other particulars customary for such receipts.

15.7 Subject to the conditions of section 49 of the Act the Minister may remit in whole or in part or defer payment of any royalties payable by Contractor.

15.8 Nothing in this Agreement shall be construed to place an obligation on the Government to file a tax return declaring its share of production or profit share or to regard such profit share as income within the meaning of section 5 of the Income Tax Act Cap 8101 or section 4 of the Corporation Tax Act Cap 8103

Sees BES The Minister hereby agrees that the Contractor and the Operator shall be exempted from the Property Tax Act pursuant to section 51 of the Act and any other act which amends or replaces in part or in whole the Property Tax Act. Minister agrees that for the duration of the Exploration Period and for any area within the Contract Area where exploration activity is in progress the provisions of section 10b of the Corporation Tax Act Cap 8103 including any successor provisions to section 10b of the Corporation Tax Act Cap 8103 Shall not apply to the Contractor with respect to any payments made to any Affiliated Companies or SubContractors. Notwithstanding any provision to the contrary in this Article. Affiliated Companies or NonResident SubContractors shall not be subject to the provisions of the Income Tax Act of Guyana Cap. 81.0 and the Corporation Tax Act of Guyana Cap 8103 during the Exploration Period on

income earned in Guyana for any given tax year if the Affiliated Company or NonResident Sub Contractor has conducted business in Guyana for not more than one hundred eighty three 183 days on a cumulative basis in the tax year of assessment. 15.11 There shall be no tax duty fee withholding charge or other. impost applicable on interest payments dividends deemed dividends transfer of profits or deemed remittance of profits from Contractors or parties comprising the Contractor Affiliated Companies or NonResident SubContractors branch in Guyana to its foreign or head office or to Affiliated companies 43 Petroleum Agreement Government of Guyana Ratio15.12 The Expatriate employees of the Operator the Contractor Affiliate companies and the Subcontractor shall be liable to pay personal income tax in Guyana on income earned in Guyana. Guyana represented herein by the Minister shall cause the proper authorities to issue appropriate tax certificates to expatriate employees when required. a If an expatriate employee is liable to pay income tax in Guyana on income earned in Guyana such expatriate employee shall pay such income tax at a rate equal to the current income tax rate of Guyana; Gi Notwithstanding any provision to the contrary in this Article expatriate employees of Operator Contractor Affiliated Companies or NonResident SubContractors shall not be subject to the provisions of the Income Tax Act of Guyana Cap. 81:01 and shall not be liable for personal income tax in Guyana on income earned in Guyana for any given tax year if the expatriate is physically present in Guyana for not more than one hundred eighty three 183 days on a cumulative basis in the tax year of assessment. 15.13 Notwithstanding any provision to the contrary in this Article assignments of any kind between Contractor and Affiliated Companies as well as any assignment of any kind made in accordance with this Agreement including one to an unrelated party shall be exempt from any duty or taxes including Capital Gains Tax payable in such respect and shall be subject to a fee payable to the GGMC upon approval of the assignment for the amount of one hundred thousand United States Dollars US\$100,000. 15.14 An Order shall promptly be made giving effect to the provisions of this Article in statutory form and language as specified in section 1 of the Act. 44 Petroleum Agreement Government of Guyana RatioArticle 16 Contracts and Assignments 16.1. The Contractor shall upon

request provide to the Minister copies of a contracts with respect to the sale or disposal of Petroleum including invoices issued thereunder; b any deed of assignment of an interest of the Contractor under this Agreement pursuant to Article 25; c any instrument by which the Contractor pledges mortgages. encumbers or hypothecates its interest or any of its rights under this Agreement or the Contract Area. 45 Petroleum Agreement Government of Guyana RatioArticle 17 Domestic Supply Obligation 17.1. Terms for Crude Oil. a If the Crude Oil requirements of the domestic market in Guyana the Crude Oil Domestic Demand exceed the Ministers total entitlement from all Crude Oil production in Guyana then the Contractor shall be obliged together with any third parties which produce Crude Oil in Guyana to supply and sell a volume of Crude Oil to be used for such Crude Oil requirements in Guyana calculated on the basis of the ratio which the Contractors Lifting Entitlement to Crude Oil bears to the sum of Contractors Lifting entitlement plus the total entitlement of all other producers in Guyana subject to Article 17.1c. The volume of Crude Oil which the Contractor shall be required to sell under this Article shall not exceed the Contractors share of Profit Oil. The Minister shall give the Contractor notice on or prior to April of the year preceding the Calendar Year in which the Government will have the said requirement and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. For the purpose of this Agreement Crude Oil Domestic Demand shall consist of those quantities of Crude Oil i used to produce refined products or petrochemicals in Guyana for end use by business and residential consumers in Guyana or 11 used to produce power in Guyana for end use by business and residential customers in Guyana the amounts for which shall be based upon independent verifiable government statistics. Crude Oil refined products petrochemicals or fuel for power generation that are exported from Guyana shall not be considered part of Crude Oil Domestic Demand. The Contractor shall in any Year have a right to supply out of Contractors Lifting Entitlement the proportion of the Crude Oil requirements of Guyana that the quantity produced from the Contract Area bears to the total production at the time in Guyana to the extent that such requirement is not satisfied from any contract entered into prior to the date of commencement of production from the Contract Area. For the purpose of this paragraph

the term the Crude Oil requirements of Guyana means the amount by which in any Year Crude Oil Domestic Demand exceeds the Ministers total entitlement to all Crude Oil produced in Guyana. The Contractor shall give the Minister notice on or prior to April 1 of the Calendar Year preceding the Calendar Year in respect of which Contractor wishes to exercise the aforesaid right and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. Notwithstanding the foregoing the Contractor shall have the right to supply the total amount calculated pursuant to the foregoing provisions.

46 Petroleum Agreement Government of Guyana Ratioc The price payable for the sale of Crude Oil pursuant to this Article shall be paid to Contractor in freely transferrable United States dollars or other currency as may be agreed at a place specified by the Contractor within thirty 30 days of receipt of the Contractors invoice by the Minister and shall be determined by agreement between the Minister and the Contractor or failing such agreement within thirty 30 days of the Ministers notice of Crude Oil Domestic Demand the price shall then be determined in accordance with Article 13. Should the Minister fail to pay within thirty 60 days of receipt of the Contractors invoice by the Minister the Contractors obligations in respect of the Domestic Supply Obligations of this Article 17 shall be suspended until payment is made good after which time deliveries shall be resumed subject to any alternative commitments that may have been reasonably entered into by Contractor to dispose of the Crude Oil during the period of default in payment. Contractor shall recover any amount due and unpaid by the Government plus interest at the Agreed Interest Rate from the Governments Lifting Entitlement of Crude Oil. d Any sale of Crude Oil as provided for in Article 17.1a c shall occur at the Delivery Point or such other point as the Minister and the Contractor may mutually agree. Ajl terms and conditions for the sale of Crude Oil pursuant to this Article shall be specified in a contract of sale entered into between the Minister and Contractor. s for Natural Gas. If the Natural Gas requirements of the domestic market in Guyana the Natural Gas Domestic Demand exceed the Ministers total entitlement from all Natural Gas production in Guyana then the Contractor shall be obliged together with any third parties which produce Natural Gas in Guyana to supply and sell a volume of Natural Gas to be used for such Natural Gas Domestic

Demand in Guyana. calculated on the basis of the ratio which the Contractors Lifting Entitlement to Natural Gas bears to the sum. of Contractors Lifting entitlement plus the total entitlement of all other producers in Guyana subject to Article 17.2c. The volume of Natural Gas which the Contractor shall be required to sell under this Article shall not exceed the Contractors share of Profit Gas. The Minister shall give the Contractor notice on or prior to April 1 of the year preceding the Calendar Year in which the Government will have the said requirement and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. For the purpose of this Agreement Natural Gas Domestic Demand shall consist of those quantities of Natural Gas used for domestic residential 47 Petroleum Agreement Government of Guyana Ratiocommercial and industrial consumption including fuel used for domestic power generation. Natural Gas liquefied or compressed in Guyana for export or used as feedstock for petrochemical exports such as methanol and fertilizer shall not be considered part of Natural Gas Domestic Demand. Any sales of Natural Gas to the domestic market shall be priced at the international value of alternative fuels in the end user market of the buyers plus freight to Georgetown. In the event of a failure to reach agreement on the price volume andor terms of sale either Party may submit the dispute for sole expert determination pursuant to Article 26.3. b The Contractor shall in any Year have a right to supply out of Contractors Lifting Entitlement the proportion of the Natural Gas requirements of Guyana that the quantity produced from the Contract Area bears to the total production at the time in Guyana to the extent that such requirement is not satisfied from any contract entered into prior to the date of commencement of production from the Contract Area. For the purpose of this paragraph the term the Natural Gas requirements of Guyana means the amount by which in any Year Domestic Demand exceeds the Ministers total entitlement to all Natural Gas produced in Guyana. The Contractor shall give the Minister notice on or prior to April 1 of the Calendar Year preceding the Calendar Year in respect of which Contractor wishes to exercise the aforesaid right and the term of the supply shall be on a Calendar Year basis unJless otherwise agreed. Notwithstanding the foregoing the Contractor shall have the right to supply the toial amount calculated pursuant to the foregoing provisions. The price

payable for the sale of Natural Gas pursuant to this Article shall be paid to Contractor in freely transferrable United States dollars or other currency as may be agreed at a place specified by the Contractor within thirty 30 days of receipt of the Contractors invoice by the Minister and shall be determined by agreement between the Minister and the Contractor pursuant to Article 17.2 a. Should the Minister fail to pay within thirty 30 days of receipt of the Contractors invoice by the Minister, the determined amount in accordance with Article 17.2a. Contractors obligations in respect of the Domestic Supply Obligations of this Article 17 shall be suspended until payment is made good after which time deliveries shall be resumed subject to any alternative commitments that may have been reasonably entered into by Contractor to dispose of the Natural Gas during the period of default in payment. Contractor shall recover any amount due and unpaid by the Government plus interest at the Agreed Interest Rate from the Governments Lifting Entitlement of Natural Gas. d Any sale of Natural Gas as provided for in Article 17.2a c shall occur 48 Petroleum Agreement Government of Guyana Ratio at the Delivery Point or such other point as the Minister and the Contractor may mutually agree. e All terms and conditions for the sale of Natural Gas pursuant to this Article shall be specified in a contract of sale entered into between the Minister and Contractor.

49 Petroleum Agreement Government of Guyana Ratio Article 18 Guyana Resources 18.1 In the conduct of Petroleum Operations pursuant to this Agreement the Contractor shall require that the Operator give preference to a the purchase of Guyanese goods and materials provided that such goods and materials are available on a timely basis of the quality and in the quantity required by Operator at competitive prices; and . b the employment of Guyanese SubContractors in so far as they are commercially and professionally competitive and satisfy the Operators financial and technical requirements and meet the requirements of Article 18.1 a. 18.2 The Contractor shall establish appropriate tender procedures when relevant for the acquisition of goods materials and services which shall ensure that Guyanese suppliers and SubContractors are given adequate opportunity to compete for the supply of goods and services. 18.3. Within ninety 90 days after the end of each Calendar Year the Contractor shall provide the Minister with a report outlining its

achievements in utilising Guyanese resources during that Calendar Year. Petroleum Agreement Government of Guyana Ratio

Article 19 Employment and Training

19.1 Subject to the requirements of any law relating to immigration Government shall provide the necessary work permits and other approvals required by the Contractor for employment of Expatriate Employees in Guyana for the purpose of Petroleum Operations.

19.2 Without prejudice to the right of the Contractor to select employees and determine the number thereof in the conduct of Petroleum Operations the Contractor shall require the Operator to employ and encourage SubContractors to employ Guyanese citizens having appropriate qualifications and experience whenever and wherever possible.

19.3 During each year of the term of the Petroleum Prospecting Licence or any renewal thereafter the Contractor shall pay to GGMC the amounts of Initial Period US\$60,000 First Renewal Period US\$60,000 Second Renewal Period US\$60,000 For one or more of the purposes mentioned in Article 19.3 ad. Payments under this Article 19.3 shall be paid directly into bank accounts held and controlled by the GGMC. Contractor shall verify such bank accounts and GGMC agrees to provide Guyanese personnel nominated by GGMC with on-the-job training in Contractor's operations in Guyana and overseas and/or practical training at institutions abroad. particularly in the areas of logistical interpretation economic analysis petroleum accounting and contract administration; en

NGPA b to send qualified Guyanese personnel selected by GGMC and approved by the Contractor on courses at universities colleges or other training institutions selected by GGMC and approved by Contractor; c to send Guyanese personnel selected by GGMC and approved by the Contractor. to conferences and seminars related to the petroleum industry d to purchase for GGMC advanced technical books professional publications scientific instruments or other equipment required by GGMC and approved by the Contractor. Petroleum Agreement Government of Guyana Ratio

Article 20 Rights to Assets and Insurance

20.1 Rights to Assets a The Contractor shall have the right to use free of charge assets previously installed by the Contractor in relinquished areas which are required for its operations in the remaining portion of the Contract Area provided that in the event of relicensing of the relinquished area such licence shall exclude the aforesaid assets. ob Subject to

Article 20.1 c upon expiry or termination of this Agreement in accordance with the provisions hereof. the Contractor shall upon notification by GGMC pursuant to Article 20.1 d 1 i deliver to the Minister free of charge in good order and condition fair wear and tear excepted all installations works pipelines pumps casings tubings engines and other equipment machinery or assets of a fixed or permanent nature constructed used or employed by the Contractor or the Operator in the Contract Area for which costs have been fully recovered in accordance with Annex C herein. Where costs have not been fully recovered the provisions of Article 20.1 biii shall apply deliver to the Minister free of charge any fixed assets relating to Petroleum Operations outside the Contract Area and movable assets owned by the Contractor or Operator and used or employed in connection with Petroleum Operations and located in Guyana for which costs have been fully recovered in accordance with Annex C herein; where costs have not been fully recovered the provisions of Article 20.1 biii shall apply; iii sell to the Minister and the Minister will purchase from the Contractor. any other assets owned by the Contractor or Operator and used or employed by the Contractor or Operator in the Contract Area or elsewhere in Guyana in connection with Petroleum Operations at a price equivalent to the depreciated unrecovered cost of the assets. c The above provisions of Article 20.1 b shall not apply to i assets which are still required by the Contractor or Operator for use in respect of an area in Guyana subject to another petroleum agreement at the time of expiry or termination of this Agreement 41 equipment and other assets rented or leased by Contractor in Guyana; 52 Petroleum Agreement Government of Guyana Ratioa ii Gy v vi equipment and other assets rented or leased by Contractor and imported in Guyana for use in Petroleum Operations and subsequently exported therefrom; equipment and any other assets owned or leased by a SubContractor; household goods and vehicles which are the personal property of employees of the Contractor and SubContractor; equipment and assets otherwise not owned by Contractor or Operator. d The Contractor shall notify the Minister of all assets acquired as provided in section 4 of Annex C to this Agreement. i Petroleum Agreement At least six 6 Calendar Months before expiry of the term of this Agreement. within three 3 Calendar Months following notice at termination of this Agreement or promptly

following cancellation of all Licences GGMC shall notify the Contractor of the assets to be delivered or sold to the Government. Subject to the terms and the provisions of this Article the Contractor shall not within one 1 year of the date upon which it estimates that termination of this Agreement will occur remove from the Contract Area or sell any assets of a fixed or permanent nature which might be deliverable to the Government under this Article without the consent of the Minister. such consent not to be unreasonably withheld or delayed. Abandonment Programme and Budget aa Within sixty 60 days after the expiration of the term of this Agreement or the sooner relinquishment of some or all of the Contract Area the Contractor shall carry out to the Ministers satisfaction an abandonment programme agreed with the Minister for all installations and pipelines provided by Contractor under this Agreement that the Minister elects not to have delivered up to him in accordance with Article 20.1b. With respect to the area being relinquished and facilities thereon such abandonment programme shall comply with and be limited to internationally accepted standards prevailing at the time of abandonment. bb Concurrent with the submission of a Development Plan as provided in Article 8.4 the Contractor shall submit for the 53 Government of Guyana Ratified ee ff Petroleum Agreement Government of Guyana Ratio Ministers approval a proposed abandonment programme and budget covering all such installations and pipelines provided by Contractor under this Agreement. The abandonment programme and budget may be revised from time to time with the agreement of the Minister to account . for any changes in the Development Plan. The Minister shall act without unreasonable delay in reaching a decision on the Contractors proposal under Article 20.1diiibb and may approve or modify or impose conditions thereon. Before modifying or imposing conditions on the proposal the Minister shall notify the Contractor of the proposed modification or conditions and give the Contractor the opportunity to make written representations within sixty 60 days thereafter about the proposed modifications or conditions. After taking into consideration such representations the Minister and the Contractor shall make their best efforts to mutually agree on the proposed modifications or conditions of the abandonment programme and budget. In the event that the Minister and Contractor cannot mutually

agree on the proposed abandonment programme and budget. either Party may by written notice to the other Party propose that the dispute be referred for determination in accordance with the provisions of Article 26. In the event that the Contractor does not present a timely proposal to the Minister under Article 20.1diiibb the Minister after giving thirty 60 days notice to the Contractor of his intention to do so may prepare an abandonment programme and budget for the Contract Area if the Contractor does not present a proposal by the end of the thirty 30 day period. When the Minister has so prepared the abandonment programme and budget it shall have the same effect as if it had been submitted by the Contractor and approved by the Minister. Contractor shall have the right on an annual basis to propose a revised abandonment programme and budget. Such proposal shall be subject to the approval process in Article 20.1d aii cc. Any revisions to the abandonment programme and budget shall result in a revision to the guarantee referred to in Article 20. 1d iiis hh All funds required to carry out the approved abandonment programme shall be made available by Contractor when the costs for abandonment are incurred. 54gg All costs included in the approved abandonment programme and budget shall be recoverable as operating costs on a unit of production basis commencing during the period when the abandonment programme and budget is approved. The amount to be recovered in a respective period shall be calculated by dividing the approved abandonment budget by the estimated ultimate recoverable reserves which may be revised from time to time based upon the actual performance of the Fields and multiplying the result by the units produced in the period. hh Contractor shall deliver to the Minister within seven 7 days after the date the abandonment programme and budget are approved an undertaking from Contractors immediate parent company stating that such parent company shall ensure provision of financial and technical resources necessary to conduct the approved abandonment programme. The amount of the financial undertaking shall be equal to the amount recovered under Article 20.1dGiigg less any amounts spent under the approved abandonment programme. i Notwithstanding the provisions of Article 20.1duff in the event the Minister elects to have all or a portion of the facilities delivered up to him in accordance with Article 20.1b the Contractor shall pay

the Minister at the time of transfer the amounts stipulated in the latest approved abandonment budget for the transferred facilities. Upon transfer and receipt of the funds the Minister shall assume all responsibilities for the transferred facilities and their abandonment and shall hold the Contractor harmless against any liability with respect thereto accruing after the date of such transfer to the Minister.

iv Subject to Article 20.1 c in the event that the Government acquires any assets pursuant to this Article the Government shall assume all] liabilities with respect to such assets, arising from and after the date of acquisition and shall not direct the Contractor to remove or abandon any such assets pursuant to regulation 1 n of the Regulations. The Government shall indemnify and hold Contractor harmless for any and all costs and claims which may arise from the use or abandonment of any asset from and after the date of acquisition by the Government.

v Assets not acquired by the Government pursuant to this Article may be sold or otherwise freely disposed of by the Contractor subject to Article 21.2 and the Regulations.

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Ratio 20.2 Insurance a b c The Contractor shall effect at all times during the term of this Agreement insurance as required by applicable laws rules and regulations and of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practice appropriate for Petroleum Operations in progress in respect of but not limited to

i loss or damage to all assets used in Petroleum Operations

ii pollution caused in the course of Petroleum Operations for which the Contractor or the Operator may be held responsible

iii loss or damage to property or bodily injury suffered by any third party in the course of Petroleum Operations for which the Contractor may be liable to provide an indemnity pursuant to Article 2.4;

iv the Contractor's and/or Operators liability to its employees engaged in Petroleum Operations. To the extent permitted by applicable laws, rules and regulations such insurance may be provided through Contractor's affiliate insurance company. Subject to the Minister's approval which shall not be unreasonably withheld the Contractor notwithstanding the provisions of Article 20.2a shall have the right to self-insure all or part of the aforementioned insurances in Article 20.2a. The Contractor shall require the Operator to carry and to endeavour to have its SubContractors carry insurance of such type and in such amount as

1S customary in the international petroleum industry in accordance with good oil field practices.

Petroleum Agreement Government of Guyana RatioArticle 21 Import Duties 21.1 21.3 The Contractor and the SubContractors engaged in Petroleum Operations shall be permitted to import free of duty VAT or all or any other duties taxes levies or imposts all equipment and supplies required for Petroleum Operations including but not limited to drill ships aircraft platforms vessels geophysical tools communications equipment explosives radioactive sources vehicles oilfield supplies lubricants consumable items other than foodstuffs or alcoholic beverages or fuel as well as all items listed on Annex D. The aforementioned items including but not limited to the items listed on Annex D shall be deemed approved and certified by the Chief Inspector to be for use solely in carrying out Petroleum Operations. The Contractor shall give prior notification to the Minister of SubContractors engaged in Petroleum Operations. a Subject to Article 21.1 and for as long as this Petroleum Agreement remains in force the Contractor and SubContractors engaged in Petroleum Operations hereunder shall be required to pay to the relevant authority the prevailing excise tax rate or ten percent 10 excise tax whichever is less on any fuel imports where such imports have been certified by the Chief Inspector to be used solely in carrying out Petroleum Operations in any area within the Contract Area. . ject to Article 20 any of the items imported into Guyana may if no longer required for Petroleum Operations hereunder. be freely exported at any time by the importing party. without the payment of any export duty or impos. provided. however that on the sale or transfer by the importer of any such item to any person in Guyana other than the Government import duty shall be payable by the importer on the value thereof at the date of such sale or transfer as determined by the Customs and Excise Department in accordance with their applicable rules. Each Expatriate Employee of the Contractor including any Affiliated Company and of SubContractors who have been assigned to work in Guyana for the Contractor or its SubContractors shall be permitted subject to the limitations and conditions set out in the Customs Act to import into Guyana free of import duty and taxes within six 6 months on first arrival household goods. clothing. for their personal consumption and vehicles all of which are the personal property of employees of the Contractor and

SubContractor provided however that no property so imported by the employee shall be sold by him in Guyana except in accordance with Government regulations and upon the payment of the prescribed customs duties. Any importation or replacement of motor vehicles by Expatriate Employees of the Contractor Including any Affiliated Company and of Sub Contractors shall be a matter for consultation with the Minister. Each Expatriate Employee of the Contractor including any Affiliated Company and of SubContractors shall have the right to asp 39p aod 41D 42D 9 RATIO sat sac ssc sec svc ssc ssc sec 49D sop sip 520 53D 54D Rec sec e7zc csc ssc voc r1c 72 61D 620 630 sap sed sed y 77c vac rac aoc sic szc ssc asc 730 van 750 760 77D 7eD sep ssc ssc arc asc ssc soc otc g2c 3c sac gsc gcc sso sep avp ssp FF asp 90D 1088 Ff 97c sec g9c t00c 101 102c t03c ff to4c tosc t06c 107 108c 97D 98D 99D 1000 1010 102p 4208 . tae ttsc FF atec ti7zc saac at9c 120c J i09n i100 4110 120 F 113D 4140 OR MEE DERM ASION Rickford Vieira Commlastanas Ag. Gujana Geelode Mine nal 1328 Upperanovace onoreetone Quran Sov amacica 260 1270 128 ff 129c 1300 131 43zc fF 12z1D 1220 1230 124D 126 4128p rm 582 RT U8 card 642 2262362 lex 68 THOM mows comnissionetggmegov.gy asec t3ec 140c tac tazc tazc 1a4c F t330 1340 1360 1360 Ff 1370 Wate Yn. 9MC.g0.gy 6K 7K aK ox 10K 14K 12K Fw 2 3k 4b sl Universal Transverse Morcalor Projection Projectlon international 24 Spheroid Meer 18K 49K 20K 21K 22k 23K 2ak taL 44L B 4SL tel 47k 4a Lnitof Measurement 63 West of Greenwich jeridian of Origin Equator Beads of Orig Sein 0.9996 actor GI 36d Pane cre On Son.oco Mates Eatin 30K 91K 32K 39K sak ask sex [26. 26L 27L aBL zsL 30L 58 o0L 06 2.810491085052490 9.6074390411377002.814825057983398 9.5914535522460902.818197965621948 9.5879993438720702.822141885757446 9.5845365524292002.826673030853271 9.5822057723999002.850533008575439 9.5750856399536102.951327085494995 9.5619049072265602.976335048675537 9.5553398132324203.001311063766479 9.546500205993650<lt;TEXTgt;<lt;DOCUMENTgt;<lt;DOCUMENTgt;<lt;TYPEgt;EX10.85<lt;SEQUENCEgt;8<lt;TEXTgt; EXHIBIT 10.85 SUPPLEMENTARY CONTRACT NO.1This Supplementary Contract No. 1 to the Production Sharing Contract for BlockA18 dated 21 April 1994 hereinafter referred to as

the Principal Contractis made on the 21st day of April 1999 by and between the MALAYSIATHAILANDJOINT AUTHORITY hereinafter referred to as MTJA an authority dulyestablished under the MalaysiaThailand Joint Authority Act 1990 of Malaysia andThailandMalaysia Joint Authority Act B.E. 2533 1990 of the Kingdom ofThailand and the Agreement between the Government of Malaysia and theGovernment of the Kingdom of Thailand on the Constitution and Other MattersRelating to the Establishment of the MalaysiaThailand Joint Authority dated 30May 1990 and having its office at 27th Floor Empire Tower City Square Centre182 Jalan Tun Razak 50400 Kuala Lumpur Malaysia of the first part; andPETRONAS CARIGALI JDA SDN. BHD. a company duly incorporated and existingunder the laws of Malaysia and having its registered office at Tower 1 PETRONASTwin Towers Persiaran KLCC 50450 Kuala Lumpur Malaysia hereinafter referredto as CARIGALI TRITON OIL COMPANY OF THAILAND a company duly incorporatedand existing under the laws of the State of Texas United States of America andhaving its registered office at 6688 North Central Expressway Suite 1400Dallas Texas 75206 United States of America and having its local branchoffice at 7th Floor Kin Gwan Building 1 140 Wireless Road Bangkok 10330Thailand and Suite 13.01 13th Floor Menara Tan amp; Tan 207 Jalan Tun Razak50400 Kuala Lumpur Malaysia hereinafter referred to as TRITON and TRITONOIL COMPANY OF THAILAND JDA LIMITED a company incorporated under the laws ofthe Cayman Islands and having its statutory office in Dallas Texas UnitedStates of America and having its local registered branch office at Suite 13.0113th Floor Menara Tan amp; Tan 207 Jalan Tun Razak 50400 Kuala Lumpur Malaysiahereinafter referred to as TRITON JDA of the second part. The parties ofthe first and second part shall hereinafter be referred to individually asParty and collectively as Parties.WHEREAS Article 2.4 Paragraph 4 of the Principal Contract provides that any SubBlock which is not defined as a Development Area and any area which is not a GasField as defined in accordance with Article 8.1 at the end of five 5 yearsfrom the Effective Date hereinafter referred to as the Unexplored Areasshall be deemed to be relinquished to MTJA and cease to be part of the ContractArea;AND WHEREAS CARIGALI TRITON and TRITON JDA hereinafter referred to as

the Contractors request MTJAs permission to retain the Unexplored Areas for an additional three 3 years for further exploration after the end of the five 5 years from the Effective Date; AND WHEREAS MTJA agrees not to invoke the abovementioned Article 2.4 Paragraph 4 and further agrees to the request of the Contractors to retain the Unexplored Areas in consideration of additional work commitments to be undertaken by the same. NOW THEREFORE it is hereby stipulated and agreed as follows:

- i. The Contractors shall retain the Unexplored Areas for an additional three 3 years commencing on the fifth anniversary of the Effective Date hereinafter referred to as the Retention Period for further exploration subject to the following minimum work commitments and conditions:
The Contractors shall carry out subsurface studies to redefine and reevaluate the hydrocarbon prospectivity in the Unexplored Areas and drill two 2 Wildcat Wells at an aggregate drilled footage of not less than five thousand 5000 metres.
- ii. The amount to be expended by Contractors in carrying out their exploration activities in the Unexplored Areas during the Retention Period shall in the aggregate be not less than ten million four hundred sixty thousand United States Dollars USD 10,460,000 which aggregate amount includes the MTJA training bonus of seventy thousand United States Dollars USD 70,000 per year.
- iii. The Retention Period shall not affect the existing fixed term of thirty five 35 years of the Principal Contract set out in Article 2.1 thereof. Any new discovery of a Gas Field within the Unexplored Areas during the Retention Period will yield a shorter gas holding period commencing from the date of agreement between the Parties on the extent of the Gas Field and its reserve area as set out in Article 8.1 of the Principal Contract and ending 20 April 2004. The periods for development and production of the Gas Field shall remain the same.
- iv. When Crude Oil is discovered in a Commercial Quantity in any Subblock or Subblocks within the Unexplored Areas during the Retention Period that Subblock or Subblocks shall be automatically converted into a Development Area and the provisions of Article 2.4 Paragraph 1 of the Principal Contract shall apply. If Contractors fail to produce Crude Oil commercially directly or indirectly from such Subblock or Subblocks prior to 20 April 2004 such Subblock or Subblocks shall be deemed to be relinquished to MTJA and cease to be part of the Contract Area.

2. Except as expressly provided in this

Supplementary Contract No. 1 thePrincipal Contract is not otherwise waived amended and supplemented hereby andthe terms therein shall remain in full force and effect.3. Any terms that are defined terms in the Principal Contract shall have thesame meaning when used in this Supplementary Contract No. 1 unless hereinothetwice expressly provided.IN WITNESS WHEREOF MTJA CARIGALI TRITON and TRITON JDA have by theirrespective duly authorised officers executed this Supplementary Contract No. 1on the day and year first herein above written.Signed by For and on behalf of MALAYSIATHAILAND JOINT AUTHORITY In the presence of Signed by For and on behalf of PETRONAS CARIGALI JDA SDN. BHD. In the presence of Signed by For and on behalf of TRITON OIL COMPANY OF THAILAND In the presence of Signed by For and on behalf of TRITON OIL COMPANY OF THAILAND JDA LIMITED In the presence of

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EXHIBIT 10.86 SUPPLEMENTARY CONTRACT NO.2This Supplementary Contract No. 2 to the Production Sharing Contract for BlockA18 dated 21 April 1994 as amended and supplemented hereinafter referred toas the Principal Contract is made the 29 day of December 1999 by andbetween the MALAYSIATHAILAND JOINT AUTHORITY hereinafter referred to asMTJA an authority duly established under the MalaysiaThailand JointAuthority Act 1990 of Malaysia and ThailandMalaysia Joint Authority Act B.E.2533 1990 of the Kingdom of Thailand and the Agreement between the Governmentof Malaysia and the Government of the Kingdom of Thailand on the Constitutionand Other Matters Relating to the Establishment of the MalaysiaThailand JointAuthority dated 30 May 1990 and having its office at 27th Floor Empire TowerCity Square Centre 182 Jalan Tun Razak 50400 Kuala Lumpur Malaysia of thefirst part; and PETRONAS CARIGALI JDA SDN. BHD. a company duly incorporatedand existing under the laws of Malaysia and having its registered office atTower 1 PETRONAS Twin Towers Persiaran KLCC 50450 Kuala Lumpur Malaysiahereinafter referred to as CARIGALI TRITON OIL COMPANY OF THAILAND acompany duly incorporated and existing under the laws of the State of TexasUnited States of America and having its registered office at 6688 North CentralExpressway Suite 1400 Dallas Texas 75206 United

States of America and having its local branch office at 339596 99100 Wall Street Tower Surawong Road Bangrak Bangkok 10500 Thailand hereinafter referred to as TRITON and TRITON OIL COMPANY OF THAILAND JDA LIMITED a company duly incorporated and existing under the laws of the Cayman Islands and having its statutory office in Dallas Texas United States of America and having its local registered branch office at Suite 13.01 13th Floor Menara Tan amp; Tan 207 Jalan Tun Razak 50400 Kuala Lumpur Malaysia hereinafter referred to as TRITON JDA of the second part. The parties of the first and second part shall hereinafter be referred to individually as Party and collectively as Western Australia Iron Ore Mount Bruce Agreement Act 1972 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au Western Australia Iron Ore Mount Bruce Agreement Act 1972 . 2. 3. 3A. 3B. 4A. 4B. 4C. 4D. 4. Short title Terms used Ratification of Agreement Ratification of Variation Agreement 1987 Variation Agreement Variation of Agreement to increase rates of royalty 2010 Variation Agreement State empowered under clause 20E9a 2011 Variation Agreement Bylaws 1 1 2 2 2 3 4 4 4 4 First Schedule Iron Ore Mount Bruce Agreement Second Schedule 1976 Variation Agreement Third Schedule 1987 Variation Agreement Fourth Schedule 2010 Variation Agreement Fifth Schedule 2011 Variation Agreement Notes Compilation table As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au 181 page i Iron Ore Mount Bruce Agreement Act 1972 page ii Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Western Australia Iron Ore Mount Bruce Agreement Act 1972 An Act to ratify an agreement relating to the exploration for and the development and treatment of iron ore in certain areas of the North West of the State and the production of steel in the State and for incidental and other purposes. 1. Short title This Act may be cited as the Iron Ore Mount Bruce Agreement Act 1972. 2. Terms used 1. In this Act 1976 Variation Agreement means the agreement a copy of which is set forth in the Second Schedule; 1987 Variation Agreement means the agreement a copy of which is set forth in the Third Schedule; 2010 Variation Agreement means the agreement a copy of which is set forth in the Fourth Schedule; 2011 Variation Agreement means the agreement a copy of which is set forth in the Fifth Schedule; Agreement means the agreement

of which a copy is set forth in the First Schedule and if that agreement is varied from time to time in accordance with the provisions of the Agreement includes the Agreement as so varied from time to time and except in section 31 also includes the Agreement as altered by the 1976 Variation Agreement the 1987 Variation Agreement the Iron Ore Agreements Legislation Amendment Act 2010 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 1 Iron Ore Mount Bruce Agreement Act 1972 s. 3 Part 6 the 2010 Variation Agreement and the 2011 Variation Agreement; Company has the same meaning as it has in and for the purposes of the Agreement. [Section 2 amended No. 94 of 1976 s. 2; No. 26 of 1987 s. 4; No. 61 of 2010 s. 12; No. 61 of 2011 s. 12.]

3. Ratification of Agreement 1 The Agreement is ratified. 2 Notwithstanding any other Act or law and without limiting the effect of subsection 1 a b the Company shall be allowed to enter upon the Crown lands mentioned in paragraph b of clause 2 of the Agreement to the extent and for the purposes provided in that paragraph; the provisions of subclause 2 of clause 3 of the Agreement shall take effect. 3 The provisions of section 96 of the Public Works Act 1902 do not apply to any railway constructed pursuant to the Agreement. 4 The provisions of section 2775 of the Mining Act 1904 2 do not apply to any renewal of the rights of occupancy granted pursuant to subclause 1 of clause 4 of the Agreement.

3A. Ratification of Variation Agreement The 1976 Variation Agreement is ratified. [Section 3A inserted No. 94 of 1976 s. 3; amended No. 26 of 1987 s. 5.]

3B. 1987 Variation Agreement 1 The 1987 Variation Agreement is ratified and its implementation is authorised. page 2 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 s. 3B 2 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the 1987 Variation Agreement shall operate and take effect notwithstanding any other Act or law. [Section 3B inserted No. 26 of 1987 s. 6.]

4A. Variation of Agreement to increase rates of royalty 1 Clause 121h of the Agreement is varied a in subparagraph ii by deleting three and three quarter per centum 3 and inserting 5.625 b in subparagraph iii by deleting fifteen 15 cents per ton; and inserting 5.625 of the f.o.b. revenue computed as aforesaid; c in subparagraph iv by deleting fifteen 15 cents per ton; and inserting 5 of the f.o.b. revenue

computed as aforesaid; 2 Clause 121hii iii and iv of the Agreement as varied by subsection 1 operate and take effect despite a b c any other provision of the Agreement; and any other agreement or instrument; and any other Act or law. 3 Nothing in this section affects the amount of royalty payable under clause 12 of the Agreement in respect of any period before the commencement of the Iron Ore Agreements Legislation Amendment Act 2010 Part 6. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 3 Iron Ore Mount Bruce Agreement Act 1972 s. 4B [Section 4A inserted No. 34 of 2010 s. 13.] 4B. 2010 Variation Agreement 1 The 2010 Variation Agreement is ratified and its implementation is authorised. 2 Without limiting or otherwise affecting the Government Agreements Act 1979 the 2010 Variation Agreement is to operate and take effect despite any other Act or law. [Section 4B inserted No. 61 of 2010 s. 13.] 4C. State empowered under clause 20E9a The State has power in accordance with clause 20E9a of the Agreement. [Section 4C inserted No. 61 of 2010 s. 13.] 4D. 2011 Variation Agreement 1 The 2011 Variation Agreement is ratified and its implementation is authorised. 2 Without limiting or otherwise affecting the Government Agreements Act 1979 the 2011 Variation Agreement is to operate and take effect despite any other Act or law. [Section 4D inserted No. 61 of 2011 s. 13.] 4. Bylaws 1 The Governor may upon the recommendation of the Company make alter and repeal bylaws for the purposes of and in accordance with the Agreement. 2 Bylaws made pursuant to this section a b shall be published in the Government Gazette; and take effect and have the force of law from the date they are so published or from such later date as is fixed by the bylaws; and page 4 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 s. 4 c may prescribe penalties not exceeding 100 for breach d of any of the bylaws; and are not subject to the provisions of section 36 of the Interpretation Act 1918 before each House of Parliament within 6 sitting days of the House next following the publication of the bylaws in the Government Gazette. but the bylaws shall be laid 3As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 5 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement First Schedule Iron Ore

Mount Bruce Agreement [s. 2] [Heading amended No. 19 of 2010 s. 4.] THIS AGREEMENT under Seal made the 10th day of March One thousand nine hundred and seventytwo BETWEEN THE HONOURABLE JOHN TREZISE TONKIN M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and Instrumentalities thereof from time to time hereinafter called the State of the one part and MOUNT BRUCE MINING PTY. LIMITED a company incorporated under the Companies Act 1961 of the said State and having its registered office at 191 St. Georges Terrace Perth hereinafter called the Company which expression will include the successors and assigns of the Company of the other part. WHEREAS a The Company and Hamersley are satisfied from investigations which prior to 1971 cost over three million dollars 3000000 that the mining areas defined in clause 1 hereof contain iron ore of tonnages and grades sufficient to warrant economic recovery and marketing; b The Company agrees that investigations should be made with a view to the establishment of a plant for the production of metallised agglomerates or a plant for the production of steel with a view to its being in a position to submit to the State proposals for such establishment as are hereinafter provided. NOW THIS AGREEMENT WITNESSETH 1. In this Agreement subject to the context approve approval consent or direct means approve approval consent or direct in writing as the case may be; associated company means a any company notified in writing by the Company to the Minister which is incorporated in the United Kingdom the page 6 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement United States of America or the Commonwealth of Australia and which is i ii iii iv a subsidiary of the Company within the meaning of the term subsidiary in section 6 of the Companies Act 1961; promoted by the Company for all or any of the purposes of this Agreement and in which the Company holds not less than two million dollars 2000000 of the issued ordinary share capital; a company in which the Company or Hamersley holds not less than twenty per cent 20 of the issued ordinary share capital; or a company which is related within the meaning of that term in the aforesaid section to the Company or to any company in which the Company holds not less than twenty per cent 20 of the issued ordinary share

capital; and b any company approved in writing by the Minister for the purposes of this Agreement which is associated directly or indirectly with the Company in its business or operations hereunder; associated company of Hamersley means a company defined as an associated company within the meaning of the Agreement a copy of which is set out in the First Schedule to the Iron Ore Hamersley Range Agreement Act 1963 1968; or b any company approved in writing by the Minister as an associated company of Hamersley for the purposes of this Agreement; the commencement date means the 30th day of June 1972. Commonwealth means the Commonwealth of Australia and includes the Government for the time being thereof; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 7 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Companys wharf means any wharf constructed by or on behalf of the Company pursuant to this Agreement for the shipment of ore from the mineral lease any wharf established by Hamersley at Dampier in the said State or any temporary wharf for the time being approved by the Minister as the Companys wharf for the purposes hereof during the period to which such approval relates; Dampier includes East Intercourse Island; direct shipping ore means iron ore which has an average pure iron of not less than sixty per cent 60 which will not pass through a one half inch mesh screen and which is sold without concentration or other beneficiation other than crushing and screening; financial year means a year commencing on and including the 1st day of July; fine ore means iron ore which has an average pure iron of not less than sixty per cent 60 which will pass through a one half inch mesh screen and which is sold without concentration or other beneficiation other than crushing and screening; fines means iron ore not being direct shipping ore or fine ore which will pass through a one half inch mesh screen; f.o.b. revenue means the price for iron ore from the mineral lease the subject of any shipment or sale which is payable by the purchaser thereof to the Company or an associated company less all export duties and export taxes of all kinds whatsoever and less all costs and charges properly incurred and payable by the Company to the State or a third party from the time the ore shall be placed on ship at the Companys wharf to the time the same is delivered and accepted by the purchaser including 1 ocean freight; 2

marine insurance; 3 port and handling charges at the port of discharge; page 8 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 4 costs of delivering the ore from port of discharge to the smelter; 5 weighing sampling assaying inspection and representation costs incurred on discharge or delivery; 6 shipping agency charges; 7 8 import taxes by the country of the port of discharge; and such other costs and charges at the Minister may in his discretion consider reasonable in respect of any shipment or sale. For the purposes of this definition a The Minister may in respect of costs or charges as set out in items 1 to 7 inclusive of this definition notify the Company in writing that in respect of any shipment or sale he does not regard a cost or charge as having been properly incurred and in such case the Company may refer the matter to arbitration hereunder and unless and until such matter is resolved in favour of the Company such cost or charge shall not be deemed to have been properly incurred. b Notwithstanding anything contained in this definition to the contrary a cost or charge as set out in items 1 to 7 inclusive of this definition shall not unless the Minister so determines in accordance with the provisions of paragraph c of this definition be deemed to be properly incurred if such charge is directly or indirectly imposed upon or incurred by the Company or an associated company pursuant to an arrangement entered into between the Company and the State. c Costs or charges other than those set out in items 1 to 7 inclusive of this definition and costs and charges to which paragraph b of this definition applies shall be deemed to be properly incurred if the Minister in his discretion so determines and in making his determination the Minister shall have regard to such As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 9 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement matters as the parties to and the bona fide nature of the transaction resulting in the cost or charge. Hamersley means Hamersley Iron Pty. Limited a company incorporated under the Companies Act 1961 of the State of Victoria; integrated iron and steel industry means an industry for the manufacture of iron and steel or for the manufacture of steel from iron ore by a process which does not necessarily involve the production of pig iron or basic iron in

the production of steel; iron ore concentrates means products whether in pellet or other form resulting from secondary processing but does not include metallised agglomerates; Land Act means the Land Act 1933; mineral lease means the mineral lease referred to in subclause 2 of clause 4 hereof and includes any renewal thereof; Mining Act means the Mining Act 1904; mining areas means the areas delineated and coloured red on the plan marked A initialled by or on behalf of the parties hereto for the purpose of identification; Minister means the Minister in the Government of the said State for the time being responsible under whatsoever title for the administration of the Ratifying Act and pending the passing of that Act means the Minister for the time being designated in a notice from the State to the Company and includes the successors in office of the Minister; metallised agglomerates means products resulting from the reduction of iron ore or iron ore concentrates by any method whatsoever and having an iron of not less than eightyfive percent 85; month means calendar month; notice means notice in writing; ore means iron ore; page 10 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement person or persons includes bodies corporate; port means the port or harbour developed or to be developed pursuant to this Agreement and shall include such adjacent land area to serve the Companys wharf but shall not include the port established by Hamersley at Dampier nor such adjacent land as is leased by Hamersley to serve that port; port townsite means the townsite determined pursuant to this Agreement to be expanded and developed near the port; Ratifying Act means the Act to ratify this Agreement and referred to in clause 3 hereof; said State means the State of Western Australia; secondary processing means concentration or other beneficiation of iron ore other than by crushing or screening and includes thermal electrostatic magnetic and gravity processing and pelletisation and the production of metallised agglomerates; special lease means a special lease or licence to be granted in terms of this Agreement under the Ratifying Act the Land Act or the Jetties Act 1926 and includes any renewal thereof; this Agreement hereof and hereunder include this Agreement as from time to time added to varied or amended; steel means steel in the form of steel billets or

manufactured steel products; ton means a ton of two thousand two hundred and forty 2240 lbs. net dry weight; townsite means a townsite or townsites established by the Company on or near the mining areas pursuant to this Agreement; wharf includes any jetty structure; year 1 means the year next following the commencement date and year followed immediately by any other numeral has a corresponding meaning; reference in this Agreement to an Act shall include the amendments to such Act for the time being in force and also any Act passed in As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 11 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement substitution therefor or in lieu thereof and the regulations for the time being in force thereunder; power given under any clause of this Agreement other than clause 52 hereof to extend any period or date shall be without prejudice to the power of the Minister under the said Clause 52; marginal notes shall not affect the interpretation or construction hereof 4; Initial Obligations of State 4 2. The State shall a b introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and endeavour to secure its passage; to the extent reasonably necessary for the purposes of this Agreement allow the Company to enter upon Crown lands including land the subject of a pastoral lease and survey possible sites for a port wharf railways townsites plants for the production or iron ore concentrates metallised agglomerates pig iron foundry iron and steel an integrated iron and steel industry and stockpiling processing and other areas required for the purposes of this Agreement. Ratification and Operation 4 1 Subclause 2 of clause 3 hereof and the subsequent clauses other 3. than clauses 52 54 and 55 of this Agreement shall not operate unless and until a the Bill to ratify this Agreement as referred to in paragraph a of clause 2 hereof is passed as an Act before the 30th day of June 1972 or such later date if any as the parties hereto may mutually agree upon; and b Bills to ratify each of the agreements referred to in the First Schedule hereto are passed as Acts before the 30th day of June 1972 or such later date if any as the parties hereto may mutually agree upon. page 12 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement If the said Bills are not

passed before that date or later date or dates as the case may be this Agreement will then cease and determine and neither of the parties hereto will have any claim against the other of them with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement save as provided in clause 22 of this Agreement. 2 The following provisions of this Agreement shall notwithstanding the provisions of any Act or law operate and take effect namely a b c d the provisions of clauses 4 and 7 the proviso to paragraph a of subclause 1 of clause 12 subclause 2 of clause 12 clauses 15 16 17 18 24 25 26 27 29 44 46 47 51 52 53 54 and 55; subject to paragraph a of this subclause the State and the Minister respectively shall have all the powers discretions and authorities necessary or requisite to enable them to carry out and perform the powers discretions authorities and obligations conferred or imposed upon their respectively hereunder; no future Act of the said State will operate to increase the Companys liabilities or obligations hereunder with respect to rents or royalties; and the State may as for a public work under the Public Works Act 1902 resume any land or any estate or interest in land required for the purpose of this Agreement and may lease or otherwise dispose of the same to the Company. Obligation of State Rights of Occupancy 4 4. 1 The State shall forthwith subject to the surrender of the rights of occupancy as referred to in subclause 2 of clause 2 of the Agreement firstly referred to in the First Schedule hereto cause to be granted to the Company and to the Company alone rights of occupancy for the purposes of this Agreement including the sole right to search and prospect for iron ore over the whole of the mining areas under Section 276 of the Mining Act at a rental at a rate of eight dollars 8 per square mile per annum payable quarterly in advance for the period expiring on the 31st day of December 1972 and shall then and thereafter subject to the continuance of this Agreement cause to be granted to the Company as may be necessary successive renewals of such last mentioned As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 13 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement rights of occupancy each renewal for a period of twelve 12 months at the same rental and on the same terms the last of which renewals shall notwithstanding its currency expire i ii on the date of grant of a

mineral lease to the Company under subclause 2 of this clause; or on the determination of this Agreement pursuant to its terms whichever shall first happen.

Mineral lease 4 2 The Company may at any time after the grant to it of the said rights of occupancy and before the end of year 2 apply for a mineral lease of any part or parts not exceeding in total area three hundred 300 square miles and in the shape of a rectangular parallelogram or rectangular parallelograms or as near thereto as is practicable of the mining areas and thereupon the State shall cause any necessary survey to be made of the land so applied for the cost of which survey to the State will be recouped or repaid to the State by the Company on demand after completion of the survey and shall cause to be granted to the Company a mineral lease of the land so applied for notwithstanding the survey in respect thereof has not been completed but subject to such corrections as may be necessary to accord with the survey when completed for iron ore in the form of the Second Schedule hereto for a term which subject to the payment of rents and royalties hereinafter mentioned and to the performance and observance by the Company of its obligations under the mineral lease and otherwise under this Agreement shall be for a period of twentyone 21 years therefor with rights to successive renewals of twentyone 21 years upon the same terms and conditions but subject to earlier determination upon the cessation or determination of this Agreement PROVIDED HOWEVER that the Company may from time to time without abatement of any rent then paid or payable in advance surrender to the State any portion or portions of reasonable size and shape of the mineral lease.

3 If by the end of year 2 the Company has not applied for a mineral lease as hereinbefore provided this Agreement shall cease and determine subject however to the provisions of subclause 13 of clause 5 and clause 22 hereof.

Proposals of the Company 4 1 The Companys obligations to submit proposals under 5. subclause 3 of this clause and its obligations under clause 6 paragraph n of subclause 1 of clause 12 and clause 13 hereof shall all be subject to the page 14 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement condition precedent that hereafter either of the following events occurs namely a b that at least fiftyone per cent 51 of the issued ordinary share capital of the

Company ceases to be held by any one or more of Hamersley an associated company of Hamersley or associated companies of Hamersley at a time when the Company is the holder of the rights of occupancy required to be granted under subclause 1 of clause 4 hereof or after a mineral lease has been granted under subclause 2 of the said clause 4 at a time when the Company is the holder of the said mineral lease; or the said rights of occupancy cease to be held by the Company or any one or more of Hamersley an associated company of Hamersley or associated companies of Hamersley otherwise than by reason of the expiry thereof or after the said mineral lease has been granted as aforesaid the said mineral lease ceases to be held by the Company or any one or more of Hamersley an associated company of Hamersley or associated companies of Hamersley. 2 If hereafter either of the events mentioned in subclause 1 of this clause occurs then a Insofar as has not already been done to the satisfaction of the Minister the Company will commence forthwith and carry out at its expense with the assistance of experienced consultants where appropriate i ii iii a reconnaissance of sites of proposed operations pursuant to the Agreement together with the preparation of suitable maps and drawings; an engineering investigation of the route for a railway from the mining areas to the port or to connect with Hamersleys existing railway as the case may be; a study of the technical and economic feasibility of the mining transporting handling and shipping of ore from the mining areas; iv the planning of a suitable townsite and the development of the port townsite in consultation with As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 15 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement the State and having due regard for use by others as well as the Company; v the investigation in areas approved by the Minister of suitable water supplies for mining industrial and townsite purposes; vi metallurgical and market research. b The Company shall collaborate with and keep the State fully informed with quarterly reports as to the progress and results of the Companys operations under paragraph a of this subclause. The Company shall furnish the Minister with copies of all reports received by it from consultants in connection with the matters referred to in paragraph a of this subclause and with copies of all findings made and reports

prepared by it. c If the State concurrently carries out its own investigations and reconnaissances in regard to all or any of the matters mentioned in paragraph a of this subclause or any port site the Company shall cooperate with the State therein and so far as reasonably practicable will consult with the representatives or officers of the State and make full disclosures and expressions of opinion regarding matters referred to in this subparagraph. d The Company will employ or retain or ensure that experienced consultant engineers approved by the Minister are employed or retained to investigate report upon and make recommendations in regard to the sites reasonably required by the Company under this Agreement for the overall development of a suitable port if necessary for the Companys operations hereunder including the Companys wharf areas for installations stockpiling and other purposes in the port but in such regard the Company will require such engineers to have full regard for the general development of the port with a view to the reasonable use by others of the port and the Company will furnish to the State copies of such report and recommendations. When submitting to the Minister detailed proposals as referred to in subclause 3 of this clause hereof in regard to the matters mentioned in this page 16 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement paragraph the Company will so far as reasonably practicable ensure that the detailed proposals i ii iii do not materially depart from the report and recommendation of such engineers; provide for the best overall development of the port so far as the same relates to the Companys activities; and disclose any conditions of user and where alternative proposals are submitted the Companys preferences in regard thereto. 3 If hereafter either of the events mentioned in subclause 1 of this clause occurs but subject to the provisions of subclause 10 of this clause the Company shall by the end of the period of three 3 years after the occurrence of that event or such extended date if any as the Minister may approve and subject to the provisions of this Agreement unless and to the extent otherwise agreed by the Minister submit to the Minister to the fullest extent reasonably practicable its detailed proposals including plans where practicable and specifications where reasonably required by the Minister with respect to the mining

by the Company of iron ore from the mining areas or so much thereof as shall be comprised within the mineral lease with a view to the transport and shipment of the iron ore mined including where applicable the location area layout design number materials and time programme for the commencement and completion of construction or the provision as the case may be of each of the following matters namely a i if the Company proposes initially to utilise for the shipment of iron ore the port established by Hamersley at Dampier aforesaid provisions for expansion of that port if necessary; or ii if the Company proposes initially to utilise for the shipment of iron ore some other port provision for the port and port development including dredging and depositing of spoil the provision of navigational aids the Companys wharf the plans and specifications for which wharf shall be submitted to and be subject to the approval of the State the berth and swinging basin for the Companys use and port installations facilities and services all of which shall permit of adaptation so as to enable the use of the Companys wharf by As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 17 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement vessels having an ore carrying capacity of not less than sixty thousand 60000 tons; b the railway from the mining areas to the port of to connect with Hamersleys existing railway as the case may be and its proposed operation including joint user conditions if any fencing if any crossing places and grade separation where appropriate or other forms of acceptable protection at intersections with public roads; c townsite and port townsite development and services and facilities in relation thereto; d housing; e water supply; f generation transmission and distribution of electricity; g roads; h mining crushing screening handling transport and storage of i j ore; air fields; any leases licences or other tenures of land required from the State; k disposal of waste materials; l drainage; m dust control; and n any other works services or facilities proposed or desired by the Company. 4 The Company shall have the right to submit to the Minister its detailed proposals aforesaid in regard to a matter or matters the subject of any of the subparagraphs numbered a to n inclusive of subclause 3 of this clause as and when the detailed proposals become finalised by the Company PROVIDED THAT where any such matter is the subject of any one of those provisions

which refer to more than one subject matter the detailed proposals will relate to and cover each of the matters mentioned in that provision. page 18 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 5 If the Company proposes initially to utilise for the shipment of iron ore some port other than the said port established by Hamersley it shall notwithstanding subclause 4 of this clause submit as its first proposals proposals for the site for that port and the Minister will within two 2 months after receipt of the proposals give to the Company notice of his approval thereof or otherwise. If the Minister does not approve the proposals then he shall within three 3 months after the giving of his notice submit alternative proposals for another site for the port. If the said site proposed by the Minister is not within two 2 months accepted by the Company by notice to the State the State shall as hereinafter provided permit the development and use inter alia for the purpose of this Agreement of a port at Legendre and the Company may within three 3 months after the expiration of the period of two 2 months last mentioned submit to the Minister proposals for the development an use of a port at Legendre as aforesaid including proposals as to the matters mentioned in subparagraph ii of paragraph a of subclause 3 of this clause and including proposals if required by the Minister or desired by the Company as to user of a port at Legendre in conjunction with others including terms and conditions involving the participation in such development and use by another party or other parties nominated in the proposals. Within two 2 months after receipt of the proposals the Minister shall give to the Company notice of his approval or otherwise in respect thereof and shall be at liberty to specify in such notice such alterations to the proposals as are fair and reasonable having regard to the interests of the Company and any other party nominated as aforesaid including alterations which are fair and reasonable as aforesaid and which involve the participation in such development and use by another party or other parties nominated by the Minister. If the Minister specifies any such alterations then the Company may subject to the provisions of subclause 6 of this clause elect by notice to the State to refer to arbitration and then two 2 months thereafter shall refer to arbitration as

provided in clause 53 hereof any dispute as to whether the alterations specified by the Minister are fair and reasonable as aforesaid. If the Company refers to arbitration any such dispute but by the award on arbitration the question is decided in favour of the Minister the Company may if it considers and it can demonstrate to the reasonable satisfaction of the Minister who shall not act unreasonably that the alterations to the proposals found by the award to have been fair and reasonable nevertheless would render the Company's participation in the development and use of a port at Legendre not feasible from the point of view of the Company for any reason whatsoever whether technical economic or otherwise by notice to the State given within two 2 months after the award withdraw its said proposals and in that event the parties shall continue to negotiate with a view to agreeing upon a site for the port either at Legendre or elsewhere and the terms As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 19 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement and conditions fair and reasonable for the development and use of the port. If the parties have not reached agreement within three 3 months then either party can terminate the negotiations. If by the award on arbitration the dispute is decided in favour of the Company the Minister shall be deemed to have approved the Company's proposal without the alteration or alterations in question. Notwithstanding the foregoing the Company may at any time prior to the time i ii iii agreement is reached as aforesaid as to a site for the port other than at Legendre; proposals submitted as aforesaid in relation to a port at Legendre are approved without alteration or are deemed to have been so approved; or two 2 months after the Minister specifies alterations to proposals submitted as aforesaid in relation to Legendre if the Company fails to refer to arbitration as aforesaid any dispute in relation thereto or the Company having referred such a dispute to arbitration after the award on arbitration as the case may be whichever is the earliest elect by notice to the State to utilise for the shipment of iron ore the port established by Hamersley at Dampier aforesaid and thereupon but without prejudice to the provisions of subclause 9 of this clause subclauses 3 and 7 of this clause shall be read and construed as if the Company had initially proposed so to utilise the said port established by Hamersley and the Company shall submit to the

Minister its detailed proposals as required pursuant to subclause 3 of this clause. 6 Notwithstanding anything contained in this Agreement the Ministers determination in respect of the Companys proposals relating to the location of the port and the proposals relating to the development of the port insofar as such development proposals concern the development of the port for use by or in conjunction with others and the location of the port townsite shall be final and no such determination shall be referred to arbitration by the Company. Consideration of Companys Proposals 4 7 Within two 2 months after receipt of any of the detailed proposals required to be submitted by the Company pursuant to subclause 3 of this clause other than a proposal of the kind mentioned in subclause 5 of this page 20 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement clause the Minister shall give to the Company notice either of his approval of the proposals submitted or of alterations desired thereto and in the latter case shall afford to the Company opportunity to consult with and to submit new proposals to the Minister. Within two 2 months of the receipt of the notice the Company may elect by notice to the State to refer to arbitration and within two 2 months thereafter shall refer to arbitration as provided in clause 53 hereof any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the dispute is deed against the Company then unless the Company within three 3 months after delivery of the award satisfies and obtains the approval of the Minister as to the matter or matters the subject of the arbitration this Agreement shall on the expiration of that period of three 3 months cease and determine save as provided in subclause 13 of clause 5 and clause 22 hereof but if the question is deed in favour of the Company the decision will take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. Extension of time 4 8 The arbitrator arbitrators or umpire as the case may be of any submission to arbitration hereunder is hereby empowered upon application by either party hereto to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both the parties hereunder and an award in favour of the Company may in the name of

the Minister grant any further extension of time for that purpose. 9 Notwithstanding that under the preceding provisions of this clause any detailed proposals submitted by the Company pursuant to subclause 3 of this clause are approved by the Minister or determined by arbitration award unless each and every such proposal is so approved or determined by the end of a period of three 3 years and five 5 months after the occurrence of either of the events mentioned in subclause 1 of this clause or by such extended date if any as shall be granted pursuant to the provisions hereof then at any time after the end of the said period or last such extended date as the case may be the Minister may give to the Company twelve 12 months notice of intention to determine this Agreement and unless before the expiration of the said twelve 12 months period all such proposals are so approved or determined this Agreement shall cease and determine subject however to the provisions of subclause 13 of clause 5 and clause 22 hereof. 10 If the Company desires to mine transport and ship iron ore from the mining areas prior to the occurrence of either of the events mentioned in As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 21 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement subclause 1 of this clause the Company shall submit to the Minister detailed proposals as aforesaid as to all of the matters mentioned in subclause 3 of this clause and its time schedule for the implementation thereof and the provisions of subclause 5 and subclause 7 of this clause shall mutatis mutandis apply to the approval or determination of those proposals provided that if agreement is not reached as to any matter submitted as mentioned in the said subclause 5 and subclause 7 and the Company is not entitled to or fails to refer to arbitration any dispute in relation thereto or does so refer the dispute but by the award on arbitration the question is deed in favour of the Minister and if within two 2 months after the decision of the Minister or the award on arbitration the Company notifies the Minister that it does not accept the decision or award then the proposals shall be deemed not to have been approved or determined and this Agreement shall continue as if the Company had never submitted any proposals under this subclause without prejudice to the Companys right to submit further proposals under this subclause. To the extent to which the company submits proposals under this

subclause and those proposals are approved or determined as aforesaid the Company shall be relieved from the obligations it might hereafter have under the said subclause 3 to submit proposals to the Minister and to the extent to which the Company complies with those proposals it shall be relieved from the obligation it might thereafter have under clause 6 hereof. 11 The Company may at any time after it has submitted proposals either in compliance with its obligations under subclause 3 of this clause or pursuant to subclause 10 of this clause which have been approved or determined under this clause and under which the Company proposes initially to utilise for the shipment of iron ore the port established by Hamersley at Dampier aforesaid submit to the Minister detailed proposals as aforesaid for the utilisation for the shipment of iron ore of some other port including proposals as to the matters mentioned in subparagraph ii of paragraph a of the said subclause 3 the provisions of subclause 5 of this clause other than the last sentence thereof and the provisions of subclause 7 of this clause in both cases as modified by the proviso to the first sentence of subclause 10 of this clause shall mutatis mutandis apply to the approval or determination of those proposals. 12 The Company shall except to the extent agreed with the Minister comply with proposals submitted under subclause 10 or subclause 11 of this clause and approved or determined aforesaid. 13 Notwithstanding the preceding provisions of this clause if under any arbitration under subclause 7 of this clause the dispute is decided against page 22 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement the Company and subsequently this Agreement ceases and determines pursuant to the said subclause 7 or to subclause 9 of this clause the State will not for a period of three 3 years after such determination enter into a contract with any other party for the mining transport and shipment of iron ore from the mining areas on terms more favourable on the whole to the other party than those which would have applied to the Company hereunder if the question had been determined in favour of the Company. Subject to the provisions of subclause 10 of clause 5 hereof the 6. Company shall by the end of the period of two 2 years after the last of the proposals submitted under subclause 3 of clause 5 hereof is approved or determined as aforesaid

and in accordance therewith but subject to any variation approved pursuant to clause 47 hereof and at a cost of not less than fifty million dollars 50000000 construct install provide and do all things necessary to enable it to mine from the mineral lease and to transport by rail to the Companys wharf and to commence shipment therefrom in commercial quantities at an annual rate of not less than one million 1000000 tons of iron ore and without lessening the generality of this provision the Company shall be the end of the said period of two 2 years a b c construct install and provide upon the mineral lease or in the vicinity thereof mining plant and equipment crushing screening stockpiling and car loading plant and facilities a power house a workshop and other things of a design and capacity adequate to enable the Company to mine handle load and deal with not less than three thousand 3000 tons of iron ore per day; actually commence to mine and transport by rail iron ore from the mineral lease so that the average annual rate during the first two 2 years shall not be less than one million 1000000 tons; subject to the State having assured to the Company all necessary rights in or over Crown lands available for the purpose construct in a proper and workmanlike manner and in accordance with recognised standards of railways of a similar nature operating under similar conditions and along a route approved or determined under this clause but subject to the provisions of the Public Works Act 1902 to the extent that they are applicable the railway the subject of proposals determined or approved under this clause having a four feet As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 23 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement eight and onehalf inch 4ft. 8in. gauge and including inter alia any necessary deviations loops spurs sidings crossings points bridges signalling switches and other works and appurtenances and shall provide for crossing places grade separation where appropriate or other protective devices including flashing lights and boom gates at major road crossings or intersections with existing railways and operate such railway with sufficient and adequate locomotives freight cars and other railway stock and equipment to haul at least one million 1000000 tons of iron ore per annum; and d carry out such other works as are proposed to be carried out under the proposals as approved or determined under clause 5 hereof. Further Obligations of

State 4 7. 1 As soon as conveniently may be after any proposals have been approved or determined under this Agreement the State shall in accordance with such of those proposals as require the State to accept obligations a grant to the Company a lease or leases under the Mining Act or if mutually agreed a lease or leases under the Land Act notwithstanding any of the provisions of those Acts of such area of land for any railway proposed to be constructed under the proposals as the Company shall require at a peppercorn rental and for such term or period and on such terms and conditions including renewal rights as shall be reasonable having regard to the requirements of the Company hereunder and to the provisions of this Agreement the Mining Act being deemed to be so amended varied and modified as to enable such lease or leases to be granted; Lands 4 b grant to the Company for such terms or periods and on such terms and conditions including renewal rights as subject to the proposals shall be reasonable having regard to the requirements of the Company hereunder and to the overall development and access to and use by others of lands the page 24 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement subject of any grant to the Company and of services and facilities provided by the Company at peppercorn rental special leases of Crown lands for the purposes of the townsite or railway proposed to be constructed or provided under the proposals; and at rentals as prescribed by law or as are otherwise reasonable leases rights mining tenements reserves and licences in on or under Crown lands under the Mining Act the Jetties Act 1926 or under the provisions of the Land Act modified as in subclause 3 of this clause provided as the case may require as the Company reasonably requires for its works and operations hereunder including the construction or provision of railways wharves plants for the production of iron ore concentrates metallised agglomerates pig iron foundry iron and steel an intergrated iron and steel industry airstrips roads water supplies and stone and soil for construction purposes; and Services and Facilities 4 c provide any services or facilities subject to the Company bearing and paying the capital cost involved if reasonably attributable to or resulting from the Companys project and operations hereunder and reasonable charges for maintenance and

operation except operation charges in respect of education hospital and police services and except where and to the extent that the State otherwise agrees subject to such terms and conditions as may be approved or determined as aforesaid PROVIDED THAT from and after the twentieth anniversary of the date hereof the Company will in addition to the rentals already referred to in this paragraph pay to the State during the currency of this Agreement after such anniversary as aforesaid a rental which if the Company so requests shall be allocated in respect of such one or more of the special leases or other leases granted to the Company hereunder and remaining current equal to twentyfive 25 cents per ton on all iron ore and iron ore concentrates in respect of which royalty is payable under paragraph h of subclause 1 of clause 12 hereof in any financial year such additional rental to be paid within three 3 months after shipment sale or use as the case may be of the iron ore and iron ore concentrates SO NEVERTHELESS that the additional rental to be paid under this proviso shall be not less than three hundred thousand dollars As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 25 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 300000 in respect of any such year and the Company will within three 3 months after expiration of that year pay to the State as further rental the difference between three hundred thousand dollars 300000 and the additional rental actually paid in respect of that year but any amount so paid in respect of any financial year in excess of the rental payable for that year at the rate of twentyfive 25 cents per ton as aforesaid shall be offset by the Company against any amount payable by them to the State above the minimum amounts payable to the State under this paragraph in respect of the two 2 financial years immediately following the financial year in respect of which the said minimum sum was paid. Other Rights 4 2 The State shall on application by the Company cause to be granted to it such machinery and tailings leases including leases for the dumping of overburden and such other leases licences reserves and tenements under the Mining Act or under the provisions of the Land Act modified as in subclause 3 of this clause provided as the Company may reasonably require and request for its purposes under this Agreement on or near the mineral lease. 3 For the purposes of paragraph b of subclause 1 and

subclause 2 of this clause section 81D of the Transfer of Land Act 1893 shall not apply and the Land Act shall be deemed to be modified by a the substitution for subsection 2 of section 45A of the following subsection 2 Upon the Governor signifying approval pursuant to subsection 1 of this section in respect of any such land the same may subject to this section be leased; b the deletion of the proviso to section 116; c the deletion of section 135; d the deletion of section 143; e the inclusion of a power to offer for leasing land within or in the vicinity of any townsite notwithstanding that the townsite has not been constituted a townsite under section 10; and f the inclusion of a power to grant leases or licences for terms or periods and on such terms and conditions including

page 26 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement renewal rights and in forms consistent with the provisions of this Agreement in lieu of for the terms or periods and upon the terms and conditions and in the forms referred to in the Act and upon application by the Company in forms consistent as aforesaid in lieu of the forms referred to in the Act. 4 The provisions of subclause 3 of this clause shall not operate so as to prejudice the right of the State to determine any lease licence or other right or title in accordance with the other provisions of this Agreement. 5 The State further covenants with the Company that the State Noninterference with Companys rights

4 a shall not during the currency of this Agreement register any claim or grant any lease or other mining tenement under the Mining Act or otherwise by which any person other than the Company or an associated company will obtain under the laws relating to mining or otherwise any rights to mine or take the natural substances other than petroleum as defined in the Petroleum Act 1967 within the mineral lease unless the Minister reasonably determines that it is not likely to unduly prejudice or to interfere with the operations of the company hereunder assuming the taking by the Company of all reasonable steps to avoid the interference; No resumption 4 b subject to the provisions of subclause 2 of clause 18 hereof and subject to the performance by the Company of its obligations under this Agreement shall not during the currency hereof without the consent of the Company resume nor suffer nor permit to be resumed by any State instrumentality or by any local or other authority of the

said State any of the works installations plant equipment or other property for the time being belonging to the Company and the subject of or used for the purposes of this Agreement nor any of the lands the subject of any lease or licence granted to the Company in terms of this Agreement AND without such consent which shall not be unreasonably withheld the State will not create or grant or permit or suffer to be created or As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 27 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement granted by any instrumentality or authority of the State as aforesaid any road rightofway or easement of any nature or kind whatsoever over or in respect of any such lands which may unduly prejudice or interfere with the Companys operations hereunder; Labour requirements 4 c shall if so requested by the Company and so far as its powers and administrative arrangements permit use reasonable endeavours to assist the Company to obtain adequate and suitable labour for the construction and the carrying out of the works and operations referred to in this Agreement including suitable immigrants for that purpose; No discriminatory rates 4 d except as provided in this Agreement shall not impose nor permit nor authorise any of its agencies or instrumentalities or any local or other authority of the State to impose discriminatory taxes rates or charges of any nature whatsoever on or in respect of the titles property or other assets products materials or services used or produced by or through the operations of the Company in the conduct of the Companys business hereunder nor will the State take or permit to be taken by any such State authority any other discriminatory action which would deprive the Company of full enjoyment of the rights granted and intended to be granted under this Agreement; Rights to other minerals 4 e shall where and to the extent reasonably practicable on application by the Company from time to time grant or assist in obtaining the grant to the Company of prospecting rights and mining leases with respect to limestone dolomite and other minerals reasonably required by the Company for its purposes under this Agreement; and Consents to improvements on leases 4 f shall as and when required by the Company but without prejudice to the foregoing provisions of this Agreement page 28 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount

Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement relating to the approval or determination of proposals submitted hereunder consent in writing where and to the extent that the Minister considers to be reasonably justified to the Company making improvements for the purpose of this Agreement on the land comprised in any lease granted by the State to the Company pursuant to this Agreement PROVIDED THAT the Company shall also obtain any other consents legally required in relation to such improvements. 6 The Company shall not have any tenant rights in improvements made by the Company on the land comprised in any lease granted by the State to the Company pursuant to this Agreement in any case where pursuant to clause 23 hereof such improvements will remain or become the absolute property of the State. Iron Ore Concentrates 4 1 The Company shall before the end of year 4 or within such 8. extended period not exceeding a further two 2 years as the Company satisfies the Minister that the Company reasonably requires and the Minister approves and such further or other extended period as may be determined by arbitration as hereinafter provided a b c submit to the Minister detailed proposals for the establishment within the said State of a plant for the production of iron ore concentrates; in accordance with those proposals as finally approved or determined as hereinafter in this clause provided complete the construction of that plant at a total cost of not less than forty million dollars 40000000; and actually commence to produce iron ore concentrates from that plant and export those iron ore concentrates over the Companys wharf at an average annual rate during the two 2 years next following the date on which the Company first exports such iron ore concentrates in commercial quantities of not less than one million 1000000 tons and the Company will by the end of year 9 or by the end of such extension of that period as is equal to the aggregate of any extension approved by the Minister pursuant to the preceding provisions of this subclause and any extension determined by arbitration as hereinbefore mentioned in this subclause increase As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 29 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement the productive capacity of such plant to a minimum to three million 3000000 tons or iron ore concentrates per annum. 2 The Minister shall

within two 2 months of the receipt of such proposals give to the Company notice either of his approval of the proposals which approval shall not be unreasonably withheld or of any objections raised or alterations desired thereto and in the latter case shall afford to the Company an opportunity to consult with and to submit new proposals to the Minister. If within two 2 months of receipt of such notice agreement is not reached as to the proposals the Company may within a further period of two 2 months elect by notice to the State to refer to arbitration as hereinafter provided any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is deed in favour of the Company the Minister shall be deemed to have then approved the proposals of the Company. 3 The arbitrator arbitrators or umpire as the case may be of any submission to arbitration hereunder is hereby empowered upon application by either party hereto to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both parties hereunder and an award in favour of the Company may in the name of the Minister grant any further extension of time for that purpose. 4 The Company may at any time notify the Minister that it desires to reduce or limit the capacity of the plant hereinbefore referred to in this clause to a capacity of five hundred thousand 500000 tons of iron ore concentrates per annum and upon the Company so notifying the Minister a subclause 1 of this clause shall be read construed and take effect as if the words and figures forty million 40000000 and one million 1000000 where firstly and secondly appearing therein were twentyfive million dollars 25000000 and five hundred thousand 500000 respectively and as if the words and figures and the Company will by the end of year 9 or by the end of such extension of that period as is equal to the aggregate of any extension approved by the Minister pursuant to the proceeding provisions of this subclause and any extension determined by arbitration as hereinbefore mentioned in this subclause increase the productive capacity of such plant to page 30 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement a minimum of three million 3000000 tons of iron ore concentrates per annum were deleted therefrom; and b any

proposals in relation to the said plant submitted and/or approved or determined pursuant to this clause prior to the Company so notifying the Minister shall be read construed and take effect as if they were correspondingly amended; and c clause 10 hereof shall come into operation. 5 Notwithstanding anything hereinbefore contained in this clause if the Company can demonstrate to the satisfaction of the Minister that it is able to construct the said plant for the production of iron ore concentrates in accordance with proposals submitted pursuant to this clause as approved or determined for a sum less than forty million dollars 40000000 or if the Company has notified the Minister pursuant to subclause 4 of this clause for a sum less than twentyfive million dollars 25000000 the Minister may in his discretion approve a lesser sum which shall then be substituted for the sum of forty million dollars 40000000 or the sum of twentyfive million dollars 25000000 as the case may be. 6 Notwithstanding anything to the contrary contained or implied in this Agreement if the capacity of Hamersleys existing pelletising plant is or from time to time hereafter increases beyond two million 2000000 tons per annum a each of the capacities mentioned in subclause 1 and subclause 4 of this clause shall from time to time be reduced by the amount of the excess above two million 2000000 tons to the intent inter alia that i if prior to the end of the period first mentioned in subclause 1 of this clause as extended as therein provided the capacity of Hamersleys said plant is or hereafter increases to at least two million five hundred thousand 2500000 tons per annum and whether before or after such increase the Company notifies the Minister pursuant to the said subclause 4 the Company shall not have any obligation whatsoever under this clause; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 31 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement ii iii if prior to the end of the period last mentioned in subclause 1 of this clause as extended as therein provided the capacity of Hamersleys said plant is or hereafter increases to at least three million 3000000 tons per annum but not to five million 5000000 tons per annum but the Company does not notify the Minister pursuant to the said subclause 4 the only obligation of the Company under this clause will be to complete within the said State and by the end of the said period extended as aforesaid the construction of a plant for

the production of iron ore concentrates having a productive capacity equal to the difference between the annual capacity of Hamersleys said plant as increased from time to time and five million 5000000 tons per annum; and if prior to the end of the period last mentioned in subclause 1 of this clause as extended as therein provided the capacity of Hamersleys said plant is or hereafter increases to at least five million 5000000 tons per annum then the Company will not have any obligation whatsoever under this clause notwithstanding that it does not notify the Minister pursuant to the said subclause 4; b each of the amounts of forty million dollars 40000000 and twentyfive million 25000000 previously mentioned in this clause shall be reduced by such amount as is mutually agreed or failing agreement as is determined by arbitration pursuant to clause 53 hereof; and this clause shall be read construed and take effect accordingly. Company may make use of certain plant and facilities established by Hamersley 4 Notwithstanding anything to the contrary contained or implied in this 9. Agreement any proposals submitted pursuant to clause 5 hereof may be proposals involving as may be agreed by the Company with Hamersley the use of all or any of the following namely the port established by Hamersley at Dampier in the said State the channel wharf berth swinging basin port page 32 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement installations airstrip townsite road facilities and services established or to be established by Hamersley at Dampier the whole or part of Hamersleys existing railway from Tom Price to Dampier including any extension thereof from Tom Price to Paraburdoo and any locomotives freight cars and other railway stock or equipment now or thereafter provided by Hamersley and subject to approval or determination of such proposals under clause 5 hereof the obligations of the Company under the said clause 5 shall be modified accordingly. Substitution of 1000000 tons metallised agglomerates capacity for 2500000 tons iron ore concentrates capacity 4 If the Company gives notice to the Minister as provided in subclause 4 10. of clause 8 hereof then 1 The Company will before the end of year 6 or such extended date if any as the Minister may approve submit to the Minister detailed proposals for the establishment within the said State of plant for the production of

metallised agglomerates containing provision that such plant will by the end of year 8 or by the end of such extension of that period approved by the Minister pursuant to the preceding provision of this subclause have the capacity to produce not less than one million 1000000 tons of metallised agglomerates annually. Such capacity shall be additional to the respective capacities in respect of which the Company may be obliged to submit proposals pursuant to clause 32 hereof. 2 The Minister shall within two 2 months of receipt of proposals pursuant to subclause 1 of this clause give to the company notice either of his approval of those proposals which approval shall not unreasonably be withheld or of any objections raised or alterations desired thereto and in the latter case shall afford the Company an opportunity to consult with and to submit new proposals to the Minister. If within two 2 months of receipt of such notice agreement is not reached as to the proposals the Company may within a further period of two 2 months elect by notice to the State to refer to arbitration as provided in clause 53 of this Agreement any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is deed in favour of the Company the Minister shall be deemed to have approved of the proposals of the Company. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 33 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 3 The Company will except to the extent otherwise agreed with the Minister and subject always to clause 33 hereof before the end of the time specified in subclause 1 of this clause complete the construction of plant in accordance with the Companys proposals as finally approved or determined under this clause. 4 The arbitrator arbitrators or umpire as the case may be of any submission to arbitration hereunder is hereby empowered upon application by either party hereto to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both the parties hereunder and an award in favour of the Company may in the name of the Minister grant any further extension of time for that purpose. Additional Proposals 4 11. 1 In the event that the Company desires a to expand its activities beyond those specified in the Companys proposals as approved pursuant to clause 5 hereof; or b to undertake

secondary processing; or c to undertake the production of steel the Company shall so notify the Minister who may consequent upon the outcome of the negotiations of the parties pursuant to subclause 2 of this clause require the Company to submit proposals in respect of all or any of the matters referred to in paragraphs a to n of subclause 3 of clause 5 hereof and in clauses 19 and 20 hereof and the Company shall to the extent of such requirement submit such proposals. The provisions of clauses 5 19 and 20 hereof shall so far as they are applicable apply to such proposals mutatis mutandis. 2 The extent to which the Company will be required to provide or contribute towards the capital costs of services and facilities and the maintenance thereof pursuant to clauses 19 and 20 hereof in consequence of such proposed expansion or undertaking shall be determined by the Minister following negotiations on such matters and in making his determination the Minister shall have regard inter alia to the current and anticipated composition of the town and the extent to which the ordinary responsibilities of the State page 34 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement with respect to the provision of the capital cost of such services and facilities are to be assumed by it in the light of the States then current capital resources. Obligations of Company 4 1 Throughout the continuance of this Agreement the Company 12. shall Operation of railway 4 a operate any railway constructed by it in a safe and proper manner and where and to the extent that it can do so without unduly prejudicing or interfering with its operations hereunder allow crossing places for roads stock and other railways and also transport the passengers and carry the freight of the State and of third parties on the railway subject to and in accordance with bylaws which shall include provision for reasonable charges from time to time to be made altered and repealed as provided in subclause 2 of this clause and subject thereto or if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost of the railway to the Company PROVIDED THAT in relation to its use of the railway the Company shall not be deemed to be a common carrier at common law or otherwise; Compliance with Laws 4 b in the construction operation maintenance and use of any work

installation plant machinery equipment service or facility provided or controlled by the Company comply with and observe the provisions hereof and subject thereto the laws for the time being in force in the said State; Maintenance 4 c at all times keep and maintain in good repair and working order and condition and where necessary replace all such works installations plant machinery and equipment and any railway the Companys wharf roads other than the public roads referred to in clause 15 hereof and water and power supplies for the time being the subject of this Agreement; Shipment of and price for ore 4 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 35 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement d subject to the provisions of this Agreement ship from the companys wharf all ore mined from the mineral lease and sold and use its best endeavours to obtain therefor the best price possible having regard to market conditions from time to time prevailing and will not sell any direct shipping ore as fine ore or fines PROVIDED THAT this paragraph shall not apply to ore used for the production of iron ore concentrates or in a plant for the production of metallised agglomerates or steel in any part of the said State lying north of the twentysixth parallel of latitude; Access through mining areas 4 e allow the State and third parties to have access with or without stock vehicles and rolling stock over the mineral lease by separate route road or railway PROVIDED THAT such access over shall not unduly prejudice or interfere with the Companys operations hereunder. Protection for inhabitants 4 f subject to and in accordance with bylaws which shall include provision for reasonable charges from time to time to be made and altered as provided in subclause 2 of this clause and subject thereto or if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost thereof to the Company allow the inhabitants for the time being of the townsite being employees licencees or agents of the Company or persons engaged in providing a legitimate and normal service to or for the company or its employees licencees or agents to make use of the water power recreational health and other services or facilities provided or controlled by the Company; Use of local labour and materials 4 g so far as reasonably and economically practicable use labour available within the said State and give

preference to bona fide Western Australian manufacturers and contractors in the placement of orders for works materials plant equipment and supplies where price quality delivery and service are equal to or better than that obtainable elsewhere. In calling tenders and/or letting contracts for works material plant equipment page 36 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement and supplies required by the Company the Company will so call tender quotations or by other methods of procurement make provision that bona fide Western Australian manufacturers and contractors are given reasonable opportunity to tender quote or otherwise be properly considered for such works materials plant equipment and supplies; Royalties 4 h pay to the State royalty on all iron ore from the mineral lease shipped or sold other than iron ore shipped solely for testing purposes or in the circumstances mentioned in subparagraph iv of this paragraph on iron ore concentrates produced from iron ore from the mineral lease or on other iron ore from the mineral lease used as mentioned in subparagraph iv of this paragraph as follows i ii on direct shipping ore and on fine ore and fines where such fine ore or fines are not sold or shipped separately as such not being locally used ore at the rate of seven and one half per centum 7 of the f.o.b. revenue computed at the rate of exchange prevailing on date of receipt by the Company of the purchase price in respect of ore shipped or sold hereunder PROVIDED NEVERTHELESS that such royalty shall not be less than sixty 60 cents per ton subject to subparagraph vi of this paragraph in respect of ore the subject of any shipment or sale; on fine ore sold or shipped separately as such not being locally used ore at the rate of three and three quarter per centum 3 of the f.o.b. revenue computed as aforesaid PROVIDED NEVERTHELESS that such royalty shall not be less than thirty 30 cents per ton subject to subparagraph vii of this paragraph in respect of ore the subject of any shipment or sale; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 37 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement iii iv v vi vii on fines sold or shipped separately as such not being locally used ore at the rate of fifteen 15 cents per ton; on locally used ore not being iron ore used for producing iron ore concentrates and on iron ore

concentrates produced from locally used ore and shipped or sold or used in plant for the production of steel or in an integrated iron and steel industry or in plant for the production of metallised agglomerates other than iron ore concentrates shipped solely for testing purposes at the rate of fifteen 15 cents per ton; on all other iron ore not being locally used ore at the rate of seven and one half per centum 7 of the f.o.b. revenue computed as aforesaid without any minimum royalty; if the amount ascertained by multiplying the total tonnage of direct shipping ore shipped or sold and liable to royalty under subparagraph i of this paragraph in any financial year by sixty 60 cents is less than the total royalty which would be payable in respect of that ore but for the operation of the proviso to that subparagraph then that proviso shall not apply in respect of direct shipping ore shipped or sold in that year and at the expiration of that year any necessary adjustments shall be made accordingly; if the amount ascertained by multiplying the total tonnage of fine ore shipped or sold separately as such and liable to royalty under subparagraph ii of this paragraph in any financial year by thirty 30 cents is less than the total royalty which would be payable in respect of that ore but for the operation of the proviso to that subparagraph then that proviso shall not apply in respect of fine ore shipped or sold separately as such in that year and at the expiration of that year any necessary adjustments shall be made accordingly; page 38 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement viii ix the royalty at the rate of fifteen 15 cents per ton referred to in subparagraphs iii and iv of this paragraph shall be adjusted up or down as the case may be as at the first day of January 1969 and as at the beginning of every fifth year thereafter in accordance with any variation in the average of the basic prices of foundry pig iron c.i.f. Australian capital city ports as announced by The Broken Hill Proprietary Company Limited or any subsidiary thereof from time to time during the calendar year immediately preceding the date at which the adjustment is required to be made as compared with such average for the calendar year 1963; for the purpose of this paragraph locally used ore means iron ore used by the Company or an associated company both within the Commonwealth and within the limits referred to in paragraph m of this clause for secondary

processing or in an integrated iron and steel industry or in plant for the production of steel and includes iron ore used by any other person or company north of the twentysixth parallel of latitude in the said State for secondary processing or in an integrated iron and steel industry or in plant for the production of steel; and x where iron ore concentrates are produced from an admixture of iron ore from the mineral lease and other iron ore a portion and a portion only of the iron ore concentrates so produced being equal to the proportion which the amount of iron in the iron ore from the mineral lease used in the production of those iron ore concentrates bears to the total amount of iron in the iron ore so used shall be deemed to be produced from iron ore from the mineral lease; Payment of Royalties 4 i within fourteen 14 days after the quarter days the last days of March June September and December in each year furnish to the Minister a return showing the quantity of all iron ore and iron ore concentrates the subject of royalty hereunder As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 39 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement and shipped sold or used as the case may be during the quarter immediately preceding the due date of the return and shall not later than two 2 months after such due date pay to the Minister the royalty payable in respect of iron ore and iron ore concentrates used and in respect of all iron ore and iron ore concentrates shipped or sold pay to the Minister on account of the royalty payable hereunder a sum calculated on the bases of invoices or provisional invoices as the case may be rendered by the Company to the purchaser which invoices the Company shall render without delay simultaneously furnishing copies thereof to the Minister of such iron ore and iron ore concentrates and shall from time to time in the next following appropriate return and payment make by the return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. revenue realised in respect of the shipments shall have been ascertained; Rent for Mineral Lease 4 j by way of rent for the mineral lease pay to the State annually in advance a sum equal to thirtyfive 35 cents per acre of the area for the time being the subject of the mineral lease commencing on and accruing from the commencement of its term PROVIDED THAT after production is commenced in commercial quantities within the said State

from a plant constructed by the Company for secondary processing or for iron and steel manufacture or steel manufacture whichever is first constructed pursuant to this Agreement if and during the period that the total area for the time being comprised within the mineral lease i ii is not more than one hundred 100 square miles the annual rent shall be twenty 20 cents per acre; is over one hundred 100 square miles but not more than one hundred and fifty 150 square miles the annual rent shall be twentyfive 25 cents per acre; and page 40 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement iii is over one hundred and fifty 150 square miles but not more than two hundred 200 square miles the annual rent shall be thirty 30 cents per acre; Other rentals 4 k pay to the State the rental referred to in the proviso to subclause 1 of clause 7 hereof if and when such rental shall become payable; Inspection 4 l permit the Minister or his nominee to inspect at all reasonable times the books of account and records of the Company relative to any shipment sale or use of ore hereunder including sale contracts and to take copies or extracts therefrom and for the purposes of determining the f.o.b. revenue payable in respect of any shipment of ore hereunder the Company will take reasonable steps to satisfy the State either by certificate of a competent independent party acceptable to the State or otherwise to the Ministers reasonable satisfaction as to all relevant weights and analyses and will give due regard to any objection or representation made by the Minister or his nominee as to any particular weight or assay of ore which may affect the amount of royalty payable hereunder; and Export to places outside the Commonwealth 4 m ensure that unless with the prior written approval of the Minister to do otherwise all ore from the mineral lease shipped pursuant to this Agreement will be offloaded at a place outside the Commonwealth without such prior written approval the Company shall forthwith on becoming aware thereof give to the State notice of the fact and pay to the State in respect of the ore the subject of the shipment such further and additional rental calculated at a rate not exceeding one dollar 1 per ton of the ore as the Minister shall demand without prejudice however to any other rights and remedies of the State hereunder arising from the breach by the Company of the provisions

hereof. If ore is shipped in a vessel not owned by the Company or an associated company or any other company in which the Company has a

As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 41 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement controlling interest and such ore is offloaded in the Commonwealth the Company will not be or be deemed to be in default hereunder if it takes appropriate action to prevent a recurrence of such an offloading PROVIDED FURTHER that the foregoing provisions of this paragraph shall not apply in any case including any unforeseeable diversion of the vessel for necessary repairs or arising from force majeure or otherwise where the Company could not reasonably have been expected to take steps to prevent that particular offloading PROVIDED ALSO that the provisions of this paragraph shall not apply i ii iii to ore used in secondary processing or in an integrated iron and steel industry or in plant for the production of steel by the Company or an associated company within the said State; to ore so used by the Company or an associated company within the Commonwealth but outside the said State to the extent that the tonnage of ore so used does not in any year exceed fifty per centum 50 of the total quantity of ore used in secondary processing or in an integrated iron and steel industry or in plant for the production of steel by the Company or an associated company within the State; or to ore so used by the Company or an associated company within the Commonwealth but outside the said State in excess of fifty per centum 50 of the total quantity of ore used in secondary processing or in an integrated iron and steel industry or in plant for the production of steel by the Company or an associated company within the said State with the prior approval of the Minister as aforesaid. Port townsite air field 4 n pay to the State or local authority concerned a sum or sums to be agreed as a fair and reasonable proportion of the cost of expanding the capacity of any existing air field near the port townsite to cater for the additional air traffic resulting from the implementation of the Companys proposals hereunder. page 42 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Other works and facilities 4 o in accordance with the Companys approved proposals and as may be further required

pursuant to clause 11 hereof provide any other works services facilities building or equipment necessary for carrying out the Companys obligations hereunder. Bylaws 4 2 The Governor in Executive Council may upon recommendation by the Company make alter and repeal bylaws for the purpose of enabling the Company to fulfil the obligations under paragraph a of subclause 1 of this clause and under clause 14 hereof and unless and until the port townsite is declared a townsite pursuant to section 10 of the Land Act under paragraph f of subclause 1 of this clause and under clauses 17 and 18 hereof upon terms and subject to conditions including terms and conditions as to user charging and limitation of the liability of the Company as set out in such bylaws consistent with the provisions hereof. Should the State at any time consider that any bylaw made hereunder has as a result of altered circumstances become unreasonable or inapplicable then the Company shall recommend such alteration or repeal thereof as the State may reasonably require or in the event of there being any dispute as to the reasonableness of such requirement then as may be deed by arbitration hereunder. Port and Companys Wharf 4 13. 1 The Company shall develop the port construct the Companys wharf and carry out all necessary dredging of approach channels swinging basin and berth at the Companys wharf and provide all necessary buoys beacons markers navigational aids lighting equipment and services and facilities in accordance with the Companys relevant approved proposal hereunder. 2 Notwithstanding the provisions of subclause 1 of this clause the parties recognise that it may be advantageous for the State to provide all or any of the works thereunder mentioned and in such case the parties hereto shall together with other users and potential users of the port confer as to the manner in and the conditions upon which the State should provide such works to the mutual advantage of all. The Company shall pay to the State a sum or sums to be agreed not exceeding the amount that would have been payable had the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 43 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Company carried out the said works towards the cost of the said works provided by the State. Use of Wharf and Facilities 4 1 The Company shall subject to and in accordance with bylaws 14. which shall include provision

for reasonable charges from time to time to be made and altered as provided in subclause 2 of clause 12 hereof and subject thereto or if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost thereof to the Company allow the State and third parties to use the Companys wharf and port installations wharf machinery and equipment and wharf and port services and port facilities constructed or provided by it PROVIDED THAT such use shall not unduly prejudice or interfere with the Companys operations hereunder and that such use shall be subject to the prior approval of the Company. 2 Subject to the provisions of clause 24 hereof nothing in this Agreement shall be construed to limit the application of the Shipping and Pilotage Act 1967. Roads 4 15. 1 The Company shall subject to the State having assured to the Company all necessary rights in or over Crown lands or reserves available for the purpose at its own cost and expense and in accordance with its proposals as approved hereunder construct such new roads as the Company may reasonably require for the purposes of this Agreement such roads to be of such widths of such materials with such gates and warning devices crossings level or grade separated where warranted and passovers for cattle and for sheep and along such routes as the parties hereto shall agree after consideration of the requirements of the respective shire councils through whose districts any such roads may pass and after prior consultation with the Minister. Except to the extent that the Companys relevant proposal as finally approved or determined under clause 5 hereof otherwise provides the Company shall allow the public to use free of charge any roads constructed or upgraded under this subclause PROVIDED THAT such use shall not unduly prejudice or interfere with the Companys operations hereunder. 2 The Company shall have the right to use any public roads that may from time to time exist in the area of its operations under this Agreement both prior to the commencement date and also in the course of the Companys operations hereunder. If the exercise by the Company of such right results in or page 44 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement is likely to result in intensive use of any public road whereby excessive damage or deterioration is caused thereto or

whereby that road becomes inadequate for use by the Company and the public the Company will upon demand except where and to the extent that the Commissioner of Main Roads or the local or other authority agrees to bear the whole or part of such cost pay to the State or the local authority concerned or other authority having control of such road the cost of preventing or making good such damage or deterioration or of upgrading the road to a standard commensurate with the increased traffic. 3 If required by the Company the State shall at the Companys cost and expense except where and to the extent that the Commissioner of Main Roads agrees to bear the whole or any part of the cost widen upgrade or realign any public road existing from time to time which the Company desires to use for its operations hereunder over which the State has control subject to the prior approval of the Commissioner of Main Roads to the proposed work. Liability of Company 4 16. It is hereby agreed and declared that a for the purposes of determining whether and to the extent to which i ii the Company is liable to any person or body corporate other than the State; or an action is maintainable by any such person or body corporate in respect of the death or injury of any person or damage to any property arising out of the use of any of the roads for the maintenance of which the Company is responsible hereunder and for no other purpose the Company shall be deemed to be a municipality and the said roads shall be deemed to be streets under the care control and management of the Company; b for the purposes of this paragraph the terms municipality street and care control and management shall have the meanings which they respectively have in the Local Government Act 1960. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 45 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Water 4 1 The Company shall give to the State not less than two 2 years 17. notice of its estimated water consumption at the port and port townsite which amounts or such other amounts as shall be agreed between the parties hereto are hereinafter called the Companys coastal water requirements. 2 Upon receipt of such notice the State shall in collaboration with the Company and in accordance with a mutually agreed programme and budget at the expense of the Company search for suitable subterranean water sources in areas agreed to by the parties hereto. 3 In the event that

the search referred to in subclause 2 of this clause identifies and proves subterranean water sources which are mutually agreed to be adequate to supply the Companys coastal water requirements the State shall in accordance with a mutually agreed programme and budget construct or arrange to have constructed at the Companys expense all bores valves pipelines meters tanks equipment and appurtenances necessary to supply the Companys coastal water requirements. 4 If within six months of the commencement of the respective negotiations between the parties pursuant to subclause 2 and subclause 3 of this clause towards agreeing a programme and budget the parties have not reached agreement then the latest proposal of the State with respect to such programme and budget shall be deemed to be mutually agreed for the purposes of this clause PROVIDED such agreement shall not prejudice the Companys right to require the State to undertake supplementary water studies in the areas agreed pursuant to subclause 2 of this clause as the Company may require and at the Companys expense. 5 The State may in its discretion construct the water supply facilities or any related works or appurtenances mentioned in subclause 3 of this clause to achieve a capacity greater than that needed to meet the Companys coastal water requirements and in that event the Company shall pay to the State a sum or sums to be agreed between the parties hereto as being the Companys fair share of the cost of providing the said facilities works or appurtenances. 6 The State shall supply to the Company from sources developed by the State pursuant to subclauses 3 and 5 of this clause water up to an amount and at a rate not less than that set forth in the notice given pursuant to subclause 1 and of this clause PROVIDED HOWEVER that should such sources prove hydrologically inadequate to meet the Companys coastal water requirements the State may limit the amount of water which may be taken from page 46 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement such sources at any one time or from time to time to the maximum which such sources are hydrologically capable of meeting as aforesaid. 7 The Company shall give to the State not less than six 6 months notice in respect of its requirements of water both at the townsite and within the mineral lease to implement

its obligations hereunder which amounts or such other amounts as shall be agreed between the parties hereto are hereinafter called the Companys inland water requirements. 8 The Company shall in collaboration with the State search for and make investigations to establish the availability of suitable subterranean water sources within the mineral lease or at other locations approved by the State and will employ and retain experienced ground water consultants where appropriate and will furnish the Minister with copies of the consultants reports or alternatively if so requested by the Company the State shall carry out the said search and investigations at the Companys expense. 9 The Company shall provide and construct at its own expense to standards and in accordance with designs approved by the State in accordance with its relevant proposals all necessary bores valves pipelines meters tanks equipment and appurtenances necessary to draw transport use and dispose of water drawn from sources licensed to the Company. 10 The Company shall make application to the State for a licence to draw water up to an amount and at a rate not less than that set forth in the notice given pursuant to subclause 7 hereof from suitable subterranean water sources identified pursuant to the search and investigation referred to in subclause 8 of this clause and as are agreed to be adequate and the State shall grant to the Company such licence PROVIDED HOWEVER that should such sources prove hydrologically inadequate to meet the Companys inland water requirements the State may limit the amount of water which may be taken from such sources at any one time or from time to time to the maximum which such sources are hydrologically capable of meeting as aforesaid. 11 If during the currency of a licence granted under the provisions of this clause the Minister is of the opinion that it would be desirable for water conservation purposes or water management purposes that sources of water licensed to the Company be controlled and operated by the State as part of a regional water supply scheme the Minister may on giving six 6 months prior notice to the Company of his intention revoke the licence and take over the Companys water supply facilities in each case without payment of compensation. Immediately from the revocation of such licence the State shall

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Agreement subject only to the continued hydrological availability of water from such sources commence and thereafter continue to supply water to an amount and at a rate required by the Company being the amount and rate to which the Company was entitled under such revoked licence and the proviso of subclause 10 of this clause shall in like manner apply to this subclause.

12 The State may in its discretion develop any district or regional water supply and for the purposes thereof construct any works of the kind mentioned in subclause 9 of this clause to a greater capacity than that required to supply the Companys inland water requirements but in that event the cost of the works as so enlarged shall be shared by the parties hereto in such manner as may be agreed to be fair in all the circumstances. 13 The Company shall design and construct its plant and facilities for the mining handling processing and transportation of ore so that as far as practicable non potable water may be used therein. 14 The Company shall pay to the State for water supplied by it pursuant to subclause 6 and subclause 11 of this clause a fair price to be negotiated between the parties hereto having regard to the actual cost of operating and maintaining the supply and provision for replacement of the water supply facilities. Notwithstanding the foregoing in respect of water supplied by the State to the Company as aforesaid for domestic purposes the Company shall pay to the State therefor charges as levied from time to time pursuant to the provisions of the Country Areas Water Supply Act 1947. 15 The State may grant to a third party rights to draw water from sources from which the Company draws water always provided however that a where the Company has paid in whole or in part any moneys in respect of the investigation proving development and utilization of such sources as provided pursuant to this clause the State shall require as a condition of such grant that where such third party is or will be a substantial user of water that party shall reimburse to the Company a proportion of such moneys as the Minister determines is fair and reasonable having regard inter alia to the proportion which that partys actual or potential requirements for water bears to the total capacity of such sources; and b where the Company draws water from a source developed wholly at its expense pursuant to this clause the State shall ensure that it is a condition of such grant to third parties that

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www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement in the event that the capacity of the source is reduced such reduction shall be first applied to such third parties and thereafter if further reduction is necessary the States and the Companys requirements shall be reduced in such proportion as may be agreed. 16 Without prejudice to the provision of subclause 10 of this clause the Company shall collaborate with the State in an investigation of surface water catchments and storage dams should water supplies from available underground sources prove insufficient to meet the Companys coastal water requirements and the Companys inland water requirements and the Company shall if it proposes to utilise such water catchments and/or storage dams pay to the State a sum or sums to be agreed towards the cost of such investigation and towards the cost of constructing any water storage dam or dams and reticulation facilities required PROVIDED THAT the State may in its sole discretion elect to construct a water storage dam or dams and reticulation facilities having a capacity in excess of that required to supply the Companys needs and in that event the Companys contribution shall be limited to a fair and reasonable proportion of the total cost of constructing such water storage dam or dams and reticulation facilities. 17 Any reference in this clause to a licence is a reference to a licence under the Rights in Water and Irrigation Act 1914 and the provisions of that Act relating to water rights and licences shall except where inconsistent with the provisions of this Agreement apply to any water sources developed for the Companys purposes under this Agreement. Electricity 4 1 The Company shall in accordance with its proposals as approved 18. construct without cost or expense to the State facilities for the generation and transmission of electricity needed to enable the Company to carry out its obligations hereunder and design and construct its electrical generation plant equipment and transmission system so as to facilitate the ultimate connection of such plant equipment and transmission system with facilities owned by the State Electricity Commission or other third parties. 2 The State may at any time give to the Company twelve months notice of its intention to acquire and may thereafter acquire the Companys electrical generation plant equipment and transmission system or any of them up to the first point of voltage

breakdown or such other appropriate point as may be agreed at a price to be agreed between the parties and the Company will take all As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 49 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement such steps as may be necessary to give effect to the acquisition. The State undertakes that in such event the Company shall have first priority for its purposes hereunder on the power generated by such plant and equipment or capable of being transmitted along such systems and the State guarantees subject only to its inability to supply power for any of the reasons set forth in clause 51 hereof to supply the Company with power for all its purposes hereunder up to the normal continuous full load capacity of such plant and equipment and the State undertakes that in the event of such inability to supply power the State shall take all possible steps to restore such supply regardless of the time or day when such inability to supply power arises and may call upon the Company to provide employees for that purpose. 3 In the event of the State acquiring the Companys facilities or any of them as provided by subclause 2 of this clause the Company shall pay to the State Electricity Commission the cost of all electricity supplied to the Company by the Commission at a rate equal to the standard tariff applying from time to time to the Commissions system less the difference if any between the Commissions standard tariff in force at the time of the States acquisition of the facilities pursuant to subclause 2 of this clause and the Companys costs of operating those facilities including inter alia appropriate capital charges at the time of the said acquisition. The Commissions rate for electricity calculated as aforesaid shall apply to an amount of electricity equal to the continuous full load capacity of the facilities so acquired and the Company shall pay for all electricity supplied to it by the Commission in excess of such amount at the Commissions standard tariff applicable from time to time. Townsite 4 19. 1 The Company shall collaborate with the State in the planning location and development of the townsite and shall employ an experienced town planner to prepare a town plan for initial and longterm town development which town plan shall be submitted by the Company as part of proposals pursuant to clause 53c hereof. 2 The Company shall at its cost in accordance with the relevant approved proposal provide

and maintain at the townsite and make available i at such prices rentals or charges and upon such terms and conditions as are fair and reasonable under the circumstances housing accommodation services and works including sewerage reticulation and treatment works water supply works main drainage works and civic facilities; and page 50 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement ii without charge public roads and buildings and other works and equipment required for educational hospital medical police recreation fire or other services to the extent to which any of the foregoing are necessary to provide for the needs of persons and the dependants of such persons engaged in connection with the Companys operations hereunder whether or not employed by the Company. 3 The Company shall at its cost equip the buildings referred to in subclause 2 of this clause to a standard normally adopted by the State in similar types of buildings in comparable townsites. 4 The Company shall provide at its cost adequate housing accommodation for married and single staff directly connected with the educational hospital medical and police services referred to in subclause 2ii of this clause. 5 The extent of the obligations of the Company pursuant to subclauses 3 and 4 of this clause shall be determined by the proportion which the Companys contribution to the cost of the facilities and services set forth in subclause 2 of this clause bears to the total cost of such facilities and services. Existing Towns 4 20. The Company shall as the occasion may require enter into negotiations with the State with a view to achieving the assimilation into a suitable existing coastal town of such of the Companys work force at the port or any other workers employed by the Company including the dependants of such persons as shall reside at or near or shall frequent the port. Subject to the provisions of clause 11 hereof the Company shall pay to the State or the appropriate authority the capital cost of establishing and providing additional services and facilities and associated equipment including sewerage and water supply schemes main drains education police and hospital services to the extent to which those additional works and services are made necessary in that town as a result of the operations of the Company. The additional services works and associated equipment referred to in this clause shall

be provided by the State to a standard normally adopted by the State in providing new services works and associated equipment in similar cases in comparable towns. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 51 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Determination of Agreement 4 21. In any of the following events namely if the Company shall make default in the due performance or observance of any of the covenants or obligations to the State herein or in any lease sublease licence or other title or document granted or assigned under this Agreement on its part to be performed or observed and shall fail to remedy that default within reasonable time after notice specifying the default is given to it by the State or if the alleged default is contested by the Company and promptly submitted to arbitration within a reasonable time fixed by the arbitration award where the question is deed against the Company the arbitrator finding that there was a bona fide dispute and that the Company had not been dilatory in pursuing the arbitration if the Company shall abandon or repudiate its operations under this Agreement or if the Company shall go into liquidation other than a voluntary liquidation for the purpose of reconstruction then and in any of such events the State may by notice to the Company determine this Agreement and the rights of the Company hereunder and under any lease licence easement or right granted hereunder or pursuant hereto or if the Company shall surrender the entire mineral lease as permitted under subclause 2 of clause 4 hereof this Agreement and the rights of the Company hereunder and under any lease licence easement or right granted hereunder or pursuant hereto shall thereupon determine; PROVIDED HOWEVER that if the Company shall fail to remedy and default other than any default under any of clauses 8 10 32 33 34 and 35 hereof after such notice or within the time fixed by the arbitration award as aforesaid the State instead of determining this Agreement as aforesaid because of such default may itself remedy such default or cause the same to be remedied for which purpose the State by agents workmen or otherwise shall have full power to enter upon lands occupied by the Company and to make use of all plant machinery equipment and installations thereon and the costs and expenses incurred by the State in remedying or causing to be remedied such default shall be a

debt payable by the Company to the State on demand. Effect of determination of Agreement 4 22. On the cessation or determination of this Agreement i except as otherwise agreed by the Minister the rights of the Company to in or under this Agreement and the rights of the Company or of any assignee of the Company or any mortgagee to in or under the mineral lease and any other lease licence easement or right granted hereunder or pursuant hereto shall thereupon cease and determine but without prejudice to the liability of either of the page 52 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement ii iii parties hereto in respect of any antecedent breach or default under this Agreement or in respect of any indemnity given hereunder; the Company shall forthwith pay to the State all moneys which may then have become payable or accrued due; the Company shall forthwith furnish to the State complete factual statements of the investigations referred to in recital a hereof and of any work research surveys and reconnaissances carried out by the Company pursuant to the provisions of this Agreement if and insofar as such statements may not have been furnished provided that the Company shall not be obliged to supply technical information of a confidential nature with respect to processes that have been developed by the Company alone or with others or acquired from other sources and that is not generally available to the iron ore industry or financial and economic information of a confidential nature that if disclosed could unduly prejudice the contractual or commercial arrangements between the Company and third parties; iv save as aforesaid and as provided in subclause 13 of clause 5 hereof and in clause 23 hereof neither of the parties hereto shall have any claim against the other of them with respect to any matter or thing in or arising out of this Agreement. Effect on determination of lease 4 23. On the cessation or determination of any lease licence or easement granted hereunder by the State to the company or except as otherwise agreed by the Minister to an associated company or other assignee of the Company under clause 43 hereof of land for any wharf port installation railway or housing at any townsite near any such port constructed or established by the Company pursuant to this Agreement the improvements and things other than plant equipment and removable buildings

erected on the relevant land and provided for in connection therewith shall remain or become the absolute property of the State without compensation and freed and discharged from all mortgages and encumbrances and the Company will do and execute such documents and things including surrenders as the State may reasonably require to give effect to this provision. In the event of the Company immediately prior to such expiration or determination or subsequent thereto deing to remove locomotives rolling stock plant equipment and removable buildings owned by the Company or any of them from any land it shall not do so without first notifying the State in As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 53 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement writing of its decision and thereby granting to the State the right or option exercisable within three 3 months thereafter to purchase at valuation in situ the said plant equipment and removable buildings or any of them. Such valuation shall be mutually agreed or in default of agreement shall be made by such competent valuer as the parties may appoint or failing agreement as to such appointment then by two competent valuers one to be appointed by each party or by an umpire appointed by such valuers should they fail to agree.

No charge for the handling of cargoes 4 24. The State covenants that subject to the Company at its own expense providing all works buildings dredging and things of a capital nature reasonably required for its operations hereunder at or in the vicinity of the port no charge or levy shall be made by the State or by any State authority in relation to the loading of outward or the unloading of inward cargoes from the Companys wharf whether such cargoes shall be the property of the Company or of any other person or corporation but the State accepts no obligations to undertake such loading or unloading and may make the usual charges from time to time prevailing in respect of services rendered by the State or by any State agency or instrumentality or other local or other authority of the State and may charge vessels using the Companys wharf ordinary light conservancy and tonnage dues. Zoning 4 25. The State covenants that the mineral lease and the lands the subject of any lease licence or easement granted to the Company under this Agreement shall be and remain zoned for use or otherwise protected during the currency of this Agreement so that the operations of

the Company hereunder may be undertaken and carried out thereon without any interference or interruption by the State by any State agency or instrumentality or by any local or other authority of the State on the ground that such operations are contrary to any zoning bylaw regulation. Rentals and Evictions 4 26. The State covenants that any State legislation for the time being in force in the said State relating to the fixation of rentals shall not apply to any houses belonging to the Company in the port townsite and the townsite and that in relation to each such house the Company shall have the right to include as a condition of its letting thereof that the Company may take proceedings for eviction of the occupant if the latter shall fail to abide by and observe the terms page 54 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement and conditions of occupancy or if the occupant shall cease to be employed by the Company. Labour conditions 4 27. The State covenants that during the currency of this Agreement and subject to compliance with its obligations hereunder the Company shall not be required to comply with the labour conditions imposed by or under the Mining Act in regard to the mineral lease. Subcontracting 4 28. Without affecting the liabilities of the parties under this Agreement either party shall have the right from time to time to entrust to third parties the carrying out of any portions of the operations which it is authorised or obliged to carry out hereunder. Rating 4 29. The State shall ensure that notwithstanding the provisions of any Act or anything done or purported to be done under any Act the valuation of all lands whether of a freehold or leasehold nature the subject of this Agreement except as to any part upon which a permanent residence shall be erected or which is occupied in connection with that residence and except as to any part upon which there stands any improvements that are used in connection with a commercial undertaking not directly related to the mining treatment transportation shipment and processing of ore and products derived therefrom which excepted parts shall be subject to the provisions of the Local Government Act shall for rating purposes be deemed to be on the unimproved value thereof and no such lands shall be subject to any discriminatory rate PROVIDED THAT nothing in this clause shall prevent the Company making the election provided for

by Section 533B of the Local Government Act 1960. Environmental Protection 4 30. Nothing in this Agreement shall be construed to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or incidental to the Company's operations hereunder that may be made pursuant to any Act from time to time in force by the State or by any State agency or instrumentality or any local or other authority or statutory body of the State. Company to elect whether to produce metallised agglomerates or steel 4 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 55 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 31. Before the end of year 6 or such extended date if any as the Minister may approve the Company shall either a b give to the Minister notice that it proposes to comply with the provisions of clause 32 hereof; or give to the Minister notice that it proposes to comply with the provisions of clause 34 hereof. Metallised agglomerates 4 If pursuant to clause 31 hereof the Company gives to the Minister notice 32. that it proposes to comply with the provisions of this clause then 1 the company will a b c before the end of year 6 or such extended date if any as the Minister may approve submit to the Minister detailed proposals for the establishment within the said State of plant for the production of metallised agglomerates containing provision that such plant will by the end of year 8 or such extended date if any as the Minister may approve have the capacity to produce not less than one million 1000000 tons of metallised agglomerates annually; before the end of year 8 or such extended date if any as the Minister may approve submit to the Minister detailed proposals for the expansion of the productive capacity of such plant to not less than two million 2000000 tons of metallised agglomerates annually by the end of year 10 or such extended date if any as the Minister may approve; and before the end of year 10 or such extended date if any as the Minister may approve submit to the Minister detailed proposals for the further expansion of the productive capacity of such plant to not less than three million 3000000 tons of metallised agglomerates annually by the end of year 12 or such extended date if any as the Minister may approve. If Minister gives notice clauses 35 to 39 and 41 to operate 4 2 The Minister may at any time after receipt of the notice referred to in clause 31a hereof and

before the expiration of two 2 months after the page 56 Version 02a005 Published on
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Schedule Iron Ore Mount Bruce Agreement receipt of any proposals submitted pursuant to
subclause 1 of this clause give to the Company notice that notwithstanding the Companys proposal
to comply with the provisions of this clause the State requires the provisions of clauses 35 36 37 39
and 41 hereof to apply and upon the giving of such notice a the provisions of subclauses 1 3 4 and 5
of this clause shall cease to operate and neither the Company nor the Minister shall have any
further or continuing obligation thereunder; and b the provisions of clauses 35 36 37 39 and 41
hereof shall come into operation. 3 If the Minister does not give to the Company notice pursuant to
subclause 2 of this clause then the Minister shall within two 2 months of the receipt of each of the
proposals referred to in subclause 1 of this clause give to the Company notice either of his approval
of those proposals which approval shall not unreasonably be withheld or of any objections raised or
alterations desired thereto and in the latter case shall afford the Company an opportunity to consult
with and to submit new proposals to the Minister. If within two 2 months of receipt of such notice
agreement is not reached as to the proposals the Company may within a further period of two 2
months elect by notice to the State to refer to arbitration as provided in clause 53 of this Agreement
any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the
question is deed in favour of the Company the Minister shall be deemed to have approved the
proposals of the Company. 4 The Company will except to the extent otherwise agreed with the
Minister and subject always to clause 33 hereof within the respective times specified in paragraphs
a b and c of subclause 1 of this clause complete the construction of plant in accordance with such
proposals as finally approved or determined under this clause. 5 The arbitrator arbitrators or umpire
as the case may be of any submission to arbitration hereunder is hereby empowered upon
application by either party hereto to grant any interim extension of time or date referred to herein
which having regard to the circumstances may reasonably be required in order to preserve the rights
of either or both parties hereunder and an award in favour of the Company may in the name of the

Minister grant any further extension of time for that purpose. If metallised agglomerates not feasible

4 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 57 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 1 If the Company at any time considers that the construction of plant 33. for the production of metallised agglomerates as required to be proposed under clause 9 or clause 32 hereof or as required pursuant to any proposals finally approved or determined under those clauses hereinafter called the metallising operation is for any technical economic andor other reason not feasible then the Company may without prejudice to its rights if any under clause 51 of this Agreement submit to the Minister the reasons why it considers the metallising operation is not feasible together with supporting data and other information. 2 Within two 2 months after receipt of a submission from the Company under subclause 1 of this clause the Minister shall notify the Company whether or not he agrees with its submission. 3 If the Minister notifies the Company that he does not agree with its submission then at the request of the Company made within two 2 months after receipt by the Company of the notification from the Minister the Minister will appoint a tribunal hereinafter called the Tribunal of three persons one of whom shall be a Judge of the Supreme Court of Western Australia or failing him a Commissioner appointed pursuant to section 49 of the Supreme Court Act 1935 and the others of whom shall have appropriate technical or economic qualifications to dee whether or not the metallising operation is feasible and the Tribunal in reaching its decision shall take into account inter alia the Companys submission the amount of capital required for the metallising operation the availability of that capital at that time on reasonable terms and conditions the likelihood of the Company being able to sell metallised agglomerates at sufficient prices and in sufficient quantities and for a sufficient period to justify the metallising operation having regard to the amount and rate of return on total funds that would be involved in or in connection with the production and sale of metallised agglomerates by the Company and the comparable amount and rate of return on total funds employed in comparable metallurgical processes in Australia. 4 If the Minister notifies the Company that he agrees with its submission of if on reference to the Tribunal

the Tribunal dees that the metallising operation is not feasible then a the Company will not have any obligation or further obligation to submit proposals in respect of the metallising operation as provided in clause 10 or clause 32 hereof or to carry out such proposals in respect thereof as may have been finally approved or determined pursuant to those clauses; page 58 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement b the Minister and the Company will forthwith confer with a view to agreeing on the substitution for the Companys obligations in respect of the metallising operation the obligation to carry out some other feasible operation related directly to the mining and metallurgical industry representing an economic development within the said State approximately equivalent to the metallising operation. 5 If within two 2 months after the Minister notifies the Company that he agrees with its submission or as the case may be within two 2 months after the Tribunal has announced its decision that the metallising operation is not feasible the Minister and the Company have not reached agreement under subclause 4b of this clause then the Minister will instruct the Tribunal to dee whether any and if so what other feasible operation of the kind referred to in that subclause is capable of being and should be undertaken by the Company and the Tribunal in reaching its decision thereon shall have regard to any submissions made to it by the Minister and by the Company and also inter alia to the amount of capital required for such other operation the availability of that capital at that time on reasonable terms and conditions the likelihood of the Company being able to sell the product of such operation at sufficient prices and in sufficient quantities and for a sufficient period to justify the same having regard to the amount and rate of return on total capital that would be involved in or in connection with that other operation and the comparable amount and rate of return on total funds employed in comparable processes in Australia. 6 If the Minister and the Company reach agreement under subclause 4b of this clause or if on reference to the Tribunal under subclause 5 of this clause the Tribunal dees that some other feasible operation is capable of being and should be undertaken by the Company then this Agreement shall be altered to give effect to that agreement or as the case may be that decision and

the Company shall be obliged to comply with the obligations imposed on it as a result of such alteration. 7 If the Company makes a submission to the Minister under subclause 1 of this clause then the period from the time of making that submission to the time when the Minister notifies the Company that he does not agree with its submission or if the Company requests the Minister as provided in subclause 3 of this clause to the time if any when the Tribunal dees that the metallising operation is feasible shall be added to the respective times by which the Company is required to comply with any of its obligations under clause 10 or as the case may be under clause 32 hereof. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 59 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 8 The Company may invoke the foregoing provision of this clause at any time and from time to time in respect of all or any of its obligations arising under clause 10 or clause 32 hereof and the references to the metallising operation in those provisions shall as the case may require be read and construed as referring to the one or more of those obligations in respect of which those provisions are invoked by the Company. PROVIDED THAT the Company may not without the consent of the Minister invoke the foregoing provisions of this clause in respect of its obligations under clause 32 hereof until it has pursuant to that clause constructed plant having the capacity to produce not less than one million 1000000 tons of metallised agglomerates annually. If the Minister does not give such consent within one 1 month after application therefor by the Company the provisions of subclause 2 of clause 32 hereof shall operate as if the Minister had given notice to the Company pursuant to that subclause and the Minister shall be deemed to have given such notice accordingly and the Company shall be released from any obligations pursuant to this clause and clause 32 hereof accordingly. Production of steel if Company elects to produce steel 4 If pursuant to clause 31 hereof the Company gives to the Minister notice 34. that it proposes to comply with the provisions of this clause then 1 The Company will before the end of year 17 submit to the Minister detailed proposals for the establishment within the said State of plant for the production of steel containing provision that such plant will by the end of year 22 have the capacity to produce not less than five hundred thousand

500000 tons of steel annually and will by the end of year 27 have the capacity to produce not less than one million 1000000 tons of steel annually. 2 The Minister shall within two 2 months of receipt of such proposals give to the Company notice of his approval of those proposals which approval shall not unreasonably be withheld or of any objections raised or alterations desired thereto and in the latter case shall afford the Company an opportunity to consult with and to submit new proposals to the Minister. If within two 2 months of receipt of such notice agreement is not reached as to the proposals the Company may within a further period of two 2 months elect by notice to the State to refer to arbitration as provided in clause 53 of this Agreement any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is decided in favour of the Company the page 60 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Minister shall be deemed to have approved the proposals of the Company. 3 The Company will except to the extent otherwise agreed with the Minister before the end of the respective times specified in subclause 1 of this clause complete the construction of plant in accordance with the Companys proposals as finally approved or determined under this clause. 4 The arbitrator arbitrators or umpire as the case may be of any submission to arbitration hereunder is hereby empowered upon application by either party hereto to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both the parties hereunder and an award in favour of the Company may in the name of the Minister grant any further extension of time for that purpose. Production of steel if Minister requires Company to produce steel 4 1 The provisions of this clause and of clauses 36 37 38 39 and 41 35. hereof shall not operate unless and until the Minister has given notice or is deemed to have given notice to the Company pursuant to subclause 2 of clause 32 hereof. 2 The Company will in due course investigate the feasibility of establishing an integrated iron and steel industry within the said State and will from time to time review this matter with a view to its being in a position before the end of year 17 to submit to the Minister detailed proposals for such industry

capable ultimately of producing one million 1000000 tons of steel per annum containing provision that a b by the end of year 22 productive capacity will be at an annual rate of not less than and during year 23 production will be not less than five hundred thousand 500000 tons of pig iron foundry iron or steel hereinafter together referred to as product of which not less than two hundred and fifty thousand 250000 tons will be steel; production will progressively increase so that by the end of year 26 productive capacity will be at an annual rate of not less than and during year 27 production will be not less than one million 1000000 tons of product of which not less As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 61 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement than five hundred thousand 500000 tons will be steel and by the end of year 28 productive capacity will be at an annual rate of not less than and during year 29 production will be not less than one million 1000000 tons of steel; and c the capital cost involved will be not less than eighty million dollars 80000000 unless the Company utilises a less expensive but at least equally satisfactory method of manufacture than any at present known to either party. 3 If before the end of year 17 such proposals are submitted by the Company to the Minister the Minister shall within two 2 months of the receipt thereof give to the Company notice either of his approval of the proposals which approval shall not unreasonably be withheld or of any objections raised or alterations desired thereto and in the latter case shall afford to the Company an opportunity to consult with and to submit new proposals to the Minister. If within thirty 30 days of receipt of such notice agreement is not reached as to the proposals the Company may within a further period of thirty 30 days elect by notice to the State to refer to arbitration as hereinafter provided any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is deed in favour of the Company the Minister shall be deemed to have then approved the proposals of the Company. 4 If such proposals are not submitted by the Company to the Minister before the end of year 17 or if such proposals are so submitted but are not approved by the Minister within two 2 months after receipt thereof then subject to any extension of time granted under subclause 3 of clause 8 hereof if by the end of year 20 or extended date if any

the State gives to the Company notice that some other company or party hereinafter referred to as the Third Party has agreed to establish an integrated iron and steel industry within the said State using iron ore from the mineral lease on terms not more favourable on the whole to the Third Party than those proposed by or available to the Company hereunder then this Agreement will subject to the provisions of clauses 22 and 23 and clauses 38 and 41 hereof cease and determine at the end of year 27 or at the date by which the Third Party has substantially established that industry whichever is the later. 5 If by the end of year 20 or extended date if any the State has not given to the Company any such notice as is referred to in subclause 4 of this clause that subclause shall thereupon cease to have effect except that to the page 62 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement extent that they can from time to time operate the provisions of subclause 4 of this clause shall revive for a period of three 3 years at the end of year 30 and at the end of each successive period of thirteen 13 years thereafter in such a way that each year referred to in that subclause shall be read as the year 13 or as the case may require a multiple of thirteen 13 years thereafter subject to extensions of dates if any as aforesaid. 6 The Company may at any time after the end of year 17 submit proposals for an integrated iron and steel industry if at that time it has not received any notice under subclause 4 of this clause and the provisions of subclauses 2 and 3 of this clause shall apply to such proposals. 7 Except as provided in subclause 4 of this clause this Agreement will continue in operation subject to compliance by the Company with its obligations hereunder and with such proposals by the Company as are approved by the Minister. 8 Notwithstanding anything contained herein no failure by the Company to submit to the Minister proposals as aforesaid nor any nonapproval by the Minister of such proposals shall constitute a breach of this Agreement by the Company and the only consequences arising from such failure or nonapproval as the case may be will be those set out in subclause 4 of this clause. Substantial establishment 4 36. The Third Party shall have substantially established a plant for an integrated iron and steel industry when and not before that party's integrated iron and steel industry has the

capacity to produce one million 1000000 tons of steel per annum and the Minister has notified the Company that he is satisfied that that party will proceed bona fide to operate its plant or industry. Terms not more favourable 4 In doing whether for the purposes of clause 35 hereof the terms 37. granted by the State to some company or party are not more favourable on the whole than those proposed by or available to the Company regard shall be had inter alia to all the obligations that would have continued to devolve on the Company had it proceeded with iron and steel manufacture or steel manufacture including its obligations in regard to secondary processing and its obligations to establish or construct works and facilities for the mining transportation by rail and shipment of iron ore and restrictions relating thereto and its obligations to pay rent additional rental and royalty and also to the need for the other company As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 63 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement or party to pay on a fair and reasonable basis for or for the use of property accruing to the State under clause 23 hereof and made available by the State to that company or party but also to any additional or equivalent obligations to the State assumed by that company or party. Supply of iron ore by others 4 38. If at the date upon which this Agreement ceases and determines pursuant to clause 35 hereof the Company remains under any obligation for the supply of iron ore arising out of a contract or contracts entered into by the Company with the consent of the Minister the Company may give notice to the Minister that it desires the State to ensure that the Third Party is obligated to discharge such remaining obligations. Forthwith upon receipt of such notice the State will ensure that the Third Party is obligated to discharge such obligations in accordance with such contract or contracts on a basis that is fair and reasonable as between the Company and the Third Party or if desired to supply iron ore to the Company into ships on such fair and reasonable basis. Supply of iron ore to others 4 39. The Company covenants and agrees with the State that should the Company remain in possession of the mineral lease for any period during which the Third Party is operating or is ready to operate a plant for an integrated iron and steel industry and have available to it facilities for the purpose then during such period

whenever commencing the Company will supply the Third Party with iron ore from the mineral lease not exceeding in all five million 5000000 tons per annum unless otherwise agreed i at such rates and grade as may reasonably be available and be required; ii at such points on the Companys railway; iii at such price; and iv on such other terms and conditions as may mutually be agreed between the Company and the State or failing agreement deed by arbitration between them PROVIDED ALWAYS that the price shall unless otherwise agreed between them be equivalent to the total cost of production and transport incurred by the Company including reasonable allowance for depreciation and all overhead expenses plus ten per centum 10 of such total cost. page 64

Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Acceleration of Companys steel obligations 4 If before the first day of January 1977 the State gives to the Company 40. notice that it is willing to supply the Company at all times from the commencement of the first day of January 1986 and thereafter during the continuance in operation of this Agreement with all the Companys requirements for electrical power anywhere within a radius of thirty 30 miles from the Post Office at Dampier and anywhere within a radius of thirty 30 miles from the northernmost point of Cape Lambert in the said State including all electrical power from time to time required by the Company for secondary processing for the production of iron andor steel and for all ancillary purposes including crushing screening and loading and the operation of any port or ports but not including electrical power from time to time required by the Company for any townsite or townsites established or to be established by the Company at a total cost to the Company of six tenths of a cent 0.6c per kilowatt hour and supplied by the State at points reasonably adjacent to the respective places at which it is from time to time required by the Company then the State and the Company will forthwith enter into an agreement for the supply of such electrical power accordingly and from and after the date when such agreement is entered into and so long as the State complies with all its obligations under the said agreement clauses 34 and 35 hereof shall be read construed and take effect as if each numeral appearing therein immediately after the word year were a numeral six 6

less than each such numeral. If by the end of the year first referred to in subclause 2 of clause 35 41. hereof or any later time to which that time has been extended by the Minister detailed proposals for an integrated iron and steel industry as referred to in subclause 2 of clause 35 hereof are not submitted by the Company to the Minister then the Minister may at any time before the expiration of two 2 months after the end of that year or as the case may be that later time give to the Company notice that the provisions of clauses 35 36 37 38 and 39 hereof are to cease to operate and upon the giving of such notice all those provisions will cease to operate and should any notice have by then been given by the Minister to the Company pursuant to subclause 4 of clause 35 hereof such last mentioned notice shall cease to have and shall be deemed not to have had any force or effect.

Indemnity 4 42. The Company will indemnify and keep indemnified the State and its servants agents and contractors in respect of all actions suits claims demands or As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 65 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement costs of third parties arising out of or in connection with any work carried out by the Company pursuant to this Agreement or relating to its operations hereunder or arising out of or in connection with the construction maintenance or use by the Company or its servants agents contractors or assignees of any wharf railway or other works or services the subject of this Agreement or the plant apparatus or equipment installed in connection therewith and will also indemnify and keep indemnified the State against all actions suits compensation claims demands or costs by third parties under the Ratifying Act the Public Works Act 1902 the Land Act or any other Act in respect of or as a consequence of the resumption or deprivation of the use of any land where such resumption or deprivation of the use of any land where such resumption or deprivation of use is made or done by the State for the purpose of granting to the Company a lease right mining tenement easement reserve or licence pursuant to subclause 2 of clause 4 and subclause 1 of clause 7 hereof. Assignment 4 1 43. time Subject to the provision of this clause the Company may at any a b assign mortgage charge sublet or dispose of to an associated company or associated companies as of right and to any other company or

companies or person or persons with the consent in writing of the Minister the whole or any part of the rights of the Company hereunder including its rights to or as the holder of any lease licence easement grant or other title and of the obligations of the Company hereunder; and appoint as of right an associated company or associated companies or with the consent of the Minister any other company or companies or person or persons to exercise all or any of the powers functions and authorities which are or may be conferred on the Company hereunder; subject however to the assignee or assignees or as the case may be the appointee or appointees executing in favour of the State a deed of covenant in a form to be approved by the Minister to comply with observe and perform the provisions hereof on the part of the Company to be complied with observed or performed in regard to the matter or matters so assigned or as the case may be the subject of the appointment.

2 Notwithstanding anything contained in or anything done under or pursuant to subclause 1 of this clause the Company shall at all times during page 66 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement the currency of this Agreement be and remain liable for the due and punctual performance and observance of all the covenants and agreements on its part contained herein and in any lease licence easement grant or other title the subject of an assignment under the said subclause 1.

44. Notwithstanding the provisions of section 82 of the Mining Act and of regulations 192 and 193 made thereunder and of section 81D of the Transfer of Land Act 1893 insofar as the same or any of them may apply a no mortgage or charge in a form commonly known as a floating charge made or given pursuant to clause 43 hereof over any lease licence reserve or tenement granted hereunder or pursuant hereto by the Company or any assignee or appointee who has executed and if for the time being bound by a deed of covenant made pursuant to clause 43 hereof; b no transfer or assignment made or given at any time in exercise of any power of sale contained in any such mortgage or charge; shall require any approval or consent other than such consent as may be necessary under clause 43 hereof and no such mortgage or charge shall be rendered ineffectual as an equitable charge by the absence of any approval or consent otherwise

that as required by clause 43 hereof or because the same is not registered under the provisions of the Mining Act. 45. The Company may arrange for any obligation undertaken by the Company hereunder including any obligation to erect a plant or plants for the production of or any obligation to produce iron ore concentrates metallised agglomerates pig iron foundry iron or steel and any obligation arising out of proposals being approved deemed to have been approved or determined under this Agreement to construct a railway and/or to provide locomotives freight cars and other railway stock and equipment therefor to be undertaken either wholly or partially by any associated company or associated companies or with the Ministers consent which consent shall not be unreasonably withheld by any other company or companies and fulfilment of any such obligation in whole or in part by such associated company or associated companies or by that other company or companies shall be deemed to be fulfilment wholly or partially as the case may be of that obligation by the Company hereunder. Where such associated company or associated companies or such other company or companies now has or at some future time has installed or provided a plant or plants for the production of iron ore concentrates metallised agglomerates pig As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 67 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement iron foundry iron or steel or a railway or other facilities any increase in the capacity of carried out under arrangements made by the Company with such associated company or associated companies or with the prior consent of the Minister as aforesaid with such other company or companies shall to the extent of the increase reduce or as the case may be extinguish any obligation of the Company to provide such capacity.

Variation 4 1 The parties hereto may from time to time by agreement in writing 46. add to substitute for cancel or vary all or any of the provisions of this Agreement or of any lease licence easement or right granted hereunder or pursuant hereto for the purpose of implementing or facilitating any of the objects of this Agreement. 2 Where in the opinion of the Minister an agreement made pursuant to subclause 1 of this clause would constitute a material or substantial alteration of the rights or obligations of either party hereto the Agreement shall contain a provision to that effect and the

Minister shall cause that agreement to be laid on the table of each House of Parliament within twelve sitting days of the date of its execution. 3 If either House does not pass a resolution disallowing the agreement within twelve sitting days of that House after the agreement has been laid before it the agreement shall have effect from and after the last day on which the agreement might have been disallowed. Variation of Proposals 4 47. The Minister may from time to time at the request of the Company approve variations in the detailed proposals relating to any railway or port site and/or port facilities or dredging programme or townsite or town planning or any other facilities or services or other plans specifications or proposals which may have been approved pursuant to this Agreement and in considering such variation shall have regard to any changes consequent upon joint user proposals of any such works facilities or services and other relevant factors arising after the date hereof. Where the variation referred to in this clause constitutes a material or substantial alteration to the rights and/or obligations of either party as set out in this Agreement the provisions of clause 46 shall apply. Joint user 4 page 68 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement 1 The Company shall be entitled at any time and from time to time 48. with the prior approval in writing of the Minister to enter into an agreement with any third party for the joint construction maintenance and user or for the joint user only of any work constructed or agreed to be constructed by the Company pursuant to the terms of this Agreement or by such other party pursuant to any agreement entered into by it with the State and in any such event any amount expended in or contributed to the cost of such construction by the Company shall for the purpose of the calculation of the sum agreed to be expended on that work by the Company under this Agreement and if so approved by the Minister be taken and accepted as an amount equal to the total amount expended whether by the Company or the said third party or by them jointly in the construction of such work. 2 When any agreement entered into by the Company with some other company or person results in that other company or person discharging all or any of the obligations undertaken by the Company under this Agreement or renders it unnecessary for the Company to

discharge any obligation undertaken by it hereunder the Minister will discharge or temporarily relieve the Company from such part of its obligations as is reasonable having regard to the extent of any period for which the other company or person actually effects the discharge of those obligations.

Alteration of works 4 It at any time the State finds it necessary to request the Company to alter 49. the situation of any of the installations or other works other than the Companys wharf erected constructed or provided hereunder and gives to the Company notice of the request the Company shall within a reasonable time after receipt of the notice but at the expense in all things including increased running costs of the State unless the alteration is rendered necessary by reason of a breach by the Company of any of its obligations hereunder alter the situation thereof accordingly.

Export Licence 4 50. 1 On request by the Company the State shall make representations to the Commonwealth for the grant to the Company of a licence or licenses under Commonwealth law for the export of ore in such quantities and at such rate or rates as shall be reasonable having regard to the terms of this Agreement the capabilities of the Company and to maximum tonnages of ore for the time being permitted by the Commonwealth for export from the said State and in a manner or terms not less favourable to the Company except as to rate or quantity than As at 06 Dec 2013

Version 02a005 Published on www.legislation.wa.gov.au page 69 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement the State has given or intends to give in relation to such licence or licenses to any other exporter of ore from the said State. 2 If at any time the Commonwealth limits by export licence the total permissible tonnage of ore for export from the said State then the Company will at the request of the State and within three 3 months of such request inform the State whether or not it intends to export to the limit of the tonnage permitted to it under Commonwealth licences in respect of the financial year next following and if it does not so intend will cooperate with the State in making representation to the Commonwealth with a view to some other producer in the said State being licensed by the Commonwealth to export such of the tonnage permitted by the Commonwealth in respect of that year as the Company does not require and such other producer may require. Such procedure shall continue to be followed year by year

during such time as the Commonwealth limits by export licence the total permissible tonnage of ore for export from the said State. 3 The Company shall be in default hereunder if at any time it fails to obtain any licence or licences under Commonwealth law for the export of ore as may be necessary for the purpose of enabling the Company to fulfil its obligations hereunder or if any such licence is withdrawn or suspended by the Commonwealth and such failure to obtain or such withdrawal or suspension as the case may be is due to some act or default by the Company or to the Company not being bona fide in its application to the Commonwealth or otherwise having failed to use its best endeavours to have the licence granted or restored as the case may be but save as aforesaid if at any time any necessary licence is not granted or any licence granted to the Company shall be withdrawn or suspended by the Commonwealth and so that as a result thereof the Company is not for the time being permitted to export at least the tonnage it has undertaken with the State it will export then the Company shall not be obliged to export that tonnage during the period such licence is not granted or is withdrawn or suspended. The State shall at all times be entitled to apply on behalf of the Company and is hereby authorised by the Company so to do for any licence or licences under Commonwealth law for the export of ore as may from time to time be necessary for the purposes of this Agreement. Delays 4 51. This Agreement shall be deemed to be made subject to any delays in the performance of obligations under this Agreement and to the temporary suspension of continuing obligations hereunder which may be occasioned by or arise from circumstances beyond the power and control of the party responsible page 70 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement for the performance of such obligations including delays or any such temporary suspension as aforesaid caused by or arising from Act of God force majeure floods storms tempests washaways fire unless caused by the actual fault or privity of the Company act of war act of public enemies riots civil commotion strikes lockouts stoppages restraint of labour or other similar acts whether partial or general shortages of labour or essential materials reasonable failure to secure contractors delays of contractors and inability

common in the iron ore export industry to profitably sell iron ore inability common in the iron ore concentrates export industry to profitably sell iron ore concentrates or inability to profitably sell metallised agglomerates or factors due to overall world economic conditions or factors which could not reasonably have been foreseen PROVIDED ALWAYS that the party whose performance of obligations is affected by any of the said causes shall minimise the effect of the said causes as soon as possible after the occurrence. Power to extend periods 4 52. Notwithstanding any provision hereof the Minister may at the request of the Company from time to time extend any period or date referred to in this Agreement for such period or to such later date as the Minister thinks fit and the extended period or later date where advised to the Company by notice from the Minister shall be deemed for all purposes hereof substituted for the period or date so extended. Arbitration 4 53. Any dispute or difference between the parties arising out of or in connection with this Agreement or any agreed amendment or variation thereof or agreed addition thereto or as to the construction of this Agreement or any such amendment variation or addition or as to the rights duties or liabilities of either party thereunder or as to any matter to be agreed upon between the parties under this Agreement shall in default of agreement between the parties and in the absence of any provision in this Agreement to the contrary be referred to the arbitration of two arbitrators one to be appointed by each party the arbitrators to appoint their umpire before proceeding in the reference and every such arbitration shall be conducted in accordance with the provisions of the Arbitration Act 1895 PROVIDED THAT except where this Agreement makes express provision for arbitration hereunder or except where by this Agreement the Minister is required to act reasonably or not to act unreasonably this clause shall not apply to any case where the Minister is by this Agreement given either As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 71 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement expressly or impliedly a power or discretion to approve consent direct or otherwise act in any particular way. Notices 4 54. Any notice consent or other writing authorised or required by this Agreement to be given or sent shall be deemed to have been duly given or sent by the State if signed by the Minister

or by any senior officer of the Public Service of the said State acting by the direction of the Minister and forwarded by prepaid post to the Company at its registered office for the time being in the said State and by the Company if signed on its behalf by a director manager or secretary of the Company or by any person or persons authorised by the Company in that behalf or by its solicitors as notified to the State from time to time and forwarded by prepaid post to the Minister and any such notice consent in writing shall be deemed to have been duly given or sent on the day on which it would be delivered in the ordinary course of post. Exemption from stamp duty 4 1 The State shall exempt from any stamp duty which but for the 55. operation of this clause would or might be chargeable on a this Agreement; b c d any instrument executed by the State pursuant to this Agreement granting to or in favour of the Company or any permitted assignee of the Company any tenement lease easement licence or other right or interest; any assignment sublease or disposition other than by way of mortgage or charge or any appointment made in conformity with the provisions of subclause 1 of clause 43 hereof; and any assignment sublease or disposition other than by way of mortgage or charge or any appointment to or in favour of the Company or an associated company of any interest right obligation power function or authority which has already been the subject of an assignment sublease disposition or appointment executed pursuant to subclause 1 of clause 43 hereof; page 72 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement PROVIDED THAT this clause shall not apply to any instrument or other document executed or made more than seven 7 years from the date hereof. 2 If prior to the date on which the Bill referred to in clause 2a hereof to ratify this Agreement is passed as an Act stamp duty has been assessed and paid on any instrument or other document referred to in subclause 1 of this clause the State when such Bill is passed as an Act shall on demand refund any stamp duty paid on any such instrument or other document to the person who paid the same. Interpretation 4 56. This Agreement shall be interpreted according to the law for the time being in force in the said State. FIRST SCHEDULE Firstly The Agreement under seal of even date herewith between the Honourable John Trezise Tonkin M.L.A.

Premier of the State of Western Australia acting for and on behalf of the said State and Instrumentalities thereof of the first part HANCOCK PROSPECTING PTY. LTD. and WRIGHT PROSPECTING PTY. LTD. of the second part. Secondly The Agreement under seal of even date herewith between the Honourable John Trezise Tonkin M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and Instrumentalities thereof of the one part and Hamersley of the other part. SECOND SCHEDULE WESTERN AUSTRALIA IRON ORE MOUNT BRUCE AGREEMENT ACT 1972 MINERAL LEASE LEASE NO. GOLDFIELD ELIZABETH THE SECOND by the Grace of God of the United Kingdom Australia and Her other Realms and Territories Queen Head of the Commonwealth Defender of the Faith TO ALL WHOM THESE PRESENTS shall come GREETINGS KNOW YE that WHEREAS by an Agreement made the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 73 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement day of 1972 BETWEEN the STATE OF WESTERN AUSTRALIA of the one part and MOUNT BRUCE MINING PTY. LIMITED hereinafter called the Company which expression will include the successors and assigns of the Company of the other part the said State has agreed to grant to the Company a mineral lease or leases of portion or portions of the lands referred to in the said Agreement as the mining areas and whereas the said Agreement was ratified by the Iron Ore Mount Bruce Agreement Act 1972 which said Act inter alia authorised the grant of a mineral lease or leases to the Company NOW WE in consideration of the rents and royalties reserved by and of the provisions of the said Agreement and in pursuance of the said Act DO BY THESE PRESENTS GRANT AND DEMISE unto the Company subject to the said provisions ALL THOSE pieces or parcels or land situated in the Goldfields containing approximately acres and subject to such corrections as may be necessary to accord with the survey when made being the land shaded pink on the plan in the Schedule hereto and all those mines veins seams lodes and deposits of iron ore in on or under the said land hereinafter called the said mine together with all rights liberties easements advantages and appurtenances thereto belonging or appertaining to a lessee of a mineral lease under the Mining Act

1904 including all amendments thereof for the time being in force and all regulations made thereunder for the time being in force which Act and regulations are hereinafter referred to as the Mining Act or to which the Company is entitled under the said Agreement TO HOLD the said land and mine and all and singular the premises hereby demised for the full term of twentyone years from the day of 19 with the right to renew the same from time to time for further periods each of twentyone years as provided in but subject to the said Agreement for the purposes but upon and subject to the terms covenants and conditions set out in the said Agreement and to the Mining Act as modified by the said Agreement YIELDING and paying therefor the rent and royalties as set out in the said Agreement AND WE DO hereby declare that this lease is subject to the observance and performance by the Company of the following covenants and conditions that is to say 1 The Company shall and will use the land bona fide exclusively for the purposes of the said Agreement. 2 Subject to the provisions of the said Agreement the Company shall and will observe perform and carry out the provisions of the Mines Regulation Act 1946 and all amendments thereof for the time being in force and the regulations for the time being in force made thereunder and subject to and also as modified by the said page 74 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement Agreement the Mining Act so far as the same effect or have reference to this lease. PROVIDED THAT this lease and any renewal thereof shall not be determined or forfeited otherwise than under and in accordance with the provisions of the said Agreement. PROVIDED FURTHER that all petroleum on or below the surface of the demised land is reserved to Her Majesty with the right to Her Majesty or any person claiming under her or lawfully authorised in that behalf to have access to the demised land for the purpose of searching for and for the operations of obtaining petroleum in any part of the land under the provisions of the Petroleum Act 1967. IN WITNESS whereof we have caused our Minister for Mines to affix his seal and set his hand hereto at Perth in the said State of Western Australia and the common seal of the Company has been affixed hereto this day of 19 THE SCHEDULE ABOVE REFERRED TO IN WITNESS WHEREOF these presents

have been executed the day and year first hereinbefore written. SIGNED by the said THE HONOURABLE JOHN TREZISE TONKIN M.L.A. in the presence of JOHN T. TONKIN. DON MAY Minister for Mines. THE COMMON SEAL OF MOUNT BRUCE MINING PTY. LIMITED was hereto affixed in the presence of C.S. R. T. MADIGAN Director. JOHN CALDER Secretary. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 75 Iron Ore Mount Bruce Agreement Act 1972 First Schedule Iron Ore Mount Bruce Agreement [First Schedule amended No. 94 of 1976 s. 4.] page 76 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 1976 Variation Agreement Second Schedule Second Schedule 1976 Variation Agreement [s. 2] [Heading inserted No. 94 of 1976 s. 5; amended No. 19 of 2010 s. 4.] THIS AGREEMENT made the 5th day of October 1976 BETWEEN THE HONOURABLE SIR CHARLES WALTER MICHAEL COURT O.B.E. M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and Instrumentalities thereof from time to time hereinafter called the State of the one part and MOUNT BRUCE MINING PTY. LIMITED a company incorporated under the Companies Act of the said State and having its registered office at 191 St. Georges Terrace Perth hereinafter called the Company which expression will include the successors and assigns of the Company of the other part WHEREAS it is desired to amend the provisions of the principal Agreement as hereinafter defined; NOW THIS AGREEMENT WITNESSETH 1. In this Agreement subject to the context principal Agreement means the Agreement of which a copy is set out in the Schedule to the Iron Ore Mount Bruce Agreement Act 1972; words and phrases to which meanings are given under clause 1 of the principal Agreement other than words or phrases to which meanings are given in the foregoing provisions of this clause shall have the same respective meanings in this Agreement as are given to them under clause 1 of the principal Agreement. 2. The State shall introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and endeavour to secure its passage as an Act. The subsequent clauses of this Agreement shall not operate unless and 3. until 1 The Bill to ratify this Agreement as referred to in clause 2 hereof is passed as an Act before the 30th day of November 1976 or such

later date if any as the parties hereto may mutually agree upon; and As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 77 Iron Ore Mount Bruce Agreement Act 1972 Second Schedule 1976 Variation Agreement 2 a Bill to ratify the Agreement referred to in the Schedule hereto is passed as an Act before the 30th day of November 1976 or such later date if any as the parties hereto may mutually agree upon. 4. The principal Agreement is hereby varied as follows 1 as to clause 1 a by inserting after the definition of Hamersley the following definition Hamersley Amending Agreement means the agreement of which a copy is set out in the Third Schedule to the Iron Ore Hamersley Range Agreement Act 1963 1972 as amended by the Agreement of which a copy is set out in the Fourth Schedule to that Act and as further amended by the Agreement dated the 5th day of October 1976 between the State of the one part and Hamersley Iron Pty. Limited of the other part; and b by inserting after the definition of metallised agglomerates the following definition metallised agglomerate production commencement date means the date upon which Hamersley pursuant to the provisions of clause 9 of the Hamersley Amendment Agreement first commences to produce metallised agglomerates in commercial quantities; ; 2 by adding after clause 10 a new clause 10A as follows 10A. If Hamersley pursuant to subclause 1 of clause 8A of the Hamersley Amending Agreement submits detailed proposals to the State for the establishment within the said State of a plant for the production of iron ore concentrates then the operation of clauses 8 and 10 hereof shall be suspended until either a Hamersley complies with its obligations under subclauses 1 and 2 of the said clause 8A in which event this Agreement shall thenceforth be read and construed as page 78 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 1976 Variation Agreement Second Schedule if the said clauses 8 and 10 were deleted herefrom; or b Hamersley commits a breach of its obligations under the said subclauses 1 and 2 in which event the said clauses 8 and 10 shall recommence to operate but thereafter shall be read and construed as if i ii iii the reference year 4 in subclause 1 of the said clause 8 read year 8; the reference year 9 wheresoever appearing in the said clause 8 read year 13; and the reference year 6 in subclause 1

of the said clause 10 read year 10 and the reference year 8 in that subclause read year 12. ; 3 as to clause 31 by substitution for the passage end of year 6 in line one the passage expiry of one 1 year from the metallised agglomerate production commencement date; 4 a as to subclause 1 of clause 32 i ii by substituting for the passage end of year 6 in line one the passage expiry of one 1 year from the metallised agglomerate production commencement date; and by substituting for the passages the end of year 8 the end of year 10 and the end of year 12 wheresoever appearing the passages the expiry of three 3 years from the metallised agglomerate production commencement date the expiry of five 5 years from the metallised agglomerate production commencement date and the expiry of seven 7 years from the metallised As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 79 Iron Ore Mount Bruce Agreement Act 1972 Second Schedule 1976 Variation Agreement agglomerate production commencement date respectively; and b as to subclause 2 of clause 32 by adding after the words pursuant to in line four the passage paragraph a of. THE SCHEDULE. THE Agreement of even date herewith between THE HONOURABLE SIR CHARLES WALTER MICHAEL COURT O.B.E. M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and the Instrumentalities thereof of the first part and HAMERSLEY IRON PTY. LIMITED of the second part. IN WITNESS WHEREOF these presents have been executed the day and the year first hereinbefore written. CHARLES COURT SIGNED by the said THE HONOURABLE SIR CHARLES WALTER MICHAEL COURT O.B.E. M.L.A. in the presence of ANDREW MENSAROS MINISTER FOR INDUSTRIAL DEVELOPMENT THE COMMON SEAL of MOUNT BRUCE MINING PTY. LIMITED was hereunto affixed in the presence of [C.S.] Director. DONALD S. STEWART Secretary. C. J. S. RENWICK [Second Schedule inserted No. 94 of 1976 s. 5.] page 80 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement Third Schedule 1987 Variation Agreement [s. 2] [Heading inserted No. 26 of 1987 s. 7; amended No. 19 of 2010 s. 4.] THIS AGREEMENT is made the 28th day of May 1987 BETWEEN THE HONOURABLE BRIAN THOMAS BURKE M.L.A. Premier of the State of Western Australia acting

for and on behalf of the said State and its instrumentalities from time to time hereinafter called the State of the one part and MOUNT BRUCE MINING PTY. LIMITED a company incorporated in Western Australia and having its registered office at 191 St. Georges Terrace Perth hereinafter called the Company which expression shall include the successors and assigns of the Company of the other part. WHEREAS a b c d the State and the Company are the parties to the agreement dated the 10th day of March 1972 which agreement was ratified by and is scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as varied by the agreement dated the 5th day of October 1976 ratified by the Iron Ore Mount Bruce Agreement Act Amendment Act 1976 which agreement as so varied is referred to in this Agreement as the Principal Agreement; the obligations of the Company under clauses 8 and 10 of the Principal Agreement have been satisfied pursuant to the provisions of paragraph a of clause 10A of the Principal Agreement by the construction by Hamersley Iron Pty. Limited of the plant for the production of iron ore concentrates referred to in that clause; the Principal Agreement contains other provisions with regard to the secondary and further processing of iron ore intended where feasible to further the economic development of the State; and the parties consistent with the above intention but in the light of changed world circumstances with respect to the secondary and further processing of iron ore have agreed to vary certain of the provisions of the Principal Agreement in relation thereto and to broaden the scope for substitution of alternative investments. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 81 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement

NOW THIS AGREEMENT WITNESSETH 1. 2. 3. Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. The State shall introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and endeavour to secure its passage as an Act. The subsequent clauses of this Agreement shall not operate unless and until a the Bill to ratify this Agreement referred to in clause 2 hereof; and b a Bill to ratify the Agreement referred to in the Schedule hereto are passed as Acts before the 30th day of June 1987 or such later date if any as the parties may

agree. 4. The Principal Agreement is hereby varied as follows 1 Clause 1 a by inserting before the definition of approve the following definition alternative investments means investments in the said State which are within the ability and competence of the Company or of corporations which are related to the Company for the purposes of the Companies Western Australia Code and which are approved by the Minister from time to time as alternative investments for the purpose of this Agreement which approval shall not be unreasonably withheld in the case of an investment which would add value or facilitate the addition of value beyond mining to the mineral resources of the said State;; b in the definition of associated company by deleting section 6 of the Companies Act 1961 and substituting the following section 7 of the Companies Western Australia Code; page 82 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement c by deleting the definitions of Hamersley Amending Agreement and metallised agglomerate production commencement date. 2 Clause 7 subclause 1 by deleting in the proviso payable by them and substituting the following payable by it. 3 By deleting clauses 8 10 and 10A. 4 Clause 21 by deleting other than any default under any of clauses 8 10 32 33 34 and 35 hereof and substituting the following other than any default under clause 41A or clause 41B hereof 5 By deleting clauses 31 to 41 inclusive. 6 By inserting before clause 42 the following clauses 41A. 1 a The Company shall subject to subclause 5 of this clause and to clause 41B of this Agreement on or before the 31st day of December 1991 submit to the Minister detailed proposals for the establishment within the said State of plant for the production of steel containing provision that such plant will by the 31st day of December 1994 have the capacity to produce not less than five hundred thousand 500000 tons of steel annually and will by the 31st day of December 1999 have the capacity to produce not less than one million 1000000 tons of steel annually. b If the Company reasonably requires an additional period for the purpose of submitting adequate proposals under this subclause or making a contract for the sale of steel products then the company may apply to the Minister before the 31st day of December 1991 for an extension of time beyond that date in order to complete the preparation of its proposals and As at 06

Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 83 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement the Minister will grant such extension of time being not less than twelve months as he considers warranted in the circumstances. 2 The provisions of clause 51 hereof shall not apply to subclause 1 of this clause. 3 The Minister shall within two 2 months of receipt of such proposals give to the Company notice of his approval of those proposals which approval shall not be unreasonably withheld or of any objections raised or alterations desired thereto and in the latter case shall afford the Company an opportunity to consult with and to submit new proposals to the Minister. If within two 2 months of receipt of such notice agreement is not reached as to the proposals the Company may within a further period of two 2 months elect by notice to the State to refer to arbitration as provided in clause 53 of this Agreement any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is deed in favour of the Company the Minister shall be deemed to have approved the proposals of the Company. 4 The Company shall except to the extent otherwise agreed with the Minister before the end of the respective times specified in subclause 1 of this clause complete the construction of plant in accordance with the Companys proposals as finally approved or determined under this clause. 5 a The Company may at any time before the time for submission of proposals pursuant to subclause 1 of this clause apply to the Minister for approval that the carrying out by the company of alternative investments be accepted by the State in lieu of all or some part of the Companys obligations in respect of the establishment of plant for the production of steel pursuant to this clause. page 84 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement b Where the Minister approves a request under paragraph a of this subclause the Company shall implement the investments in accordance with that approval and upon completion thereof or earlier with the agreement of the Minister the provisions of subclause 1 of this clause or that part of those provisions which pursuant to the said approval are to be satisfied by those investments shall cease to apply. 41B. 1 If the Company at any time considers that the

establishment of plant for the production of steel or as the case may be the expansion of the productive capacity of such plant as required to proposed or as required pursuant to any proposals finally approved or determined pursuant to clause 41A hereof hereinafter called the steel operation is for any technical economic or other reason not feasible whether in whole or in part then the Company may submit to the Minister the reasons why it considers the steel operation is not feasible together with supporting data and such other relevant information as the Minister may require. 2 Within two 2 months after receipt of a submission from the Company under subclause 1 of this Clause the Minister shall notify the Company whether or not he agrees with its submission. 3 a If the Minister notifies the company that he does not agree with its submission than at the request of the Company made within two 2 months after receipt by the Company of the notification from the Minister the Minister will refer the matter to arbitration pursuant to clause 53 hereof to decide whether or not the steel operation is feasible. b If the Company does not request a reference to arbitration under paragraph a of this subclause or if on a reference to arbitration it is decided that the steel operation is feasible the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 85 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement Company shall comply with its obligations under clause 41A hereof provided that the period from the time that the Company made its submission under subclause 1 of this clause to the time when the Minister notified the Company that he did not agree with its submission or the time when it was decided by arbitration that the steel operation was feasible as the case may be shall be added to the respective times by which the Company is required to comply with those obligations. 4 If the Minister notifies the Company that he agrees with its submission or if on reference to arbitration it is decided that all or part of the steel operation is not feasible then a The Company shall not have any obligation or b further obligation to submit proposals in respect of so much of the steel operation as has been found not to be feasible or to carry out the relevant part of any proposals in respect thereof that may have been finally approved or determined pursuant to clause 41A hereof; and the Company shall thenceforth be obliged to identify and investigate

potential alternative investments which would either alone or in the aggregate with other alternative investments represent economic development within the said State approximately equivalent to the steel operation or relevant part thereof. 5 In carrying out its obligations under subclause 4b of this clause the Company shall take account of and investigate to the extent reasonable under the circumstances having regard inter alia to the expertise of the Company and related corporations any potential alternative investments which are prim facia feasible and which are formally referred to the Company by the Minister from time to time. page 86 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement 6 The Company shall submit to the Minister in detail its programme for the identification and investigation of potential alternative investments pursuant to paragraph b of subclause 4 and subclause 5 of this clause not later than two 2 months after receiving the notice from the Minister or the decision on arbitration as the case may be referred to in subclause 4 of this clause which programme shall specify the potential alternative investments it is investigating and any potential alternative investments it intends to investigate and shall set forth the Companys proposed timetable for its investigations of those investments and the feasibility thereof. 7 a Within two 2 months after receipt of a programme from the Company under subclause 6 of this clause the Minister shall notify the Company of any investments referred to in the programme which he would be prepared to approve as alternative investments and forthwith after such a notice the Company and the Minister shall meet to agree upon a programme including timing for studies by the Company into the feasibility of those investments. b The Company shall duly investigate the feasibility of any potential alternative investments referred to in paragraph a of this subclause and report to the Minister thereon in accordance with the programme agreed pursuant thereto or determined by arbitration hereunder. c Where any such potential alternative investment is accepted by the Minister as an alternative investment and agreed by the Company and the Minister or found on arbitration to be feasible the Company and the Minister shall forthwith meet to agree on a date by which the Company shall submit detailed proposals for that alternative investment. As at 06 Dec

2013 Version 02a005 Published on www.legislation.wa.gov.au page 87 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement d The Company shall report to the Minister on its progress in performing its obligations under paragraphs b and c of this subclause at such intervals as the Minister may require but not more frequently in respect of any such matter than once in every three 3 months for summary reports and once in every twelve 12 months for detailed written reports. 8 a The Company shall submit its detailed proposals for any alternative investment referred to in subclause 7c of this clause not later than the date agreed pursuant to that subclause. b The provisions of subclause 3 of clause 41A hereof shall apply mutatis mutandis to the approval or determination of proposals made under this subclause. The Company shall implement proposals so approved or determined in accordance with the terms thereof. 9 a The obligations of the Company under subclause 4b of this clause shall continue until the parties agree or it is found on arbitration that alternative investments representing economic development within the said State approximately equivalent to the steel operation or relevant part thereof as provided for in that subclause have become the subject of proposals approved or determined in accordance with subclause 8 of this clause. So long as the Company has continuing obligations under subclause 4b of this clause the Company shall as and when it identified any potential alternative investment forthwith submit to the Minister a programme for the investigation of that investment and the feasibility thereof by the Company including its proposed timetable for the investigations. b page 88

Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement 10 c The provisions of subclauses 7 and 8 of this clause shall mutatis mutandis apply to a programme submitted under paragraph b of this subclause as if it were a programme under subclause 6 of this clause. The Company may invoke the foregoing provisions of this clause at any time and from time to time in respect of all or any of its obligations arising under or pursuant to clause 41A hereof and the references to the steel operation in those provisions shall as the case may require be read and construed as referring to the one or more of those obligations in respect of which those provisions are invoked by the

Company.. 7 Clause 51 by deleting inability common in the iron ore concentrates export industry to profitably sell iron ore concentrates or inability to profitably sell metallised agglomerates and substituting the following inability to profitably sell steel or the product of any production facility required to be established pursuant to this Agreement. 8 Clause 53 a b by inserting after the clause designation 53 the subclause designation 1; by deleting the arbitration of two arbitrators one to be appointed by each party the arbitrators to appoint their umpire before proceeding in the reference and every such arbitration shall be conducted in accordance with the provisions of the Arbitration Act 1895 PROVIDED THAT and substituting the following and settled by arbitration under the provisions of the Commercial Arbitration Act 1985 Provided That a notwithstanding sections 6 and 7 of that Act the matter unless the parties agree on the appointment of a specific single arbitrator shall be referred to and settled by arbitration under that Act by a tribunal of As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 89 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement three 3 arbitrators of whom the State shall appoint one the Company shall appoint one and those two arbitrators shall appoint the third; and b notwithstanding section 201 of that Act each party may be represented by a duly qualified legal practitioner or other representative and PROVIDED FURTHER THAT; c by inserting the following subclauses 2 The arbitrator or arbitrators as the case may be 3 determining any submission to arbitration under this Agreement shall have power upon application by either party to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both of the parties hereunder and an award in favour of the Company may in the name of the Minister grant any further extension of time for that purpose. In deing issues of economic feasibility the arbitrator or arbitrators as the case may be shall have regard to any submissions made by the Minister and by the Company and also inter alia to the amount of capital required for the investment the availability of that capital at that time on reasonable terms and conditions the likelihood of the investment being able to generate sufficient cash flow for a sufficient period to justify the same having regard to the amount and rate of

return of total capital that would be involved in or in connection with the investment and the weighted average cost of capital to the Company.. 9 Clause 54 by deleting in writing and substituting the following or writing page 90 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Third Schedule 1987 Variation Agreement THE SCHEDULE The Agreement of even date with this Agreement between THE HONOURABLE BRIAN THOMAS BURKE M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and its instrumentalities and HAMERSLEY IRON PTY. LIMITED. IN WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto on the date first hereinbefore mentioned. BRIAN BURKE [C.S.] SIGNED by the said THE HONOURABLE BRIAN THOMAS BURKE M.L.A. in the presence of D. PARKER MINISTER FOR MINERALS AND ENERGY THE COMMON SEAL of MOUNT BRUCE MINING PTY. LIMITED was hereunto affixed by authority of the Directors in the presence of Director T. BARLOW Secretary G. B. BABON [Third Schedule inserted No. 26 of 1987 s. 7.] As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 91 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Fourth Schedule 2010 Variation Agreement [s. 2] [Heading inserted No. 61 of 2010 s. 14.] 2010 THE HONOURABLE COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND MOUNT BRUCE MINING PTY. LTD. ACN 008 714 010 IRON ORE MOUNT BRUCE AGREEMENT 1972 RATIFIED VARIATION AGREEMENT [Solicitors details] page 92 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement THIS AGREEMENT is made this 17th day of November 2010 BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time State AND MOUNT BRUCE MINING PTY. LIMITED ACN 008 714 010 of Level 22 Central Park 152158 St Georges Terrace Perth Western Australia Company. RECITALS A. The State and the Company are the parties to the agreement dated 10 March 1972 ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 and which

as subsequently added to varied or amended is referred to in this Agreement as the Principal Agreement. B. The State and the Company wish to vary the Principal Agreement. THE PARTIES AGREE AS FOLLOWS 1. 2. Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. The State shall introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and shall endeavour to secure its passage as an Act prior to 31 December 2010 or such later date as the parties may agree. 3. a Clause 4 does not come into operation unless or until an Act passed in accordance with clause 2 ratifies this Agreement. b If by 30 June 2011 or such later date as may be agreed pursuant to clause 2 clause 4 has not come into operation then unless the parties hereto otherwise agree this Agreement shall cease and determine and neither party shall have any claim against the other party with respect to any matter or thing arising out of or done or As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 93 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement performed or omitted to be done or performed under this Agreement. 4. The Principal Agreement is hereby varied as follows 1 in clause 1 a b by deleting the current definitions of direct shipping ore fine ore fines and f.o.b. revenue; by inserting in the appropriate alphabetical positions the following new definitions agreed or determined means agreed between the Company and the Minister or failing agreement within three months of the Minister giving notice to the Company that he requires the value of a quantity of iron ore to be agreed or determined as determined by the Minister following if requested by the Company consultation with the Company and its consultants in regard thereto and in agreeing or determining a fair and reasonable market value of such iron ore assessed on an arms length basis the Company and/or the Minister as the case may be shall have regard to i in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to clause 121d the prices for that type of iron ore prevailing at the time the price for such iron ore was agreed between the arms length purchaser referred to in paragraph Biii of that proviso and the seller in relation to the type of sale and the relevant international seaborne iron ore

market into which such iron ore was sold and where prices beyond the deemed f.o.b. point are being considered the deductions mentioned in the definition of f.o.b. value; and ii in any other case the prices for that type of iron ore prevailing at the time the price for such iron ore was agreed between the Company and the purchaser in relation to the type of sale and the market into which such iron ore was sold and where prices beyond the page 94 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement deemed f.o.b. point are being considered the deductions mentioned in the definition of f.o.b. value; approved proposal means a proposal approved or determined under this Agreement; beneficiated ore means iron ore that has been concentrated or upgraded otherwise than solely by crushing screening separating by hydrocycloning or a similar technology which uses primarily size as a criterion washing scrubbing trommelling or drying or by a combination of 2 or more of those processes by the Company in a plant constructed pursuant to a proposal approved pursuant to an Integration Agreement or in such other plant as is approved by the Minister after consultation with the Minister for Mines and beneficiation and beneficiate have corresponding meanings; deemed f.o.b. point means on ship at the relevant loading port; deemed f.o.b. value means an agreed or determined value of the iron ore as if the iron ore was sold f.o.b. at the deemed f.o.b. point as at a in the case of iron ore the property of the Company which is shipped out of the said State the date of shipment; and b in any other case the date of sale transfer of ownership disposal or use as the case may be; EP Act means the Environmental Protection Act 1986 WA; fine ore means iron ore not being beneficiated ore which is screened and will pass through a 6.3 millimetre mesh screen; f.o.b. value means i subject to paragraph ii in the case of iron ore shipped and sold by the Company the price which is payable for the iron ore by the purchaser thereof to As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 95 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement the Company or an associated company or where the Minister considers following advice from the appropriate Government department that the price payable in respect of the iron ore does not represent a fair

and reasonable market value for that type of iron ore assessed on an arms length basis such amount as is agreed or determined as representing such a fair and reasonable market value less all export duties and export taxes payable to the Commonwealth on the export of the iron ore and all costs and charges properly incurred and payable by the Company from the time the iron ore shall be placed on ship at the relevant loading port to the time the same is delivered and accepted by the purchaser including 1 ocean freight; 2 marine insurance; 3 4 5 6 7 8 port and handling charges at the port of discharge; all costs properly incurred in delivering the iron ore from port of discharge to the smelter and evidenced by relevant invoices; all weighing sampling assaying inspection and representation costs; all shipping agency charges after loading on and departure of ship from the relevant loading port; all import taxes by the country of the port of discharge; and such other costs and charges as the Minister may in his discretion consider reasonable in respect of any shipment or sale; ii in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to clause 121d the price which is payable for the iron ore by the arms length purchaser as referred to in paragraph Biii of page 96 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement that proviso or where the Minister considers following advice from the appropriate Government department that the price payable in respect of the iron ore does not represent a fair and reasonable market value for that type of iron ore assessed on an arms length basis in the relevant international seaborne iron ore market such amount as is agreed or determined as representing such a fair and reasonable market value less all duties taxes costs and charges referred to in paragraph i above; iii in all other cases the deemed f.o.b. value. For the purpose of subparagraph i of this definition it is acknowledged that the consideration payable in an arms length transaction for iron ore sold solely for testing purposes may be less than the fair and reasonable market value for that iron ore and in this circumstance where the Minister in his discretion is satisfied such consideration represents the entire consideration payable the Minister shall be taken to be satisfied that such entire consideration represents the fair and reasonable market value; Government agreement has the meaning given in

the Government Agreements Act 1979; Integration Agreement means a b c d the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act 1963 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act Amendment Act 1968 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; or As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 97 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement e f g h i j k the agreement ratified by and scheduled to the Iron Ore Hope Downs Agreement Act 1992 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Mount Newman Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Mount Goldsworthy Agreement Act 1964 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore GoldsworthyNimingarra Agreement Act 1972 as from time to time added to varied or amended; or the agreement authorised by and as scheduled to the Iron Ore McCameys Monster Agreement Authorisation Act 1972 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Marillana Creek Agreement Act 1991 as from time to time added to varied or amended; Integration Proponent means in relation to an Integration Agreement the Company or the Joint Venturers as the case may be as defined in and for the purpose of that Integration Agreement; iron ore includes without limitation beneficiated ore; laws relating to native title means laws applicable from time to time in the said State in respect of native title and includes the Native Title Act 1993 Commonwealth; loading port means a the Port of Dampier; or b Port Walcott; or page 98 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth

Schedule 2010 Variation Agreement c the Port of Port Hedland; or d any other port constructed after the variation date under an Integration Agreement; or e such other port approved by the Minister at the request of the Company from time to time for the shipment of iron ore from the mineral lease; lump ore means iron ore not being beneficiated ore which is screened and will not pass through a 6.3 millimetre mesh screen; Minister for Mines means the Minister in the Government of the said State for the time being responsible under whatsoever title for the administration of the Mining Act 1978 WA; Related Entity means a company in which a as at 21 June 2010; and b after 21 June 2010 with the approval of the Minister a direct or through a subsidiary or subsidiaries within the meaning of the Corporations Act 2001 Commonwealth indirect shareholding of 20 or more is held by c Rio Tinto Limited ABN 96 004 458 404; or d BHP Billiton Limited ABN 49 004 028 077; or e those companies referred to in paragraphs c and d in aggregate; variation date means the date on which clause 4 of the variation agreement made on or about 17 November 2010 between the State and the Company comes into operation; washing means a process of separation by water using only size as a criterion; c in the definition of alternative investments by deleting or of corporations which are related to the Company for the purposes of the Companies Western Australia Code; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 99 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement d e f g h i in the definition of Companys wharf by inserting and in clauses 121d and 141 also any additional wharf constructed by the Company pursuant to this Agreement; in the definition of metallised agglomerates by deleting or iron ore concentrates; in the definition of mineral lease by inserting and any areas added to it pursuant to clause 20B before the semi colon; in the definition of secondary processing by deleting concentration or other beneficiation of iron ore other than by crushing or screening and substituting beneficiation of iron ore; in the sentence beginning marginal notes by inserting and clause headings after marginal notes; and by inserting after that sentence the following new paragraphs Nothing in this Agreement shall be construed a b to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or inental to its

activities under this Agreement that may be made by or under the EP Act; or to exempt the State or the Company from compliance with or to require the State or the Company to do anything contrary to any laws relating to native title or any lawful obligation or requirement imposed on the State or the Company as the case may be pursuant to any laws relating to native title; or c to exempt the Company from compliance with the provisions of the Aboriginal Heritage Act 1972 WA.; 2 by inserting after subclause 4 of clause 5 the following new subclauses page 100 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 4a A proposal may with the consent of the Minister except in relation to an Integration Agreement and that of any parties concerned being in respect of an Integration Agreement the Integration Proponent for that agreement provide for the use by the Company of any works installations or facilities constructed or established under a Government agreement. 4b At the time when the Company submits the said proposals it shall submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefore and shall if required by the Minister consult with the Minister with respect thereto.; 3 in clause 55 by a b c inserting or where required to be assessed under Part IV of the EP Act within 2 months after the service on him of an authority under section 457 of the EP Act after 2 months after receipt of the proposals; inserting subject to the EP Act after State shall as hereinafter permit; deleting the fourth sentence and substituting the following new sentence The provisions of paragraphs a except subparagraph iv b c and the proviso to and second sentence of paragraphd of subclause 7 shall apply mutatis mutandis to such proposals provided that in his notice to the Company of his decision in respect of the proposals the Minister shall also be at liberty to specify in such notice such alterations to the proposals as are fair and reasonable having regard to the interests of the Company and any other party nominated as aforesaid including participation in such development and use by another party or other parties nominated by the

Minister.; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 101 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 4 by deleting the heading to subclause 8 of clause 5 and renumbering that subclause as subclause 6a; 5 by deleting subclause 7 of clause 5 and substituting the following new subclause 7 a In respect of each proposal pursuant to subclause 3 of this clause the Minister shall i subject to the limitations set out below refuse to approve the proposal whether it requests the grant of new tenure or not if the Minister is satisfied on reasonable grounds that it is not in the public interest for the proposal to be approved; or ii approve of the proposal without qualification or reservation; or iii defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in subclause 3 not covered by the said proposal; or iv require as a condition precedent to the giving of his approval to the said proposal that the Company make such alteration thereto or comply with such conditions in respect thereto as he thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions PROVIDED ALWAYS that where implementation of any proposals hereunder has been approved pursuant to the EP Act subject to conditions or procedures any approval or decision of the Minister under this clause shall if the case so requires incorporate a requirement that the Company make such alterations to the proposals as may be necessary to make them accord with those conditions or procedures. page 102 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement In considering whether to refuse to approve a proposal the Minister is to assess whether or not the implementation of the proposal by itself or together with any one or more of the other submitted proposals will A detrimentally affect economic and orderly development in the said State including without limitation infrastructure development in the said State; or B be contrary to or inconsistent with the planning and development policies and objectives of the State; or C detrimentally affect the rights and interests of third parties; or D detrimentally affect access to and use by others of the lands the subject of any grant or proposed grant to the Company. The right to refuse to approve a

proposal conferred by subparagraph i of paragraph a may only be exercised in respect of a proposal where the Minister is satisfied on reasonable grounds that a purpose of the proposal is the integrated use of works installations or facilities as defined in subclause 7 of clause 20C for the purpose of that clause as contemplated by clause 20C. It may not be so exercised in respect of a proposal if pursuant to clause 11B5 the Minister prior to the submission of the proposal advised the Company in writing that the Minister has no public interest concerns as defined in that clause with the single preferred development as referred to in clause 11B5a the subject of the submitted proposals and those proposals are consistent as to their substantive scope and with the information provided to the Minister pursuant to clause 11B5 in respect of that single preferred development. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 103 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement b c d The Minister shall within 2 months after receipt of proposals pursuant to subclause 3 give notice to the Company of his decision in respect to the proposals PROVIDED THAT where a proposal is to be assessed under Part IV of the EP Act the Minister shall only give notice to the Company of his decision in respect to the proposal within 2 months after service on him of an authority under section 457 of the EP Act. If the decision of the Minister is as mentioned in either of subparagraphs i iii or iv of paragraph a the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised proposals either generally or in respect to some particular matter. If the decision of the Minister is as mentioned in either of subparagraphs iii or iv of paragraph a and the Company considers that the decision is unreasonable the Company within 2 months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision PROVIDED THAT any requirement of the Minister pursuant to the proviso to paragraph a shall not be referable to arbitration hereunder. A decision of the Minister under subparagraph i of paragraph a of this subclause shall not be referable to arbitration under the Agreement. e An award made on an arbitration pursuant to this subclause 7 shall except as otherwise provided in subclause 5 have the force and effect as follows i if by the

award the dispute is deed against the Company then unless the Company within 3 months after delivery of the award gives notice to the Minister of its acceptance of the award this Agreement shall on the expiration of that period of 3 months cease and determine; and page 104 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement ii if by the award the dispute is deed in favour of the Company then decision shall take effect as a notice by the Minister that he is so satisfied with and approves the mater or matters the subject of the arbitration.; 6 by inserting after subclause 13 of clause 5 the following new subclauses 14 The Company shall implement the approved proposals in accordance with the terms thereof. 15 Notwithstanding clause 46 the Minister may during the implementation of approved proposals approve variations to those proposals.; 7 in clause 71b by a inserting or cause to be granted after grant; b inserting after the paragraph beginning at peppercorn rental the following new paragraph at commercial rentals licence or easement fees as applicable leases licences or easements within the port as defined in clause 1 or other port within which the Company is permitted to construct works installations or facilities inserting the Port Authorities Act 1999 WA after 1926; and inserting installations or facilities after Company reasonably requires for its works; c d 8 by inserting after subclause 4 of clause 7 the following new subclause; 4a The provisions of subclauses 1 and 2 of this clause shall not operate so as to require the State to grant or vary or cause to be granted or varied any lease licence or other right or title until all processes necessary under any laws relating to native title to enable that grant or variation to proceed have been completed.; 9 in clause 111 by As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 105 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement a in paragraph a inserting other than under clause 20E after activities beyond; and b in the second sentence i inserting subclauses 3 to 6 hereof and of after provisions; and ii inserting 11A before 19; 10 by inserting after subclause 2 of clause 11 the following new subclauses 3 A proposal may with the consent of the Minister except in relation to an Integration Agreement and that of any parties concerned being in respect of an Integration Agreement the

Integration Proponent for that agreement provide for the use by the Company of any works installations or facilities constructed or established under a Government agreement. 4 Each of the proposals pursuant to subclause 1 may with the approval of the Minister or shall if so required by the Minister be submitted separately and in any order as to any matter or matters in respect of which such proposals are required to be submitted. 5 At the time when the Company submits the said proposals it shall submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. 6 The Company may withdraw its proposals pursuant to subclause 1 at any time before approval thereof or where any decision in respect thereof is referred to arbitration as referred to in clause 11A within 3 months after the award by notice to the Minister that it shall not be proceeding with the same.; page 106 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 11 by inserting after clause 11 the following new subclauses

Consideration of Companys proposals under clause 11 11A. 1 In respect of each proposal pursuant to subclause 1 of clause 11 the Minister shall a b c d subject to the limitations set out below refuse to approve the proposal whether it requests the grant of new tenure or not if the Minister is satisfied on reasonable grounds that it is not in the public interest for the proposal to be approved; or approve of the proposal without qualification or reservation; or defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in clause 11 not covered by the said proposal; or require as a condition precedent to the giving of his approval to the said proposal that the Company make such alteration thereto or comply with such conditions in respect thereto as he thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions PROVIDED ALWAYS that where implementation of any proposals hereunder has been approved pursuant to the EP Act

subject to conditions or procedures any approval or decision of the Minister under this clause shall if the case so requires incorporate a requirement that the Company make such alterations to the proposals as may be necessary to make them accord with those conditions or procedures. In considering whether to refuse to approve a proposal the Minister is to assess whether or not the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 107 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement implementation of the proposal by itself or together with any one or more of the other submitted proposals will i ii iii iv detrimentally affect economic and orderly development in the said State including without limitation infrastructure development in the said State; or be contrary to or inconsistent with the planning and development policies and objectives of the State; or detrimentally affect the rights and interests of third parties; or detrimentally affect access to and use by others of the lands the subject of any grant or proposed grant to the Company. The right to refuse to approve a proposal conferred by paragraph a may only be exercised in respect of a proposal where the Minister is satisfied on reasonable grounds that a purpose of the proposal is the integrated use of works installations or facilities as defined in subclause 7 of clause 20C for the purpose of that clause as contemplated by clause 20C. It may not be so exercised in respect of a proposal if pursuant to clause 11B5 the Minister prior to the submission of the proposal advised the Company in writing that the Minister has no public interest concerns as defined in that clause with the single preferred development as referred to in clause 11B5a the subject of the submitted proposals and those proposals are consistent as to their substantive scope and with the information provided to the Minister pursuant to clause 11B5 in respect of that single preferred development. 2 The Minister shall within 2 months after receipt of proposals pursuant to clause 111 give notice to the Company of his decision in respect to the proposals page 108 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement PROVIDED THAT where a proposal is to be assessed under Part IV of the EP Act the Minister shall only give notice to the Company of his decision in respect to the proposal within 2

months after service on him of an authority under section 457 of the EP Act. If the decision of the Minister is as mentioned in either of paragraphs a c or d of subclause 1 the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised proposals either generally or in respect to some particular matter. If the decision of the Minister is as mentioned in either of paragraphs c or d of subclause 1 and the Company considers that the decision is unreasonable the Company within 2 months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision PROVIDED THAT any requirement of the Minister pursuant to the proviso to subclause 1 shall not be referable to arbitration hereunder. A decision of the Minister under paragraph a of subclause 1 shall not be referable to arbitration under this Agreement. If by the award made on the arbitration pursuant to subclause 4 the dispute is deed in favour of the Company the decision shall take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. The Company shall implement the approved proposals in accordance with the terms thereof. Notwithstanding clause 46 the Minister may during the implementation of approved proposals approve variations to those proposals. 3 4 5 6 7

Notification of possible proposals As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 109 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 11B.1 If the Company upon completion of a prefeasibility study in respect of any matter that would require the submission and approval of proposals pursuant to this Agreement being proposals which will have as their purpose or one of their purposes the integrated use of works installations or facilities as contemplated by clause 20C for the matter to be undertaken intends to further consider the matter with a view to possibly submitting such proposals it shall promptly notify the Minister in writing giving reasonable particulars of the relevant matter. 2 Within one 1 month after receiving the notification the Minister may if the Minister so wishes inform the Company of the Ministers views of the matter at that stage. 3 4 If the Company is informed of the Ministers views it shall take them into account in deing whether or not to proceed with its

consideration of the matter and the submission of proposals. Neither the Ministers response nor the Minister choosing not to respond shall in any way limit prejudice or otherwise affect the exercise by the Minister of the Ministers powers or the performance of the Ministers obligations under this Agreement or otherwise under the laws from time to time of the said State. 4 a This subclause applies where the Company has settled upon a single preferred development a purpose of which is the integrated use of works installations or facilities as defined in subclause 7 of clause 20C for the purpose of that clause as contemplated by clause 20C. b For the purpose of this subclause public interest concerns means any concern that implementation of the single preferred development or any part of it will page 110 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement i ii iii iv detrimentally affect economic and orderly development in the said State including without limitation infrastructure development in the said State; or be contrary to or inconsistent with the planning and development policies and objectives of the State; or detrimentally affect the rights and interests of third parties; or detrimentally affect access to and use by others of lands the subject of any grant or proposed grant to the Company. c At any time prior to submission of proposals the Company may give to the Minister notice of its single preferred development and request the Minister to confirm that the Minister has no public interest concerns with that single preferred development. d The Company shall furnish to the Minister with its notice reasonable particulars of the single preferred development including without limitation i ii iii as to the matters that would be required to be addressed in submitted proposals; and its progress in undertaking any feasibility or other studies or matters to be completed before submission of proposals; and its timetable for obtaining required statutory and other approvals in relation to the submission and approval of proposals; and iv its tenure requirements. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 111 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement e If so required by the Minister the Company will provide to the Minister such further information regarding the single preferred development as the Minister may require from time to time for the

purpose of considering the Company's request and also consult with the Minister or representatives or officers of the State in regard to the single preferred development. f Within 2 months after receiving the notice or if the Minister requests further information within 2 months after the provision of that information the Minister must advise the Company i ii that the Minister has no public interest concerns with the single preferred development; or that he is not then in a position to advise that he has no public interest concerns with the single preferred development and the Minister's reasons in that regard. g If the Minister gives the advice mentioned in paragraph f ii the Company may should it so desire give a further request to the Minister in respect of a revised or alternate single preferred development and the provisions of this subclause shall apply mutatis mutandis thereto.; 12 in clause 121 by deleting paragraph d and substituting the following new paragraphs d ship or procure the shipment of all iron ore mined from the mineral lease and sold i from the Company's wharf; or page 112 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement ii from any other wharf in a loading port which wharf has been constructed under an Integration Agreement; or iii with the Minister's approval given before submission of proposals in that regard from any other wharf in a loading port which wharf has been constructed under another Government agreement excluding the Integration Agreements and use its best endeavours to obtain therefor the best price possible having regard to market conditions from time to time prevailing PROVIDED THAT A B this paragraph shall not apply to iron ore used for the production of iron ore concentrates or in a plant for the production of metallised agglomerates or steel in any part of the said State lying north of the twenty sixth parallel of latitude; and iron ore from the mineral lease may be sold by the Company prior to or at the time of the shipment under this Agreement at a price equal to the production costs in respect of that iron ore up to the point of sale if i ii iii the Minister is notified before the time of shipment that the sale is to be made at cost providing details of the proposed sale; and the Minister is notified of the proposed arms length purchaser in the relevant international seaborne iron ore market of the iron ore the subject of the proposed sale at cost; and there is included in the return

lodged pursuant to clause 121i particulars of the transaction in which the ore sold at cost was subsequently purchased in the relevant international seaborne iron ore market by an arms length purchaser specifying the purchaser the seller the price and the date As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 113 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement when the sale was agreed between the arms length purchaser and the seller; and iv the arms length purchaser referred to in iii above is not then a designated purchaser as referred to in subclause 1da; Designated purchaser da if required by notice in writing from the Minister provide the Minister within 30 days after receiving the notice with evidence that the transaction as included in the return pursuant to paragraph Biii of subclause 1d was a sale in the relevant international seaborne iron ore market to an independent participant in that market. If no evidence is provided or the Minister is not so satisfied on the evidence provided or other information obtained the Minister may by notice to the Company designate the purchaser to be a designated purchaser and that designation will remain in force unless and until lifted by further notice from the Minister to the Company. For the avoidance of doubt the parties acknowledge that marketing entities forming part of the corporate group including the Company or part of the parallel corporate group if the Company is part of a duallisted corporate structure are not independent participants for the purposes of this subclause;; 13 in paragraph h of clause 121 by deleting all the words after solely for testing purposes and substituting the following i ii on lump ore and on fine ore not sold or shipped separately as such at the rate of 7.5 of the f.o.b. value; on fine ore sold or shipped separately as such at the rate of 5.625 of the f.o.b. value; iii on beneficiated ore at the rate of 5 of the f.o.b. value; and iv and on all other iron ore at the rate of 7.5 of the f.o.b. value. Where beneficiated ore is produced from an admixture of iron ore from the mineral lease and other iron ore a portion and a portion only of beneficiated ore so produced being equal to the proportion page 114 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement that the amount of iron in the iron ore from the mineral lease used in the production of beneficiated ore bears to the total amount of

iron in the iron ore so used shall be deemed to be produced from iron ore from the mineral lease. Where for the purpose of determining f.o.b. value it is necessary to convert an amount or price to Australian currency the conversion is to be calculated using a rate excluding forward hedge or similar contract rates that has been approved by the Minister at the request of the Company and in the absence of such request as determined by the Minister to be a reasonable rate for the purpose. The provisions of regulation 85AA Effect of GST etc on royalties of the Mining Regulations 1981 WA shall apply mutatis mutandis to the calculation of royalties under this clause.; 14 in clause 121i by a inserting and also showing such other information in relation to the abovementioned iron ore as the Minister may from time to time reasonably require in regard to and to assist in verifying the calculation of royalties in accordance with paragraph h after due date of the return; and b deleting all the words after calculated on the basis of and substituting a colon followed by i ii in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to subclause 1d at the price notified pursuant to paragraph Biii of that proviso; in any other case invoices or provisional invoices as the case may be rendered by the Company to the purchaser which invoices the Company shall render without delay simultaneously furnishing copies thereof to the Minister of such iron ore or on the basis of estimates as agreed or determined and shall from time to time in the next following appropriate return and payment make by the return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. value shall have been finally calculated agreed or determined;; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 115 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 15 by deleting paragraph l of clause 121 and substituting the following new paragraph l permit the Minister or his nominee to inspect at all reasonable times the books records accounts documents including contracts data and information of the Company stored by any means relating to any shipment or sale of iron ore the subject of royalty hereunder and to take copies or extracts in whatever form therefrom and for the purpose of determining the f.o.b. value in respect of any shipment sale transfer or other disposal or use or production of iron ore the subject of royalty

hereunder the Company will take reasonable steps i to provide the Minister with current prices for iron ore and other details and information that may be required by the Minister for the purpose of agreeing or determining the f.o.b. value and ii to satisfy the State either by certificate of a competent independent party acceptable to the State or otherwise to the Ministers reasonable satisfaction as to all relevant weights and analyses and will give due regard to any objection or representation made by the Minister or the Ministers nominee as to any particular weight or assay of iron ore which may affect the amount of royalty payable hereunder;; 16 by in clause 121 deleting the full stop at the end of paragraph o substituting a semi colon and inserting the following new paragraph Production of books etc in Perth p shall cause to be produced in Perth in the said State all books records accounts documents including contracts data and information of the kind referred to in paragraph l to enable the exercise of rights by the Minister or the Ministers nominee under paragraph l regardless of the location in which or by whom those books records accounts documents including contracts data and information are stored from time to time.; 17 by inserting after clause 20 the following new clauses

Blending of iron ore page 116 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 20A. 1 The Company may blend iron ore mined from the mineral lease with any a b c d iron ore mined from a mining tenement or other mining title granted under or pursuant to an Integration Agreement; or iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; or with the prior approval of the Minister iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; or with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by an Integration Proponent from the third party. 2 The authority given under subclause 1 is subject to the Minister being reasonably satisfied that there are in place adequate

systems and controls for the correct apportionment of the quantities of iron ore being blended as between each of the sources referred to in subclause 1 which systems and controls monitor production processing transportation stockpiling and shipping of all such iron ore. If at any time the Minister ceases to be so satisfied he may after consulting the Company and provided the Company has not within three 3 months after the commencement of such consultation addressed the matters of concern to the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 117 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Minister to his satisfaction by notice in writing to the Company suspend the above authority in respect of the relevant blending arrangements until he is again satisfied in terms of this subclause 2. 3 If any blending of iron ore occurs as contemplated by this clause then for the purposes of paragraphs h and i of clause 121 a portion of the iron ore so blended being equal to the proportion that the amount of iron ore from the mineral lease used in the admixture of iron ore bears to the total amount of iron ore so blended shall be deemed to be produced from the mineral lease. Additional areas 20B. 1 Notwithstanding the provisions of the Mining Act or the Mining Act 1978 the Company may from time to time during the currency of this Agreement apply to the Minister for areas held by the Company or an associated company under a mining tenement granted under the Mining Act 1978 to be included in the mineral lease but so that the total area of the mineral lease any land that may be included in the mineral lease pursuant to this Agreement and of any other mineral lease or mining lease granted under or pursuant to this Agreement as aggregated shall not at any time exceed 777 square kilometres. The Minister shall confer with the Minister for Mines in regard to any such application and if they approve the application the Minister for Mines shall upon the surrender of the relevant mining tenement include the area the subject thereof in the mineral lease by endorsement subject to such of the conditions of the surrendered mining tenement as the Minister for Mines determines but otherwise subject to the same terms covenants and conditions as apply to the mineral lease with such apportionment of rents as is necessary and notwithstanding that the survey of such additional land has not been completed but subject to page 118 Version 02a005 Published

on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement correction to accord with the survey when completed at the Companys expense. 2 The Minister may approve upon application by the Company from time to time for the total area referred to in subclause 1 to be increased up to a limit not exceeding 1000 square kilometres. 3 The Company shall not mine or carry out other 4 activities other than exploration bulk sampling and testing on any area or areas added to the mineral lease pursuant to subclause 1 of this clause unless and until proposals with respect thereto are approved or determined pursuant to the subsequent provisions of this clause. If the Company desires to commence mining of iron ore or to carry out any other activities other than as aforesaid on the said areas it shall give notice of such desire to the Minister and shall within 2 months of the date of such notice or thereafter within such extended time as the Minister may allow as hereinafter provided and subject to the provisions of this Agreement submit to the Minister to the fullest extent reasonably practicable its detailed proposals which proposals shall include plans where practicable and specifications where reasonably required by the Minister with respect to such mining or other activities as additional proposals pursuant to clause 11. Integrated use of works installations or facilities under the Integration Agreements 20C. 1 Subject to subclauses 2 to 7 of this clause and to the other provisions of this Agreement the Company may during the continuance of this Agreement a use any existing or new works installations or facilities constructed or held i under this Agreement; or As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 119 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement ii under any other Integration Agreement which are made available for such use and during the continuance of such Integration Agreement; or iii with the approval of the Minister under a Government agreement excluding an Integration Agreement which are made available for such use and during the continuance of that agreement wholly or in part in the activities of the Company carried on by it pursuant to this Agreement including without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing

so including without limitation blending permitted by clause 20A of A iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; B with the prior approval of the Minister iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; C with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining page 120 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by the Company from the third party; D iron ore mined under an Integration Agreement; b make any existing or new works installations or facilities constructed or held under this Agreement available for use wholly or partly by another Integration Proponent during the continuance of its Integration Agreement in the activities of that Integration Proponent carried on by it pursuant to its Integration Agreement including without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing so including without limitation blending permitted by that Integration Agreement of i iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; ii with the prior approval of the Minister as defined in that Integration Agreement iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 121 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement iii with the prior approval of the Minister as defined in that Integration Agreement iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which

has been purchased by that Integration Proponent from the third party; iv iron ore mined under an Integration Agreement; c make any existing or new works installations or facilities constructed or held under this Agreement available for use wholly or partly in connection with operations under i a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State for iron ore which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; or ii with the approval of the Minister a Government agreement other than an Integration Agreement for the mining of iron ore in or proximate to the Pilbara region of the said State; subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c connect any existing or new works installations or facilities constructed or held under this Agreement to any existing or new works installations or d page 122 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement e f g 2 a facilities constructed or held under another Integration Agreement; subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c or making of any connection referred to in paragraph d construct new works installations or facilities and expand modify or otherwise vary any existing and new works installations or facilities constructed or held under this Agreement; allow a railway or rail spur line not being a railway or rail spur line constructed or held under an Integration Agreement to be connected to a railway or rail spur line or other works installations or facilities constructed or held under this Agreement for the delivery of iron ore to an Integration Proponent for transport by railway and shipping from a loading port together with any ancillary and inental activities in doing so as part of its activities under its Integration Agreement; and allow an electricity transmission line not being an electricity transmission line constructed or held under an Integration Agreement to be connected to an electricity transmission line constructed or held under this Agreement for the supply of electricity permitted to be made under an Integration Agreement. A connection referred to in clause 1d or construction expansion modification or other variation referred

to in subclause 1e by the Company shall to the extent not already authorised under this Agreement as at the variation date be regarded as a As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 123 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement significant modification expansion or other variation of the Companys activities carried on by it pursuant to this Agreement and may only be made in accordance with proposals submitted and approved or determined under this Agreement in accordance with clauses 11 and 11A or clause 20E as the case may require and otherwise in compliance with the provisions of this Agreement and the laws from time to time of the said State. For the avoidance of doubt the parties acknowledge that any use or making available for use contemplated by subclause 1a 1b or 1c shall not otherwise than as required by this paragraph a require the submission and approval of further proposals under this Agreement. b The Company shall not be entitled to i ii submit proposals to develop a port or harbour otherwise than as permitted by clause 5 or to establish harbour or port works installations or facilities or to expand modify or otherwise vary harbour or works installations or facilities other than within the boundaries of the port as defined by clause 1 or as permitted by clause 5; or generate and supply power take and supply water or dispose of water otherwise than in accordance with the other clauses of this Agreement and subject to any restrictions contained in those clauses; or iii without limiting subparagraphs i and ii submit proposals to construct or establish works installations or page 124 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement iv v facilities of a type or to make expansions modifications or other variations of works installations or facilities of a type which in the Ministers reasonable opinion this Agreement immediately before the variation date did not permit or contemplate the Company constructing establishing or making as the case may be otherwise than for integration use as contemplated by subclauses 1a 1b or 1c or as permitted by clause 20E; or submit proposals to make a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e otherwise than on tenure granted under or pursuant to this Agreement from time to time or held pursuant to

this Agreement from time to time; or submit proposals to make a connection referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use as contemplated by subclause 1ci if in the reasonable opinion of the Minister the activity which is the subject of the proposals would give to the holder or holders of the relevant Mining Act 1978 mining lease the benefit of rights or powers granted to the Company under this Agreement over and above the right of access to As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 125 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement vi vii and use of the relevant works installations or facilities; or submit proposals to make a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use as contemplated by subclause 1c and involving the grant of tenure without the prior approval of the Minister; or submit proposals to assign sublet transfer or dispose of any works installations or facilities constructed or held under this Agreement or any leases licences easements or other titles under or pursuant to this Agreement for any purpose referred to in this clause. Notwithstanding the provisions of clauses 11A and 20E the Minister may defer consideration of or a decision upon a proposal submitted by the Company for a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use or making available for use as referred to in subclauses 1a or 1b until relevant corresponding proposals under the relevant Integration Agreement have been submitted and those proposals can be approved under that Integration Agreement concurrently with the Ministers approval under this Agreement of the Companys proposal.

c 3 Any use or making available for use as referred to in subclause 1 or submission of proposals as page 126 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement referred to in subclause 2 in respect of a Related Entity shall be subject to the Company first confirming with the Minister that the Minister is satisfied that the relevant company is a Related Entity.

4 The Company shall give the Minister prior written notice of

any significant change other than a temporary one for maintenance or to respond to an emergency proposed in its use or in it making available for use works installations or facilities as referred to in this clause a b from that authorised under this Agreement immediately before the variation date; and subsequently from that previously notified to the Minister under this subclause as soon as practicable before such change occurs. The Company shall also keep the Minister fully informed with respect to any proposed connection as referred to in subclause 1f or 1g or request of the Company for such connection to be allowed. 5 Nothing in this Agreement shall be construed to a b exempt another Integration Proponent from complying with or the application of the provisions of its Integration Agreement; or restrict the Companys rights under clause 43. For the avoidance of doubt the approval of proposals under this Agreement shall not be construed as authorising another Integration Proponent to undertake any activities under this Agreement or under another Integration Agreement. 6 Nothing in this clause shall be construed to exempt the Company from complying with or the application of the other provisions of this As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 127 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Agreement including without limitation clause 43 and of relevant laws from time to time of the said State. 7 For the purpose of this clause works installations or facilities means any a b c d e f harbour or port works installations or facilities including without limitation stockpiles reclaimers conveyors and wharves; railway or rail spur lines; track structures and systems associated with the operation and maintenance of a railway including without limitation sidings train control and signalling systems maintenance workshops and terminal yards; train loading and unloading works installations or facilities; conveyors; private roads; g mine aerodrome and associated aerodrome works installations and facilities; h iron ore mining crushing screening beneficiation or other processing works installations or facilities; i mine administration buildings including without limitation offices workshops and medical facilities; j k borrow pits; accommodation and ancillary facilities including without limitation construction camps and in townsites constructed pursuant to and held under any Integration Agreement; page 128 Version 02a005 Published on

www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement I m water sewerage electricity gas and telecommunications works installations and facilities including without limitation pipelines transmission lines and cables; and any other works installations or facilities approved of by the Minister for the purpose of this clause. Transfer of rights to shared works installations or facilities 20D. 1 For the purposes of this clause Relevant Infrastructure means any works installations or facilities as defined in clause 20C7 a b c constructed or held under another Integration Agreement; which the Company is using in its activities pursuant to this Agreement; which the Minister is satisfied after consulting with the Company and the Integration Proponent for that other Integration Agreement i are no longer required by that other Integration Proponent to carry on its activities pursuant to its Integration Agreement because of the cessation of the Integration Proponents mining operations in respect of which such Relevant Infrastructure was constructed or held or because of any other reason acceptable to the Minister; and ii are required by the Company to continue to carry on its activities pursuant to this Agreement; and d in respect of which that other Integration Proponent has notified the Minister it As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 129 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement consents to the Company submitting proposals as referred to in subclause 2. 2 The Company may as an additional proposal pursuant to clause 11 propose a b that it be granted a lease licence or other title over the Relevant Infrastructure pursuant to this Agreement subject to and conditional upon the other Integration Proponent surrendering wholly or in part and upon such terms as the Minister considers reasonable including any variation of terms to address environmental issues its lease licence or other title over the Relevant Infrastructure; or that the other Integration Proponents lease licence or other title not being a mineral lease mining lease or other right to mine title granted under a Government agreement the Mining Act 1904 or the Mining Act 1978 to the Relevant Infrastructure be transferred to this Agreement to be held by the Company pursuant to this Agreement with such surrender of land from it and variations of its terms as the Minister considers reasonable for that title

to be held under this Agreement including without limitation to address environmental issues and outstanding obligations of that other Integration Proponent under its Integration Agreement in respect of that Relevant Infrastructure. The provisions of clause 11A shall mutatis mutandis apply to any such additional proposal. In addition the Company acknowledges that the Minister may require variations of the other Integration Agreement and/or proposals under it or of this Agreement in order to give effect to the matters contemplated by this clause. page 130 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 3 This clause shall cease to apply in the event the State gives any notice of default to the Company pursuant to clause 21 and while such notice remains unsatisfied. Miscellaneous Licences for Railways 20E. 1 In this clause subject to the context Additional Infrastructure means a Train Loading Infrastructure; b Train Unloading Infrastructure; c a conveyor train unloading and other infrastructure necessary for the transport of iron ore freight goods or other products from the Railway directly or indirectly to port facilities within a loading port in each case located outside a Port; LAA means the Land Administration Act 1997 WA; Lateral Access Roads has the meaning given in subclause 3aiv; Lateral Access Road Licence means a miscellaneous licence granted pursuant to subclause 6a(ii) or subclause 6b as the case may be and according to the requirements of the context describes the area of land from time to time the subject of that licence; Port means any port the subject of the Port Authorities Act 1999 WA or the Shipping and Pilotage Act 1967 WA; Private Roads means Lateral Access Roads and the Companys access roads within a Railway Corridor; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 131 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Rail Safety Act means the Rail Safety Act 1998 WA; Railway means a standard gauge heavy haul railway or railway spur line located or to be located as the case may be in or proximate to the Pilbara region of the said State but outside the boundaries of a Port for the transport of iron ore freight goods and other products together with all railway track associated track structures including sidings turning loops over or under track structures supports including supports

for equipment or items associated with the use of a railway tunnels bridges train control systems signalling systems switch and other gear communication systems electric traction infrastructure buildings excluding office buildings housing and freight centres workshops and associated plant machinery and equipment and including rolling stock maintenance facilities terminal yards depots culverts and weigh bridges which railway is or is to be as the case may be the subject of approved proposals under subclause 4 and includes any expansion or extension thereof outside a Port which is the subject of additional proposals approved in accordance with subclause 5; Railway Corridor means prior to the grant of a Special Railway Licence the land for the route of the Railway the subject of that licence access roads other than Lateral Access Roads areas from which stone sand clay and gravel may be taken temporary accommodation facilities for the railway workforce water bores and Additional Infrastructure if any which is the subject of a subsisting agreement pursuant to subclause 3a and after the grant of the Special Railway Licence the land from time to time the subject of that Special Railway Licence; Railway Operation means the construction and operation under this Agreement of the relevant page 132 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Railway and associated access roads and Additional Infrastructure if any within the relevant Railway Corridor and of the associated Lateral Access Roads in accordance with approved proposals; Railway spur line means a standard gauge heavy haul railway spur line located or to be located in or proximate to the Pilbara region of the said State but outside a Port connecting to a Railway for the transport of iron ore freight goods and other products upon the Railway to directly or indirectly a loading port; Railway Operation Date means the date of the first carriage of iron ore freight goods or other products over the relevant Railway other than for construction or commissioning purposes; Railway spur line Operation Date means the date of the first carriage of iron ore freight goods or other products over the relevant Railway spur line other than for construction or commissioning purposes; Special Railway Licence means the relevant miscellaneous licence for railway and if applicable other purposes granted to the Company pursuant

to subclause 6ai as varied in accordance with subclause 6h or subclause 6i and according to the requirements of the context describes the area of land from time to time the subject of that licence; Train Loading Infrastructure means conveyors stockpile areas blending and screening facilities stackers reclaimers and other infrastructure reasonably required for the loading of iron ore freight goods or other products onto the relevant Railway for transport directly or indirectly to a loading port; and Train Unloading Infrastructure means train unloading infrastructure reasonably required for the unloading of iron ore from the Railway to be As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 133 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement processed or blended with other iron ore at processing or blending facilities in the vicinity of that train unloading infrastructure and with the resulting iron ore products then loaded on to the Railway for transport directly or indirectly to a loading port. Company to obtain prior Ministerial inprinciple approval 2 a If the Company wishes from time to time during the continuance of this Agreement to proceed under this clause with a plan to develop a Railway it shall give notice thereof to the Minister and furnish to the Minister with that notice an outline of its plan. b The Minister shall within one month of a notice under paragraph a advise the Company whether or not he approves inprinciple the proposed plan. The Minister shall afford the Company full opportunity to consult with him in respect of any decision of the Minister under this paragraph. c The Ministers inprinciple approval in respect of a proposed plan shall lapse if the Company has not submitted detailed proposals to the Minister in respect of that plan in accordance with this clause within 18 months of the Ministers inprinciple approval. Railway Corridor 3 a If the Minister gives inprinciple approval to a plan of the Company to develop a Railway it shall consult with the Minister to seek the agreement of the Minister as to i ii where the Railway will begin and end; and a route for the Railway access roads to be within the Railway Corridor and page 134 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement the land required for that route as well as Additional Infrastructure if any including without limitation areas from which stone sand clay and gravel may be

taken temporary accommodation facilities for the railway workforce and water bores; and in respect of Additional Infrastructure if any the nature and capacity of such Additional Infrastructure; and the routes of and the land required for roads outside the Railway Corridor and also outside a Port for access to it to construct the Railway such roads as agreed being Lateral Access Roads. iii iv In seeking such agreement regard shall be had to achieving a balance between engineering matters including costs the nature and use of any lands concerned and interests therein and the costs of acquiring the land all of which shall be borne by the Company. The parties acknowledge the intention is for the Company to construct the Railway the access roads for the construction and maintenance of the Railway which are to be within the Railway Corridor and the relevant Additional Infrastructure if any along the centreline of the Railway Corridor subject to changes in that alignment to the extent necessary to avoid heritage environmental or poor ground conditions that are not identified during preliminary investigation work and recognise the width of the Railway Corridor may need to vary along its route to accommodate Additional Infrastructure if any access roads areas from which stone sand clay and gravel may As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 135 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement b be taken temporary accommodation facilities for the railway workforce and water bores. The provisions of clause 53 shall not apply to this subclause. If the date by which the Company must submit detailed proposals under subclause 4a as referred to in subclause 2c is extended or varied by the Minister pursuant to clause 52 any agreement made pursuant to paragraph a before such date is extended or varied shall unless the Minister notifies the Company otherwise be deemed to be at an end and neither party shall have any claim against the other in respect of it. c The Company acknowledges that it shall be responsible for liaising with every title holder in respect of the land affected and for obtaining in a form and substance acceptable to the Minister all unconditional and irrevocable consents of each such title holder to and all statutory consents required in respect of the land affected for i ii the grant of the Special Railway Licence for the construction operation and maintenance within the Railway Corridor of the Railway access roads

and Additional Infrastructure if any to be within the Railway Corridor; and the grant of Lateral Access Road Licences for the construction use and maintenance of Lateral Access Roads over the routes for the Lateral Access Roads agreed pursuant to paragraph a; and page 136 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement iii the inclusion of additional land in the Special Railway Licence as referred to in subclause 6h or subclause 6i in accordance with this clause. For the purposes of this subclause 3c title holder means a management body as defined in the LAA in respect of any part of the affected land a person who holds a mining petroleum or geothermal energy right as defined in the LAA in respect of any part of the affected land a person who holds a lease or licence under the LAA in respect of any part of the affected land a person who holds any other title granted under or pursuant to a Government agreement in respect of any part of the affected land a person who holds a lease or licence in respect of any part of the affected land under any other Act applying in the said State and a person in whom any part of the affected land is vested immediately before the provision of such consents to the Minister as referred to in subclause 4eii including as applying pursuant to subclause 5d. Company to submit proposals for Railway 4 a The Company shall subject to the EP Act the provisions of this Agreement agreement at that time subsisting in respect of the matters required to be agreed pursuant to subclause 3a submit to the Minister by the latest date applying under subclause 2c to the fullest extent reasonably practicable its detailed proposals including plans where practicable and specifications where reasonably required by the Minister and any other details normally required by a local government in whose area any works are to be situated with respect to the undertaking of the relevant Railway Operation which As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 137 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement proposals shall include the location area layout design materials and time program for the commencement and completion of construction or the provision as the case may be of each of the following matters namely i the Railway including fencing if any and crossing places within the Railway Corridor; ii

Additional Infrastructure if any within the Railway Corridor; iii temporary accommodation and ancillary temporary facilities for the railway workforce on or in the vicinity of the Railway Corridor and housing and other appropriate facilities elsewhere for the Companys workforce; iv water supply; v energy supplies; vi access roads within the Railway Corridor and Lateral Access Roads both along the routes for those roads agreed between the Minister and the Company pursuant to subclause 3a; vii any other works services or facilities desired by the Company; and viii use of local labour professional services manufacturers suppliers contractors and materials and measures to be taken with respect to the engagement and training of employees by the Company its agents and contractors.

b Proposals pursuant to paragraph a must specify the matters agreed for the purpose

page 138 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement pursuant to subclause 3a and must not be contrary to or inconsistent with such agreed matters.

c Each of the proposals pursuant to paragraph a may with the approval of the Minister or must if so required by the Minister be submitted separately and in any order as to the matter or matters mentioned in one or more of subparagraphs i to viii of paragraph a and until all of its proposals under this subclause have been approved the Company may withdraw and may resubmit any proposal but the withdrawal of any proposal shall not affect the obligations of the Company to submit a proposal under this subclause in respect of the subject matter of the withdrawn proposal.

d The Company shall whenever any of the following matters referred to in this subclause are proposed by the Company whether before or during the submission of proposals under this subclause submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto.

e At the time when the Company submits the last of the said proposals pursuant to this subclause it shall i furnish to the Ministers reasonable satisfaction evidence of all accreditations under the Rail

Safety Act which are required to be held by As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 139 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement the Company or any other person for the construction of the Railway; and

ii furnish to the Minister the written consents referred to in subclause 3ci and 3cii. f The provisions of clause 11A shall apply mutatis mutandis to detailed proposals submitted under this subclause.

Additional Railway Proposals 5 a b If the Company at any time during the currency of a Special Railway Licence desires to construct a Railway spur line connecting to the Railway the subject of that Special Railway Licence or desires to significantly modify expand or otherwise vary its activities within the land the subject of the Special Railway Licence that are the subject of this Agreement and that may be carried on by it pursuant to this Agreement other than by the construction of a Railway spur line beyond those activities specified in any approved proposals for that Railway it shall give notice of such desire to the Minister and furnish to the Minister with that notice an outline of its proposals in respect thereto including without limitation such matters mentioned in subclause 4a as are relevant or as the Minister otherwise requires. If the notice relates to a Railway spur line or to the construction of Train Loading Infrastructure or Train Unloading Infrastructure on land outside the then Railway Corridor the Minister shall within one month of receipt of such notice advise the Company whether or not he approves in principle the proposed construction of such spur line Train Loading Infrastructure or page 140 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Train Unloading Infrastructure. If the Minister gives in principle approval the Company may but not otherwise submit detailed proposals in respect thereof provided that the provisions of subclause 3 shall mutatis mutandis apply prior to submission of detailed proposals in respect thereof. c Subject to the EP Act the provisions of this Agreement and agreement at that time subsisting in respect of any matters required to be agreed pursuant to subclause 3a as referred to in paragraph b the Company shall submit to the Minister within a reasonable timeframe as determined by the Minister after receipt of the notice referred to in paragraph a or in the case of a notice referred

to in paragraph b the giving of the Ministers in principle consent as referred to in that paragraph detailed proposals in respect of the proposed construction of such Railway spur line Train Loading Infrastructure Train Unloading Infrastructure or other proposed modification expansion or variation of its activities including such of the matters mentioned in subclause 4a as the Minister may require. d The provisions of subclause 4 with the date for submission of proposals being read as the date or time determined by the Minister under paragraph c and the reference in subclause 4eii to subclause 3ci being read as a reference to subclause 3ciii and of clause 11A shall mutatis mutandis apply to detailed proposals submitted pursuant to this subclause. Grant of Tenure 6 a On application made by the Company to the Minister in such manner as the Minister may As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 141 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement determine not later than 3 months after all its proposals submitted pursuant to subclause 4a have been approved or deemed to be approved and the Company has complied with the provisions of subclause 4e the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company i a miscellaneous licence to conduct within the Railway Corridor and in accordance with its approved proposals all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction commissioning operation and maintenance within the Railway Corridor of the Railway access roads and Additional Infrastructure if any the Special Railway Licence such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Third Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at a rental calculated in accordance with the Mining Act 1978 A prior to the Railway Operation Date as if the width of the Railway Corridor were 100 metres; and B on and from the Railway Operation Date at the rentals page 142 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation

Agreement from time to time prescribed under the Mining Act 1978; and ii a miscellaneous licence or licences to allow the construction use and maintenance of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a each a Lateral Access Road Licence each such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Fourth Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. b On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 months after its proposals submitted pursuant to subclause 5a for the construction of Lateral Access Roads for access to the Railway Corridor to construct a Railway spur line have been approved or deemed to be approved and the Company has complied with the provisions of subclause 4e as applying pursuant to subclause 5d the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company a miscellaneous licence or licences to allow the construction use and maintenance of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a as applying pursuant to subclause 5b each a Lateral Access Road Licence each such licence to be granted under and subject to except as As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 143 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement otherwise provided in this Agreement the Mining Act 1978 in the form of the Fifth Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. c Notwithstanding the Mining Act 1978 the term of the Special Railway Licence shall subject to the sooner determination thereof on the cessation or sooner determination of this Agreement be for a period of 50 years commencing on the date of grant thereof. d Notwithstanding the Mining Act 1978 the term of any Lateral Access Road Licence shall subject to the sooner determination thereof on the cessation or sooner determination of this Agreement be for a period of 4 years commencing on the date of grant thereof. e Notwithstanding the Mining Act 1978 and except

as required to do so by the terms of the Special Railway Licence the Company shall not be entitled to surrender the Special Railway Licence or any Lateral Access Road Licence or any part or parts of them without the prior consent of the Minister. f i The Company may in accordance with approved proposals take stone sand clay and gravel from the Railway Corridor for the construction operation and maintenance of the Railway constructed within or approved for construction within the Railway Corridor. ii Notwithstanding the Mining Act 1978 no royalty shall be payable under the page 144 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Mining Act in respect of stone sand clay and gravel which the Company is permitted by subparagraph i to obtain from the land the subject of the Special Railway Licence. g For the purposes of this Agreement and without limiting the operation of paragraphs a to f inclusive above the application of the Mining Act 1978 and the regulations made thereunder are specifically modified; i in section 911 by A B C deleting the mining registrar or the warden in accordance with section 42 as read with section 92 and substituting the Minister; deleting any person and substituting the Company as defined in the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; deleting for any one or more of the purposes prescribed and substituting for the purpose specified in clause 20E6ai clause 20E6aai or clause 20E6b of the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; ii in section 913a by deleting prescribed form and substituting As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 145 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement form required by the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; iii by deleting sections 916 919 9110 and 91B; iv in section 92 by deleting Sections 41 42 44 46 46A 47 and 52 apply and inserting Section 46A excluding in subsection 2a the mining registrar the warden or applies and by deleting in those provisions and inserting in that provision; v by deleting the full stop at the end of the section 941 and inserting except to the extent otherwise

provided in or to the extent that such terms and conditions are inconsistent with the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; vi by deleting sections 942 3 and 4; vii in section 961 by inserting after miscellaneous licence the words not being a miscellaneous licence granted pursuant to the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; viii by deleting mining regulations 372 373 42 and 42A; and ix by inserting at the beginning of mining regulations 41c and f the words page 146 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement h i subject to the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended. If additional proposals are approved in accordance with subclause 5 for the construction of a Railway spur line outside the then Railway Corridor the Minister for Mines shall include the area of land within which such construction is to occur in the Special Railway Licence by endorsement. The area of such land may be included notwithstanding that the survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. If additional proposals are approved in accordance with subclause 5 for the construction of Train Loading Infrastructure or Train Unloading Infrastructure outside the then Railway Corridor the Minister for Mines shall include the area of such land within which such infrastructure is approved for construction in the Special Railway Licence by endorsement. The area of such land may be included notwithstanding that the survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. j The provisions of this subclause shall not operate so as to require the State to cause a Special Railway Licence or a Lateral Access Road Licence to be granted or any land included in the Special Railway Licence as mentioned above until all processes necessary under any laws relating to native title to enable that grant or inclusion of land to proceed have been completed. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 147 Iron Ore Mount Bruce Agreement Act 1972

Fourth Schedule 2010 Variation Agreement Construction and operation of Railway 7 a Subject to and in accordance with approved proposals the Rail Safety Act and the grant of the relevant Special Railway Licence and any associated Lateral Access Road Licences the Company shall in a proper and workmanlike manner and in accordance with recognised standards for railways of a similar nature operating under similar conditions construct the Railway and associated Additional Infrastructure and access roads within the Railway Corridor and shall also construct inter alia any necessary sidings crossing points bridges signalling switches and other works and appurtenances and provide for crossings and where appropriate and required by the Minister grade separation or other protective devices including flashing lights and boom gates at places where the Railway crosses or intersects with major roads or existing railways. b The Company shall while the holder of a Special Railway Licence i ii keep the Railway the subject of that licence in an operable state; and ensure that the Railway the subject of that licence is operated in a safe and proper manner in compliance with all applicable laws from time to time; and iii without limiting subparagraph ii ensure that the obligations imposed under the Rail Safety Act on an owner and an operator as those terms are therein defined are complied with in connection with the Railway the subject of that licence.

page 148 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Nothing in this Agreement shall be construed to exempt the Company or any other person from compliance with the Rail Safety Act or limit its application to the Companys operations generally except as otherwise may be provided in that Act or regulations made under it. c The Company shall provide crossings for livestock and also for any roads other railways conveyors pipelines and other utilities which exist at the date of grant of the relevant Special Railway Licence or in respect of land subsequently included in it at the date of such inclusion and the Company shall on reasonable terms and conditions allow such crossings for roads railways conveyors pipelines and other utilities which may be constructed for future needs and which may be required to cross a Railway constructed pursuant to this clause. d Subject to clause 20D the Company shall at all times be the holder of Special Railway Licences

and Lateral Access Road Licences granted pursuant to this clause and without limiting clause 28 but subject to clause 20D shall at all times own manage and control the use of each Railway the subject of a Special Railway Licence held by the Company. e The Company shall not be entitled to exclusive possession of the land the subject of a Special Railway Licence or Lateral Access Road Licence granted pursuant to this clause to the intent that the State the Minister the Minister for Mines and any persons authorised by any of them from time to time shall be entitled to enter upon the land or any part of it at all reasonable times and on reasonable notice with all necessary vehicles plant and equipment and for purposes related As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 149 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement to this Agreement or such other purposes as they think fit but in doing so shall be subject to the reasonable directions of the Company so as not to unreasonably interfere with the Companys operations. f The Companys ownership of a Railway constructed pursuant to this clause shall not give it an interest in the land underlying it. g The Company shall not at any time without the prior consent of the Minister dismantle sell or otherwise dispose of any part or parts of any Railway constructed pursuant to this clause or permit this to occur other than for the purpose of maintenance repair upgrade or renewal. h The Company shall subject to and in accordance with approved proposals in a proper and workmanlike manner construct any Additional Infrastructure access roads Lateral Access Roads and other works approved for construction under this clause. i The Company shall while the holder of a Special Railway Licence at all times keep and maintain in good repair and working order and condition which obligation includes where necessary replacing or renewing all parts which are worn out or in need of replacement or renewal due to their age or condition the Railway access roads and Additional Infrastructure if any the subject of that licence and all such other works installations plant machinery and equipment for the time being the subject of this Agreement and used in connection with the operation use and maintenance of that Railway access roads and Additional Infrastructure if any. page 150 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth

Schedule 2010 Variation Agreement j Subject to clause 20D the Company shall i ii iii be responsible for the cost of construction and maintenance of all Private Roads constructed pursuant to this clause; and at its own cost erect signposts and take other steps that may be reasonable in the circumstances to prevent any persons and vehicles other than those engaged upon the Companys activities and its invitees and licensees from using the Private Roads; and at any place where any Private Roads are constructed by the Company so as to cross any railways or public roads provide at its cost such reasonable protection and signposting as may be required by the Commissioner of Main Roads or the Public Transport Authority as the case may be. k The provisions of clause 121a and 2 as well as the provision to clause 121a shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to the clause except that the Company shall not be obliged to transport passengers upon any such Railway or Railway spur line. Aboriginal Heritage Act 1972 WA 8 For the purposes of this clause the Aboriginal Heritage Act 1972 WA applies as if it were modified by a the insertion before the full stop at the end of section 181 of the words and the expression the Company means the persons from time to time comprising the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 151 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement Company in their capacity as such under the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended in relation to the use or proposed use of land pursuant to clause 20E of that agreement after and in accordance with approved proposals under clause 20E of that agreement and in relation to the use of that land before any such approval of proposals where the Company has the requisite authority to enter upon and so use the land; b c the insertion in sections 182 184 185 and 187 of the words or the Company as the case may be after the words owner of any land; the insertion in section 183 of the words or the Company as the case may be after the words the owner; d the insertion of the following sentences at the end of section 183 In relation to a notice from the Company the conditions that the Minister may specify can as appropriate include among other conditions a condition restricting the Companys use of the relevant

land to after the approval or deemed approval as the case may be under the abovementioned agreement of all of the Companys submitted initial proposals thereunder for the Railway Operation as defined in clause 20E1 of the abovementioned agreement or in the case of additional proposals submitted or to be submitted by the Company to after the approval or deemed approval under that agreement of such additional proposals and to the extent so approved.; and page 152 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement e the insertion in sections 182 and 185 of the words or it as the case may be after the word he. The Company acknowledges that nothing in this subclause 8 nor the granting of any consents under section 18 of the Aboriginal Heritage Act 1972 WA will constitute or is to be construed as constituting the approval of any proposals submitted or to be submitted by the Company under this Agreement or as the grant or promise of land tenure for the purposes of this Agreement. Taking of land for the purposes of this clause 9 a The State is hereby empowered as and for a public work under Parts 9 and 10 of the LAA to take for the purposes of this clause any land other than any part of a Port which in the opinion of the Company is necessary for the relevant Railway Operation and which the Minister determines is appropriate to be taken for the relevant Railway Operation except any land the taking of which would be contrary to the provisions of a Government agreement entered into before the submission of the proposals relating to the proposed taking and notwithstanding any other provisions of that Act may license that land to the Company. b In applying Parts 9 and 10 of the LAA for the purposes of this clause i ii land in that Act includes a legal or equitable estate or interest in land; sections 170 171 172 173 174 175 and 184 of that Act do not apply; and iii that Act applies as if it were modified in section 1772 by inserting A after railway the following As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 153 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement or land is being taken pursuant to a Government agreement as defined in section 2 of the Government Agreements Act 1979 WA; and B after that Act the following or that Agreement as the case may be. c The Company shall pay to the

State on demand the costs of or incidental to any land taken at the request of and on behalf of the Company including but not limited to any compensation payable to any holder of native title or of native title rights and interests in the land. Notification of Railway Operation Date 10 a The Company shall from the date occurring 6 months before the date for completion of construction of a Railway specified in its time program for the commencement and completion of construction of that Railway submitted under subclause 4a keep the Minister fully informed as to i the progress of that construction and its likely completion and commissioning; and ii the likely Railway Operation Date. b The Company shall on the Railway Operation Date notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over the Railway other than for construction or commissioning purposes has occurred. page 154 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement c The Company shall from the date occurring 6 months before the date for completion of construction of a Railway spur line specified in its time program for the commencement and completion of construction of that spur line submitted under subclause 5c keep the Minister fully informed as to i the progress of that construction and its likely completion and commissioning; and ii in respect of it the likely Railway spur line Operation Date. d The Company shall on the Railway spur line Operation Date in respect of any Railway spur line notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over such spur line other than for construction or commissioning purposes has occurred.; 18 in clause 21 by a b c inserting granted under or pursuant to this Agreement or held pursuant to this Agreement after licence or other title; inserting or held pursuant hereto after the subsequent 2 references to granted hereunder or pursuant hereto; and deleting occupied by the Company and substituting the subject of any lease licence easement or other title granted under or pursuant to this Agreement or held pursuant to this Agreement; 19 in clause 22i by inserting or held pursuant hereto after granted hereunder or pursuant hereto; 20 in clause 23 by inserting or pursuant hereto or held pursuant hereto after granted hereunder; 21 by deleting clause 30; As at 06 Dec 2013 Version 02a005

Published on www.legislation.wa.gov.au page 155 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement 22 in clause 41A1 by a in paragraph a a b c deleting 31st day of December 1991 and substituting 31 December 2012; deleting 31st day of December 1994 and substituting 31 December 2015; and deleting 31st day of December 1999 and substituting 31 December 2020; and b in paragraph b deleting 31st day of December 1991 and substituting 31 December 2012. 23 in clause 41A5 by a in paragraph a deleting by the company of alternative investments and substituting of an alternative project; and b in paragraph b i ii deleting the investments and substituting or cause to be implemented the alternative project; and deleting those investments and substituting that alternative project; 24 by inserting after subclause 5 of clause 41A the following new subclause 6 For the purposes of subclause 5 alternative project means a b c a project to establish and operate within the said State plant for the production of steel; a project to establish and operate within the said State plant which processes and adds value to minerals mined in the said State; or any other project within the said State which the Minister approves as providing to the State benefits equivalent to a project to establish and operate plant for the production of steel page 156 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement to be undertaken by d e f g the Company excluding a project referred to in paragraph a or a related body corporate or related bodies corporate within the meaning of the Corporations Act 2001 Cwth of the Company solely or in conjunction with the Company; or a joint venture in which the Company or its related body corporate has a majority participating interest; or any other third person or persons which the Company and the Minister accept as having the requisite financial and technical capacity and expertise to undertake solely or in conjunction with the Company the relevant project referred to in paragraph a b or c.; 25 by inserting the following sentence at the end of clause 42 As a separate independent indemnity the Company will indemnify and keep indemnified the State and its servants agents and contractors in respect of all actions suits claims demands or costs of third parties arising out of or in connection with any use making available for use or other activities of the Company as

referred to in clause 20C.; 26 in clause 44 inserting or held pursuant hereto after hereunder or pursuant hereto; 27 in clause 46 by inserting or held pursuant hereto after granted hereunder or pursuant hereto; and 28 inserting after the Second Schedule the following new schedules THIRD SCHEDULE WESTERN AUSTRALIA IRON ORE MOUNT BRUCE AGREEMENT ACT 1972 MINING ACT 1978 As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 157 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement MISCELLANEOUS LICENCE FOR A RAILWAY AND OTHER PURPOSES No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction operation and maintenance of a Railway as defined in clause 20E1 of the Agreement and otherwise as provided in the Agreement and if applicable other purposes AND WHEREAS the Company pursuant to clause 20E6a of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended the Company is hereby granted by this licence authority to conduct on the land the subject of this licence as more particularly delineated and described from time to time in the Schedule hereto all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce in accordance with the Agreement and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction commissioning operation and maintenance on the land the subject of this licence of the Railway and Additional Infrastructure as defined in clause 20E1 of the Agreement and access roads to be located on the land the subject of this licence in accordance with the provisions of the Agreement and proposals approved under the Agreement for the term of 50 years from the date hereof subject to the sooner determination of the term upon the determination of the Agreement and upon and subject to the terms covenants and

conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 20E6ai of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence page 158 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. The terms approved proposals Railway Railway Operation Date and Railway spur line have the meanings given in the Agreement. ENDORSEMENTS AND CONDITIONS Endorsements 1. 2. 3. 4. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. The Company is permitted to in accordance with approved proposals take stone sand clay and gravel from the land the subject of this licence for the construction operation and maintenance of the Railway including any Railway spur line constructed within or approved for construction within the area of land the subject of this licence. Notwithstanding the Mining Act 1978 no royalty shall be payable under the Mining Act 1978 in respect of stone sand clay and gravel which the Company is permitted by the Agreement to obtain from the land the subject of this licence. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions 1. a Except as provided in paragraph b the Company shall within 2 years after the Railway Operation Date surrender in accordance with the provisions of the Mining Act 1978 the area of this licence down to a maximum of 100 metres width As at 06 Dec 2013 Version 02a005 Published on

www.legislation.wa.gov.au page 159 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement or as otherwise approved by the Minister as defined in the Agreement for the safe operation of the Railway then constructed or approved for construction under approved proposals. b Paragraph a shall not apply to land the subject of this licence that was included in this licence pursuant to clause 20E6h or clause 20E6i of the Agreement. The Company shall as soon as possible after the construction of a Railway spur line or of an expansion or extension thereof as the case may be surrender in accordance with the Mining Act 1978 the land the subject of this licence that was included in this licence pursuant to clause 20E6h of the Agreement for the purpose of such construction down to a maximum of 100 metres in width or as otherwise approved by the Minister as defined in the Agreement for the safe operation of that Railway spur line or expansion or extension thereof as the case may be then constructed or approved for construction under approved proposals. [Any further conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] 2. 3. SCHEDULE Land description Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES FOURTH SCHEDULE WESTERN AUSTRALIA IRON ORE MOUNT BRUCE AGREEMENT ACT 1972 page 160 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement MINING ACT 1978 MISCELLANEOUS LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction use and maintenance of a Lateral Access Road as defined in the Agreement AND WHEREAS the Company pursuant to clause 20E6aⁱⁱⁱ of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Mount Bruce Agreement Act 1972 as from time to time

added to varied or amended the Company is hereby authorised to construct use and maintain a road on the land more particularly delineated and described from time to time in the Schedule hereto in accordance with the provisions of the Agreement and proposals approved under the Agreement for a term of 4 years commencing on the date hereof subject to the sooner determination of the term upon the cessation or determination of the Agreement and for the purposes and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 20E6a(ii) of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 161 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement ENDORSEMENTS AND CONDITIONS

Endorsements 1. 2. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions [Such conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including during the term of the Agreement.] page 162 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule 2010 Variation Agreement SCHEDULE Description of land Locality Mineral Field Area

DATED at Perth this day of . MINISTER FOR MINES FIFTH SCHEDULE WESTERN AUSTRALIA
IRON ORE MOUNT BRUCE AGREEMENT ACT 1972 MINING ACT 1978 MISCELLANEOUS
LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by
the Agreement hereinafter called the Agreement ratified by and scheduled to the Iron Ore Mount
Bruce Agreement Act 1972 as from time to time added to varied or amended the State agreed to
grant to [] hereinafter with its successors and permitted assigns called the Company a
miscellaneous licence for the construction use and maintenance of a Lateral Access Road as
defined in the Agreement AND WHEREAS the Company pursuant to clause 20E6b of the
Agreement has made application for the said licence; NOW in consideration of the rents reserved by
and the provisions of the Agreement and in pursuance of the Iron Ore Mount Bruce Agreement Act
1972 as from time to time added to varied or amended the Company is hereby authorised to
construct use and maintain a road on the land more particularly delineated and described from time
to time in the Schedule hereto in As at 06 Dec 2013 Version 02a005 Published on
www.legislation.wa.gov.au page 163 Iron Ore Mount Bruce Agreement Act 1972 Fourth Schedule
2010 Variation Agreement accordance with the provisions of the Agreement and proposals
approved under the Agreement for a term of 4 years commencing on the date hereof subject to the
sooner determination of the term upon the cessation or determination of the Agreement and for the
purposes and upon and subject to the terms covenants and conditions set out in the Agreement and
the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the
Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed
hereon and the payment of rentals in respect of this licence in accordance with clause 20E6b of the
Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise
than in accordance with the Agreement. In this licence If the Company be more than one the liability
of the Company hereunder shall be joint and several. Reference to an Act includes all amendments
to that Act for the time being in force and also any Act passed in substitution therefore or in lieu
thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the

Agreement means such agreement as from time to time added to varied or amended.

ENDORSEMENTS AND CONDITIONS Endorsements 1. 2. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on []

under the Agreement. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions [Such conditions which the Minister for

Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including during the term of the Agreement.] page 164 Version 02a005

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1972 Fourth Schedule 2010 Variation Agreement SCHEDULE Description of land Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES EXECUTED as a deed. SIGNED by

THE HONOURABLE COLIN JAMES BARNETT in the presence of [Signature] STEPHEN WOOD

[Signature] THE COMMON SEAL of MOUNT BRUCE MINING PTY. LIMITED ACN 008 714 010

was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director

[Signature] Secretary ALAN DAVIES HELEN FERNIHOUGH [Fourth Schedule inserted No. 61 of

2010 s. 14.] As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 165

Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement Fifth Schedule

2011 Variation Agreement [s. 2] [Heading inserted No. 61 of 2011 s. 14.] 2011 THE HONOURABLE

COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND MOUNT

BRUCE MINING PTY. LTD. ACN 008 714 010 IRON ORE MOUNT BRUCE AGREEMENT 1972

RATIFIED VARIATION AGREEMENT [Solicitors details] page 166 Version 02a005 Published on

www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth

Schedule 2011 Variation Agreement THIS AGREEMENT is made this 7th day of November 2011

BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western

Australia acting for and on behalf of the said State and instrumentalities thereof from time to time

State AND MOUNT BRUCE MINING PTY. LTD. ACN 008 714 010 of Level 22 Central Park 152158

St Georges Terrace Perth Western Australia Company. RECITALS A. The State and the Company are the parties to the agreement dated 10 March 1972 ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 and which as subsequently added to varied or amended is referred to in this Agreement as the Principal Agreement. B. The State and the Company wish to vary the Principal Agreement. THE PARTIES AGREE AS FOLLOWS

1. Interpretation Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement.

2. Ratification and Operation

1 The State shall introduce and sponsor a Bill in the State Parliament of Western Australia prior to 31 December 2011 or such later date as may be agreed between the parties hereto to ratify this Agreement. The State shall endeavour to secure the timely passage of such Bill as an Act.

2 The provisions of this Agreement other than this clause and clause 1 will not come into operation until the day after the day on which the As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 167 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement Bill referred to in subclause 1 has been passed by the State Parliament of Western Australia and commences to operate as an Act.

3 If by 30 June 2012 the said Bill has not commenced to operate as an Act then unless the parties hereto otherwise agree this Agreement will then cease and determine and no party hereto will have any claim against any other party hereto with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement.

4 On the day after the day on which the said Bill commences to operate as an Act all the provisions of this Agreement will operate and take effect despite any enactment or other law.

3. Variation of Principal Agreement The Principal Agreement is varied as follows

1 in clause 1 by a inserting in the appropriate alphabetical positions the following new definitions

Eligible Existing Tenure means a i a miscellaneous licence or general purpose lease granted to the Company under the Mining Act 1978; or ii a lease or easement granted to the Company under the LAA and not clearly to the satisfaction of the Minister granted under or pursuant to or held pursuant to this Agreement; or b an application by the Company for the grant to it of a tenement referred to in

paragraph ai which application has not clearly to the satisfaction of the Minister been made under or pursuant to this Agreement and as the context requires the tenement granted pursuant to such an application where that tenure was granted or that application was made as the case may be on or before 1 October 2011; page 168 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement LAA means the Land Administration Act 1997 WA; Relevant Land in relation to Eligible Existing Tenure or Special Advance Tenure means the land which is the subject of that Eligible Existing Tenure or Special Advance Tenure as the case may be; second variation date means the date on which clause 3 of the variation agreement made on or about 7 November 2011 between the State and the Company comes into operation; Special Advance Tenure means a a miscellaneous licence or general purpose lease requested under clause 73b to be granted to the Company under the Mining Act 1978; or b an easement or a lease requested under clause 73b to be granted to the Company under the LAA and as the context requires such tenure if granted; b inserting after the words reference in this Agreement to an Act shall include the amendments to such Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and the regulations for the time being in force thereunder the words and for the avoidance of doubt this principle subject to the context and without limitation to its application to other Acts may apply in respect of references to the Land Act and the Mining Act notwithstanding references in this Agreement to the LAA and the Mining Act 1978; 2 in clause 71 by inserting after paragraph c the following new paragraph Notwithstanding clause 20C2biv detailed proposals may refer to activities on tenure which is proposed to be granted pursuant to this subclause 1 as if that tenure was granted pursuant to this Agreement but this does not limit the powers or discretions of the Minister under this Agreement or the Minister responsible for the administration of any relevant Act with respect to the grant of the tenure.; As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 169 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement 3 by inserting after clause 73 the following new subclauses Application for Eligible Existing Tenure to be held pursuant

to this Agreement 3a a The Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Eligible Existing Tenure becoming held pursuant to this Agreement on such conditions as the Minister sees fit including without limitation and notwithstanding the Mining Act 1978 and the LAA as to the surrender of land the submission of detailed proposals and the variation of the terms and conditions of the Eligible Existing Tenure including for the Eligible Existing Tenure to be held pursuant to this Agreement and for the more efficient use of the Relevant Land and the Minister may from time to time vary such conditions in order to extend any specified time for the doing of any thing or otherwise with the agreement of the Company. b Eligible Existing Tenure the subject of an approval by the Minister under this subclause will be held by the Company pursuant to this Agreement i ii iii if the Ministers approval was not given subject to conditions on and from the date of the Ministers notice of approval; unless paragraph iii applies if the Ministers approval was given subject to conditions on the date on which all such conditions have been satisfied; and if the Ministers approval was given subject to a condition requiring that the Company submit detailed proposals in accordance with this Agreement on the later of the date on which the Minister approves proposals submitted in discharge of that specified condition and the date upon which all other specified conditions have been satisfied but page 170

Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement the Company is authorised to implement any approved proposal to the extent such implementation is consistent with the then terms and conditions of the Eligible Existing Tenure pending the satisfaction of any conditions relating to the variation of the terms or conditions of the Eligible Existing Tenure. Where this paragraph iii applies prior to any approval of proposals and satisfaction of other conditions the relevant tenure will be treated for but only for the purposes of clause 20C2biv as tenure held pursuant to this Agreement. Application for Special Advance Tenure to be granted pursuant to this Agreement 3b Without limiting clause 72 the Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Special Advance Tenure being

granted to the Company pursuant to this Agreement if a b the Company proposes to submit detailed proposals under this Agreement other than under clause 20E to construct works installations or facilities on the Relevant Land and the Companys request is so far as is practicable made unless the Minister approves otherwise no less than 6 months before the submission of those detailed proposals; and the Minister is satisfied that it is necessary and appropriate that Special Advance Tenure rather than tenure granted under or pursuant to the other provisions of this Agreement be used for the purposes of the proposed works installations or facilities on the Relevant Land and if the Minister does so approve c notwithstanding the Mining Act 1978 or the LAA the appropriate authority or instrumentality of the State shall obtain the consent of the Minister to the form As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 171 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement d and substance of the Special Advance Tenure prior to its grant which for the avoidance of doubt neither the State nor the Minister is obliged to cause to the Company; and if the Company does not submit detailed proposals relating to construction of the relevant works installations or facilities on the Relevant Land within 24 months after the date of the Ministers approval or such later time subsequently allowed by the Minister or if submitted the Minister does not approve such detailed proposals the Special Advance Tenure if then granted shall be surrendered at the request of the Minister. 3c The decisions of the Minister under subclauses 3a and 3b shall not be referable to arbitration and any approval of the Minister under this clause shall not in any way limit prejudice or otherwise affect the exercise by the Minister of the Ministers powers or the performance of the Ministers obligations under this Agreement or otherwise under the laws from time to time of the said State.; 4 in clause 7 by a b deleting in subclause 4 subclause 3 and substituting subclauses 3 3a and 3b; and deleting in subclause 4a and 2 and substituting 2 3a and 3b; 5 by inserting after clause 11B the following new clauses Community development plan 11C. 1 In this clause the term community and social benefits includes a assistance with skills development and training opportunities to promote work readiness and employment for persons living in the Pilbara region of the said State; page 172 Version 02a005

Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement b regional development activities in the Pilbara region of the said State including partnerships and sponsorships; c contribution to any community projects town services or facilities; and d a regionally based workforce. 2 The Company acknowledges the need for community and social benefits flowing from this Agreement. 3 The Company agrees that a b it shall prepare a plan which describes the Companys proposed strategies for achieving community and social benefits in connection with its activities under this Agreement; and the Company shall not later than 3 months after the second variation date submit to the Minister the plan prepared under paragraph a and confer with the Minister in respect of the plan. 4 The Minister shall within 2 months after receipt of a plan submitted under subclause 3b either notify the Company that the Minister approves the plan as submitted or notify the Company of changes which the Minister requires be made to the plan. If the Company is unwilling to accept the changes which the Minister requires it shall notify the Minister to that effect and either party may refer to arbitration hereunder the question of the reasonableness of the changes required by the Minister. 5 The effect of an award made on an arbitration pursuant to subclause 4 shall be that the relevant plan submitted by the Company pursuant to subclause 3b shall with such changes required by the Minister under subclause 4 as the arbitrator determines to be reasonable with or without As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 173 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement modification by the arbitrator be deemed to be the plan approved by the Minister under this clause. 6 At least 3 months before the anticipated submission of proposals relating to a proposed development pursuant to any of clauses 5 11 or 20E the Company must unless the Minister otherwise requires give to the Minister information about how the proposed development may affect the plan approved or deemed to be approved by the Minister under this clause. This obligation operates in relation to all proposals submitted on or after the date that is 4 months after the date when a plan is first approved or deemed to be approved under this clause. 7 The Company shall at least annually report to the

Minister about the Companys implementation of the plan approved or deemed to be approved by the Minister under this clause. 8 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan approved or deemed to be approved by the Minister under this clause and may agree to amendment of the plan or adoption of a new plan. Any such amended plan or new plan will be deemed to be the plan approved by the Minister under this clause in respect of the development to which it relates. 9 During the currency of this Agreement the Company shall implement the plan approved or deemed to be approved by the Minister under this clause. Local participation plan 11D.

1 In this clause the term local industry participation benefits means a b the use and training of labour available within the said State; the use of the services of engineers surveyors architects and other professional page 174 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement consultants experts specialists project managers and contractors available within the said State; and c the procurement of works materials plant equipment and supplies from Western Australian suppliers manufacturers and contractors. 2 The Company acknowledges the need for local industry participation benefits flowing from this Agreement. 3 The Company agrees that it shall not later than 3 months after the second variation date prepare and provide to the Minister a plan which contains a b a clear statement on the strategies which the Company will use and require a third party as referred to in subclause 7 to use to maximise the uses and procurement referred to in subclause 1; detailed information on the procurement practices the Company will adopt and require a third party as referred to in subclause 7 to adopt in calling for tenders and letting contracts for works materials plant equipment and supplies stages in relation to a proposed development and how such practices will provide fair and reasonable opportunity for suitably qualified Western Australian suppliers manufacturers and contractors to tender or quote for works materials plant equipment and supplies; c detailed information on the methods the Company will use and require a third party as referred to in subclause 7 to use to have their respective procurement officers promptly introduced to Western

Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement d suppliers manufacturers and contractors seeking such introduction; and details of the communication strategies the Company will use and require a third party as referred to in subclause 7 to use to alert Western Australian engineers surveyors architects and other professional consultants experts specialists project managers and consultants and Western Australian suppliers manufacturers and contractors to services opportunities and procurement opportunities respectively as referred to in subclause 1. It is acknowledged by the Company that the strategies of the Company referred to in subclause 3a will include strategies of the Company in relation to supply of services labour works materials plant equipment or supplies for the purposes of this Agreement. 4 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan provided under this clause and may agree to the amendment of the plan or the provision of a new plan in substitution for the one previously provided. 5 At least 6 months before the anticipated submission of proposals relating to a proposed development pursuant to any of clauses 5 11 or 20E the Company must unless the Minister otherwise requires give to the Minister information about the implementation of the plan provided under this clause in relation to the proposed development. This obligation operates in relation to all proposals submitted on or after the date that is 7 months after the date when a plan is first provided under this clause. 6 During the currency of this Agreement the Company shall implement the plan provided under this clause. page

Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement 7 The Company shall a in every contract entered into with a third party where the third party has an obligation or right to procure the supply of services labour works materials plant equipment or supplies for or in connection with a proposed development ensure that the contract contains appropriate provisions requiring the third party to undertake procurement activities in accordance with the plan provided under this clause; and b use reasonable endeavours to ensure that the third party complies with

those provisions.; 6 in clause 121 by a deleting in paragraph a allow crossing places for roads stock and other railways and also; b inserting after paragraph a the following new paragraph Crossings over Railway aa for the purposes of livestock and infrastructure such as roads railways conveyors pipelines transmission lines and other utilities proposed to cross the land the subject of the Companys railway the Company shall i if applicable give its consent to or otherwise facilitate the grant by the State or any agency instrumentality or other authority of the State of any lease licence or other title over land the subject of the Companys railway so long as such grant does not in the Ministers opinion unduly prejudice or interfere with the activities of the Company under this Agreement; and ii on reasonable terms and conditions allow access for the construction and operation of As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 177 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement such crossings and associated infrastructure provided that in forming his opinion under this clause the Minister must consult with the Company;; and c deleting paragraph hii and substituting the following subparagraph ii on fine ore sold or shipped separately as such at the rate of A B 5.625 of the f.o.b. value for ore shipped prior to or on 30 June 2012; 6.5 of the f.o.b. value for ore shipped during the period from 1 July 2012 to 30 June 2013 inclusive of both dates; and C 7.5 of the f.o.b. value for ore shipped on or after 1 July 2013;; and 7 in clause 20E by a deleting in subclause 1 LAA means the Land Administration Act 1997 WA; b inserting after subclause 3c the following new paragraph d Without limiting subclause 9 the Minister may waive the requirement under this clause for the Company to obtain and to furnish the consent of a title holder if the title holder has refused to give the required consent and the Minister is satisfied that i the title holders affected land is or was subject to a miscellaneous licence granted under the Mining Act 1978 for the purpose of a railway to be constructed and operated in accordance with this Agreement; and ii in the Ministers opinion the title holders refusal to give the required consent is not page 178 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement reasonable in all the circumstances including having regard to

A the rights of the Company in relation to the affected land as the holders of the miscellaneous licence relative to their rights as the holders of the sought Special Railway Licence or Lateral Access Road Licence as the case may be; and B the terms of any agreement between the Company and the title holder.; c deleting in subclause 4a the comma after the provisions of this Agreement and substituting and; and d in subclause 7 i ii deleting all words in paragraph c after at the date of such inclusion; and inserting after paragraph k the following new paragraph l The provisions of clause 121aa shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to this clause.. As at 06 Dec 2013 Version 02a005 Published on www.legislation.wa.gov.au page 179 Iron Ore Mount Bruce Agreement Act 1972 Fifth Schedule 2011 Variation Agreement EXECUTED as a deed. SIGNED by the HONOURABLE COLIN JAMES BARNETT in the presence of [Signature] Signature of witness Stephen Bombardieri Name of witness [Signature] THE COMMON SEAL of MOUNT BRUCE MINING PTY. LIMITED ACN 008 714 010 was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] Secretary Robert Paul Shannon Helen Fernihough [Fifth Schedule inserted No. 61 of 2011 s. 14.] page 180 Version 02a005 Published on www.legislation.wa.gov.au As at 06 Dec 2013 Iron Ore Mount Bruce Agreement Act 1972 Notes 1 This reprint is a compilation as at 6 December 2013 of the Iron Ore Mount Bruce Agreement Act 1972 and includes the amendments made by the other written laws referred to in the following table. The table also contains information about any reprint. Compilation table Number and year Assent Commencement 37 of 1972 16 Jun 1972 16 Jun 1972 94 of 1976 12 Nov 1976 12 Nov 1976 Short title Iron Ore Mount Bruce Agreement Act 1972 Iron Ore Mount Bruce Agreement Act Amendment Act 1976 26 of 1987 29 Jun 1987 29 Jun 1987 see s. 2 Iron Ore Mount Bruce Agreement Amendment Act 1987 Reprint 1 The Iron Ore Mount Bruce Agreement Act 1972 as at 7 Feb 2003 includes amendments listed above Standardisation of Formatting Act 2010 s. 4 and 422 28 Jun 2010 11 Sep 2010 see s. 2b and Gazette 10 Sep 2010 p. 4341 19 of 2010 Iron Ore Agreements Legislation Amendment Act 2010 Pt. 6 Iron Ore Agreements Legislation Amendment Act No. 2 2010 Pt. 4 34 of 2010 26 Aug 2010 1 Jul 2010 see s. 2bii 61 of 2010 10 Dec 2010 11 Dec

2010 see s. 2c 61 of 2011 Iron Ore Agreements Legislation Amendment Act 2011 Pt. 4 Reprint 2

The Iron Ore Mount Bruce Agreement Act 1972 as at 6 Dec 2013 includes amendments listed above 14 Dec 2011 15 Dec 2011 see s. 2b 2 3 Repealed by the Mining Act 1978. Repealed by the Interpretation Act 1984. 4 Marginal notes in the agreement have been represented as bold headnotes in this reprint but that does not change their status as marginal notes. As at 06 Dec 2013

Version 02a005 Published on www.legislation.wa.gov.au page 181 Iron Ore Mount Bruce Agreement Act 1972 Defined terms Defined terms [This is a list of terms defined and the provisions where they are defined. The list is not part of the law.] Defined term Provisions 1976 Variation Agreement 2 1987 Variation Agreement 2 2010 Variation Agreement 2 2011 Variation Agreement 2 Agreement 2 Company 2 page 182 Version 02a005

Published on www.legislation.wa.gov.au As at 06 Dec 2013 SCHEDULE REPUBLIC OF KENYA MODEL PRODUCTION SHARING CONTRACT PART I SCOPE AND INTERPRETATION 1. Scope 2. Interpretation PART II TERM EXPLORATION OBLIGATIONS AND TERMINATION 3. Term 4. Contract Area Surrender 5. Minimum Exploration Work and Expenditure Obligations 6. Surface Fees and Signature Bonus 7. Termination PART III RIGHTS AND OBLIGATIONS OF THE CONTRACTOR 8. Rights of the Contractor 9. General Standards of Conduct 10. Joint liability and Indemnity 11. Wells and Surveys 12. Offshore Operations 13. Upstream Petroleum Operations Facilities 14. Data and Samples 15. Reports 16. Environmental Provisions 1 P a g e 17. Plugging and Abandonment and Decommissioning Operations 18. Insurance PART IV LOCAL . Adherence to Laws and Regulations 20. Employment and Training of Kenyans 21. Training Fund 22. Preference forKenyan Goods and Services 23. Technology Transfer 24. Record Keeping and Reports PART V RIGHTS AND OBLIGATIONS OF THE GOVERNMENT 25. Rights of the Government 26.

Obligations of the Government PART VI WORK PROGRAMME DEVELOPMENT AND PRODUCTION 27. Exploration Work Programme and Detailed Budget 28. Discovery and Appraisal Work Programme 29. The Development Plan and Annual Work Programme and Budget 30. Unitization 31. Marginal and Noncommercial Discoveries 32. Natural Gas 33. Production Levels and Annual Production Programme 34. Measurement of Petroleum 35. Valuation of Crude Oil and Natural Gas 2 P a g e PART VII COST RECOVERY PRODUCTION SHARING TAXATION GOVERNMENT PARTICIPATION AND DOMESTIC SUPPLY OBLIGATIONS 36. Cost Recovery and Uplift 37. Profit Petroleum Sharing and RFactor 38. Production Sharing 39. Taxation 40. Title and Risk to Petroleum 41. Government Participation 42. Domestic Supply Obligations PART VIII BOOKS ACCOUNTS AUDITS IMPORTS EXPORTS AND FOREIGN EXCHANGE 43. Books Accounts and Audits 44. Exports and Imports 45. Exchange and Currency Controls PART IX GENERAL 46. Payments 47. Assignment 48. Manager Advocate and Joint Operation Agreement 49. Confidentiality 50. Force majeure 51. Waiver 52. Governing Law 53. Dispute Resolution 54. Notices 55. Headings and Amendments 3 P a g e APPENDICES A The Contract Area B Accounting Procedure C Participation Agreement 4 P a g e PRODUCTION SHARING CONTRACT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF KENYA AND .. This CONTRACT is made and entered into on the .. 20... by and between the Government of the Republic of Kenya hereinafter referred to as the Government represented for the purpose of this contract by the Cabinet Secretary for the time being responsible for Petroleum hereinafter referred to as the Cabinet Secretary and.. incorporated under the Laws of Kenya... and having a registered place of business at . Kenya hereinafter referred to as the Contractor which expression includes its successors and assignees. Note to be amended in case of a Contractor consisting of several entities. The Government and the Contractor herein are referred to either individually as Party or collectively as Parties. WITNESSETH WHEREAS the title to all petroleum existing in its natural condition in the territory of Kenya is vested in the Government; and WHEREAS the Government wishes to promote and encourage the exploration and the development of Petroleum throughout the contract area; and WHEREAS the

contractor desires to join and assist the Government in accelerating the exploration and development of the potential Petroleum within the contract area; and WHEREAS the contractor has the financial ability technical competence and professional skills necessary to carry out the upstream petroleum operations hereinafter described; and WHEREAS in accordance with the Petroleum Exploration Development and Production Act enacted by the Parliament of the Republic of Kenya agreements in the form of production sharing contracts may be entered into between the Government and contractors; 5 P a g e NOW THEREFORE the Parties hereby agree as follows

PART I INTERPRETATION AND SCOPE 1. Scope 1 This contract is a production sharing contract made pursuant to the Act and regulations. 2 Subject to this contract the contractor shall a have the exclusive right to carry on upstream petroleum operations for the duration of the contract at its sole cost risk and expense; and shall therefore have an economic interest in the development of petroleum in the contract area; b provide all capital machinery equipment facilities technology and personnel necessary for the conduct of upstream petroleum operations; c as further provided in this contract share in the petroleum from the contract area; and d be responsible to the Government for the execution of upstream petroleum operations in accordance with the provisions of this contract. e Without prejudice to the contractors position as an independent contractor hereunder the extent and character of such work to be done by the contractor shall be subject to the general supervision review and approval by the Cabinet Secretary to whom the contractor shall report and be responsible as set forth herein and in the Act and regulations. 3 The contractor is not authorized to carry on upstream petroleum operations in any part of Kenya outside the contract area other than in accordance with an authorization granted under the provisions of the Act. 4 This contract does not authorize the contractor to process and conduct upstream petroleum operations beyond the delivery point. 6 P a g e 2. Interpretation 1 In this contract words in the singular include the plural and vice versa and except where the context otherwise requires accounting procedure means the accounting procedures and requirements set out in Appendix B attached hereto and made an integral part hereof; Act means the Petroleum Exploration Development and Production Act; affiliate means a

person directly or indirectly controlling or controlled by or under direct or indirect common control with another person; appointee means a body corporate wholly owned or controlled by the Government and appointed for the purposes of this contract; arms length price means arms length price as defined in the Income Tax Act; associated natural gas means i any natural gas dissolved in crude oil under reservoir conditions and ii any residue gas remaining after the extraction of crude oil from a reservoir; Authority means the Authority established under the Act for the regulation of the upstream petroleum operations; barrel means a quantity consisting of 158.987 litres at standard atmospheric pressure of 1.01325 bars and temperature of fifteen degrees centigrade 15C; best petroleum industry practices means such practices methods standards and procedures generally accepted and followed internationally by prudent diligent skilled and experienced operators in the upstream petroleum operations including practices methods standards and procedures intended to a conserve petroleum by maximizing recovery of petroleum in a technically and economically sustainable manner; b promote operational safety and prevention of accidents; and c protect the environment by maximizing the impact of upstream petroleum operations; 7 P a g e block means acreage as defined by specific geographic coordinates for purposes of upstream petroleum operations as provided by section 51 of the Act; brine means all saline geological formation water resulting from obtained from or produced in connection with exploration drilling well stimulation production of oil or gas or plugging of a well. Cabinet Secretary means the Cabinet Secretary for the time being responsible for petroleum; calendar quarter or quarter means a period of three 3 consecutive months commencing with the first day of January April July and October; calendar year means a period of twelve 12 consecutive months commencing with the first day of January in any year and ending the last day of December in that year according to the Gregorian calendar; commercial assessment period means the period commencing at the request of the contractor at the time when report regarding the evaluation work programme relating to the discovery of nonassociated natural gas has been submitted by the contractor; commercial discovery means a discovery of petroleum which has been duly evaluated in accordance with the provisions of clause 28

and which can be produced commercially according to best petroleum industry practice after the consideration of all pertinent technical and economic data; commercial production means the quantity of petroleum produced on a regular basis from a commercial field saved and not used in upstream petroleum operations; commercial field means the geological structure or feature which hosts one or more reservoirs from which petroleum production may be commercially undertaken through a defined set of facilities; conservation of petroleum resources means prevention and minimization of wastage of petroleum protection of correlative rights and maximization of ultimate economic recovery. Constitution means the Constitution of the Republic of Kenya; 8 P a g e contract area means the area covered by this contract and described in Appendix A and any such area as may be modified in accordance with the terms of this contract including through amendments surrender withdrawal extension or otherwise; contract year means twelve 12 consecutive calendar months from the effective date or from the anniversary thereof; contractor means the contractor as defined in the Act; control in relation to any person means the possession directly or indirectly of the power to direct or cause the direction of the management by that person whether through the ownership of shares voting securities partnership or other ownership or participation interests agreements or otherwise; crude oil means all hydrocarbons regardless of gravity which are produced at the wellhead in liquid state at atmospheric conditions of temperature and pressure and the liquid hydrocarbons known as distillates or condensate or natural gas liquids obtained from natural gas by condensation or extraction; decommissioning means abandonment recovery and removal and disposal or if applicable redeployment of wells flow lines pipelines facilities infrastructure and assets related to upstream petroleum operations; decommissioning costs means all the costs and expenditures incurred by the contractor when carrying out decommissioning operations including those defined in the accounting procedure; decommissioning plan means the plan for the decommissioning abandonment recovery and removal or if applicable redeployment of wells flow lines pipelines facilities infrastructure and assets related to upstream petroleum operations; delivery point means the point at which petroleum passes through the intake valve of the

pipeline vessel vehicle or craft at a terminal refinery processing plant in Kenya or such other point as may be agreed by the Government and the contractor with such point to be specified in the production sharing contract; development area means the area delimited in a development plan adopted under clause 29 hereof; 9 P a g e development costs means all the costs and expenditures incurred by the contractor when carrying out development operations including those defined in the accounting procedure; drilling permit means a permit issued by the Authority which allows the contractor to conduct drilling operations of an individual well that includes construction of a well a well site and access road to the well site and the ability of the contractor to move and use facilities equipment supplies and materials to the well site during drilling monitoring appraisal and evaluation activities of upstream petroleum operations; economic limit means that point in the life of the field where expected revenue to the contractor from upstream petroleum operations is insufficient to cover the operating costs to continue upstream petroleum operations in accordance with the requirements of the contract; effective date means the date falling ninety days after this Contract has been executed by the contractor and the Government when the contractor shall commence operations; equity participant means any person who is for the time being a component of the contractor and its successors or any assignees of its interest in the contract or under this contract provided that the assignment of any such interest is accomplished pursuant to the provisions of clause 47 hereof; execution date means the date this contract has been signed by the contractor and the Government; exploration and appraisal costs means all the costs and expenditures incurred by the contractor when carrying out exploration or appraisal operations including those defined in the accounting procedure; exploration operations include geological geochemical and geophysical surveys and analysis aerial mapping investigations of subsurface geology stratigraphic test drilling drilling exploratory wells mud and wireline logging and work necessarily connected therewith; exploratory well means a well drilled in search of petroleum to test a geological feature which has not been determined to contain petroleum in commercial quantities; 10 P a g e facility includes a any structure device roads or other associated installations or infrastructure including wells flow lines

pipelines separators storage tanks drilling rigs gas processing plants rail stations pump stations compressor stations and equipment constructed placed or used in order to carry out petroleum operations; b vessel vehicle or craft when stationary and used for drilling or support of ongoing upstream petroleum operations; and c vessel vehicle or craft for transportation of petroleum in bulk when connected to a facility for loading of petroleum; first production means with respect to a development area the moment when commercial production of crude oil or nonassociated natural gas as the case may be first commences from that development area by flowing at the rate forecast in the development plan without interruption for a minimum of fortyeight 48 hours; fiscal year means a period of twelve 12 consecutive months corresponding to the year of income as defined in the Income Tax Act; flow line or gathering line means those segments of pipe complete with equipment such as pumping or compressor stations separators storage tanks communication systems and valves for transporting petroleum from the wellhead in the contract area to the junction of a trunk pipeline or a transmission pipeline; Income Tax Act means the Income Tax Act of Kenya as amended from time to time; LIBOR means the London Interbank Offered Rate for one month deposits of US Dollars displayed on page LIBOR01 of the Reuters Money Rates Service or any other page that replaces page LIBOR01 for the purposes of displaying the British Bankers Association BBA interest settlement rates for such deposits of US Dollars in the London Interbank market on the date of determination or in the event the Reuters Money Rates Service or a successor thereto no longer provides such information such other service as may be agreed by the parties hereto that provides the BBA interest settlement rates for such deposits of US Dollars in the London Interbank market and any other required information previously provided on page LIBOR01; 11 P a g e local means the use of Kenyan local expertise goods and services people businesses and financing for the systematic development of national capacity and capabilities for the enhancement of the Kenyan economy; Market Evaluation Report means a report for a potentially commercial natural gas discovery by the contractor identifying potential market for natural gas expected volumes for such market infrastructure potentially required to access such market and expectations of price

for the natural gas supplied to such market; maximum efficient rate means the rate at which the maximum ultimate economic petroleum recovery is obtained from a commercial field without excessive rate of decline in reservoir pressure and consistent with best petroleum industry practice; ministry means the Ministry for the time being responsible for petroleum in Kenya; natural gas means hydrocarbons that are in a gaseous phase at atmospheric conditions of temperature and pressure including wet mineral gas dry mineral gas casing head gas and residue gas remaining after the extraction or separation of liquid hydrocarbons from wet gas and nonhydrocarbon gas produced in association with liquid or gaseous hydrocarbons; nonassociated natural gas means any natural gas that is not associated natural gas; operator means the designated entity that is responsible for managing the day to day operation of oil and gas exploration development and production; person means any natural or juridical person; petroleum means all hydrocarbons and includes crude oil and natural gas whether capable of being produced from conventional and unconventional reservoirs including shale oil oil shale shale gas coal bed methane gas tar sands and other sources of hydrocarbon reserves; petroleum agreement means the agreement contract license or other arrangement between the National Government and a contractor to conduct upstream petroleum operations in accordance with the provisions of the Act. petroleum costs means expenditure made and obligations incurred and paid by the contractor in carrying out upstream petroleum operations hereunder determined in 12 P a g e accordance with the accounting procedure attached hereto in Appendix B and made a part hereof; upstream petroleum operations means all or any of the operations related to the exploration development production separation and treatment storage and transportation of petroleum up to the agreed delivery point; plugging and abandonment permit means a permit issued by the Authority which allows the contractor to conduct plugging and abandonment operations of an individual well which includes the proper methodology as approved by the Authority and complete restoration of the individual well site and well site access road and removal of all equipment supplies and materials used during the drilling and production licensed upstream petroleum operations; production costs means all the costs and expenditures incurred by

the contractor when carrying out production operations including those defined in the accounting procedure; production permit means a permit issued by the Authority which allows the contractor to conduct production operations of an individual well and includes and not limited to the system of production facilities such as tank batteries production units flow lines and gathering lines and other equipment as deemed necessary to conduct production activities; production sharing contract means a petroleum agreement between the Government of the Republic of Kenya and a contractor which enables the contractor to explore develop and produce petroleum within a contract area; regulations means the Regulations made under the Act as from time to time amended; revenue means the expected revenues derived from the conveyance and sale of petroleum at the delivery point together with any firm tariff income earned by the field facilities if any; semester means a period of six 6 consecutive months commencing with the first day of January or the first day of July of a calendar year. 13 P a g e underground injection control well or UIC well means an individual noncommercial existing well that is converted to a brine injection well for the sole purpose of disposal of brine and liquid waste and includes all facilities necessary to conduct safe injection operations. underground injection control well permit means a permit issued by the Authority which allows the contractor to convert an individual existing well to a brine injection well for the disposal of brine and liquid waste and includes all facilities necessary to conduct safe injection operations. well means any borehole whether drilled or bored within Kenya for production extraction or injection of any petroleum or liquids excluding fresh water to be used as such but including natural or artificial brines and well treatment chemicals. PART II TERM EXPLORATION OBLIGATIONS AND

TERMINATION 3. Term 1 The contractor is authorized to conduct exploration operations within the contract area during an initial exploration period of .. contract years from the effective date. 2 The contractor shall begin exploration operations on the effective date. 3 Upon written application by the contractor made not later than thirty 30 days prior to the expiry of the initial exploration period the Cabinet Secretary shall if the contractor has fulfilled its work and expenditure obligations under this contract grant a first additional exploration period of ..contract years. 4 Upon written application by

the contractor made not later than thirty 30 days prior to the expiry of the first additional exploration period hereof the Cabinet Secretary shall if the contractor has fulfilled its work and expenditure obligations under this contract grant a second additional exploration period of contract years. 5 In order to enable the contractor to complete the drilling and testing of an exploratory well actually being drilled or tested at the end of the second additional exploration period the Cabinet Secretary shall on written application by the contractor made not later than ninety 14 P a g e 90 days before the expiry of that exploration period grant an extension for such period as may be necessary for the contractor to complete the drilling and testing of the well which the contractor shall carry out continuously and diligently which in any event shall not extend such period by more than one hundred and twenty 120 days. 6 Unless extended in accordance with the provisions of clause 3 this contract shall expire automatically at the end of the initial exploration period or at the end of any additional exploration period except as to any development area. However if the contractor reports pursuant to subclause 288 hereof that a commercial discovery has been made before the expiry of the initial exploration period stipulated in subclause 31 hereof or any additional exploration period thereof this contract shall not expire in respect to the relevant development area but shall continue as to such development area for a term of up to twenty five 25 years from the date of the development plan for that development area is adopted under subclause 294 hereof. 7 In the event that the contractor has fulfilled all its obligations for the specified term of the contract the contractor may request an extension of the development area for a further period not exceeding ten 10 years. The Cabinet Secretary shall consider such a request in accordance with the provisions of the Act. 1 The contractor shall surrender 4. Contract Area Surrender a At least twenty five percent 25 of the net area determined by subtracting the development areas from the original contract area at or before the end of the initial exploration period; b An additional of at least twenty five percent 25 of the net area determined by subtracting the development areas from the remaining part of the original contract area at or before the end of the first additional exploration period; and c At or before the end of the second additional exploration period all of the remaining contract area that is not a

development area. 15 Page 2 The contractor may surrender a part of the contract area and such a voluntary surrender shall be credited against the next surrender obligation of the contractor under subclause 41. 3 The shape and size of an area surrendered shall be in a contiguous area of which its longer side shall not be more than three times its shorter side and shall be approved by the Cabinet Secretary approval which shall not be unreasonably withheld. 4 The contractor shall give one year's written notice of surrender in respect of a producing field and thirty days written notice of surrender in respect of any other part of the contract area. In case of a surrender of the entire contract area the contract shall terminate. 5 No surrender made in accordance with this clause shall relieve the contractor of; a its obligations to comply with the minimum exploration work and expenditure required in clause 5; or b any other obligations which may have accrued prior to the date of surrender. 6 Upon surrender of any contract area the contractor shall perform all necessary cleanup activities and undertake all necessary restoration and reclamation measures in accordance with the best petroleum industry practices and the relevant laws. 7 It shall be a requirement for the portion surrendered under this clause to have geological and geophysical data which the contractor shall be under obligation to submit at the time of surrender.

5. Minimum Exploration Work and Expenditure Obligations

1 The contractor shall carry out the following minimum work and expenditure obligations;

a during the initial exploration period of contract years i in the event this contract relates to an onshore block carry out geological geochemical and geophysical studies comprising;

a. b. c. the compilation of a technical database; the performance of a remote sensing study and a field visit to verify initial geological geochemical and geophysical work and remote sensing results and plan for two dimensional seismic acquisition;

16 Page ii carry out a data search for existing data specific to the contract area including a. well data if available; b. c. seismic data and gravity data if available; and reprocess seismic data gravity and magnetic data if available;

iii ..kms of seismic with a minimum expenditure of U.S. dollars .; iv drilling of .. exploratory wells to a minimum depth of 3000 meters per well with a minimum expenditure of U.S. dollars for each well; b during the first additional exploration period of.. contract years drilling of . exploratory wells to a

minimum depth of . meters per well with minimum expenditure of U.S.dollars . for each well; c during the second additional exploration period of .contract years drilling of . exploratory wells to a minimum depth of . meters per well with a minimum expenditure of U.S. dollars . for each well. 2 The fulfillment of all work obligations shall not relieve the contractor of the corresponding expenditure obligation therein. 3 If the drilling of an exploratory well is discontinued prior to reaching the minimum depth herein specified because that well has encountered the basement an impenetrable substance or any condition which in accordance with best petroleum industry practice would make it unsafe or impractical to continue drilling the minimum depth obligation in respect of that well shall be deemed to be fulfilled. 4 An appraisal well drilled to appraise and evaluate a commercial discovery under an Appraisal Work Programme pursuant to subclauses 282and 4 shall not be considered to be an exploratory well for the purpose of fulfilling the required number of exploratory wells. 17 P a g e 5 The minimum exploration expenditure set forth in subclause 51 are expressed in U.S. dollars of the year of the effective date. In any contract year of either the initial exploration period or of any additional exploration period for the purpose of comparison of the actual costs incurred and paid by the contractor with the minimum exploration expenditure the actual costs incurred and paid by the contractor for seismic operations and the drilling of exploratory wells during that contract year shall be converted into constant U.S. dollars by dividing the costs by the discount rate which is the sum of one 1 and the decimal equivalent of the percentage increase in the United States Consumer Price Index as reported for the first time in the monthly publication International Financial Statistics of the International Monetary Fund between the month of the effective date and the month when such costs were incurred. 6 The contractor shall submit a revised programmed and a budget in the event that the contractor may incur additional expenditure in relation to the initial minimum expenditure obligation. 7 On or before the commencement of the initial exploration period or of any additional exploration period the contractor shall provide a security of 50 Bank Guarantee and another 50 by the parent company in a form acceptable to the Cabinet Secretary guaranteeing the contractors minimum work and expenditure obligations under subclause51 hereof. 8 If at the end of either the

initial exploration period or of any additional exploration period or upon the date of termination of this contract whichever occurs first the contractor has not fulfilled its minimum work obligations under subclause 51 hereof and/or its minimum expenditure obligations under subclauses 51 and 55 hereof the contractor shall pay to the Government the minimum monetary obligation in respect of the work not carried out multiplied by the discount rate as defined in subclause 55 and calculated on the last month of that exploration period and/or the shortfall if any between the amount expended in accordance with subclause 55 and the minimum monetary obligation for that exploration period multiplied by the discount rate as defined herein above.

6. Surface Fees and Signature Bonus

1 The contractor shall pay on or before the beginning of the relevant contract year to the Government the following surface fees:

- i. U.S. dollars per square kilometre per year for the initial exploration period;
- ii. U.S. dollars . per square kilometre per year for the first additional exploration period;
- and iii. U.S. dollars per square kilometre per year for the second additional exploration period or any extension thereof.

2 The said payments shall be calculated on the basis of the surface area of the contract area on the date those payments are due.

3 A fee payable under subclause 6.1 is not refundable and a late payment shall attract interest in accordance with subclause 4.62 hereof.

4 A signature bonus of U.S. dollars . shall be payable to the Ministry by the contractor upon execution of the contract by the Cabinet Secretary.

7. Termination

1 Subject to the provisions of the Act the Cabinet Secretary may terminate this contract by giving the contractor written notice if the contractor:

- a fails to make any payment to the Government as required under this contract for a period exceeding thirty (30) days;
- b becomes insolvent makes a composition with creditors or goes into liquidation other than for reconstruction or amalgamation; or
- c fails to provide or maintain the security and insurance stipulated in this contract; or
- d is in material breach of any other obligation under the Act, regulations or this contract.

2 The period of notice in respect of subclauses 7.1a and c hereof shall be thirty (30) days and in any other case ninety (90) days but if the contractor remedies the breach within the period of the notice the Cabinet Secretary shall withdraw the notice. Where the Cabinet Secretary reasonably believes that the contractor is using its best efforts to remedy the

default the Cabinet Secretary may withdraw the notice accordingly. 19 Page 3 When this contract is terminated or expires in whole or in part the contractor shall conclude the upstream petroleum operations in the area as to which this contract has terminated or expired in an orderly manner minimizing harm to the Government and third parties. 4 Where control over one of the entities constituting the contractor is changed the continuation of the contract shall be subject to the consent of the Cabinet Secretary which shall not be unreasonably withheld and for the purpose of this subclause 74 the term control shall have the same meaning as set forth in the definition of an affiliate in clause 2.

PART III RIGHTS AND OBLIGATIONS OF THE CONTRACTOR

8. Rights of the Contractor

1 The contractor shall have the right to carry out the upstream petroleum operations within the contract area subject to the provisions of this contract and applicable law for the term hereof. 2 The contractor is granted the right subject to applicable law to enter upon the contract area and conduct upstream petroleum operations there but permission may be granted to other persons to search for and mine minerals other than petroleum so long as they do not unreasonably interfere with the upstream petroleum operations and easements and rights of way may be granted to other persons for the benefit of land adjacent to the contract area. 3 The Cabinet Secretary shall recommend to the relevant authorities to grant the necessary permit to the contractor to access i water in the contract area for the purpose of the upstream petroleum operations but the contractor shall not unreasonably deprive the users of land domestic settlement or cattle watering place of the water supply to which they are accustomed; ii security within the contract area and; iii any other services the contractor may require in performance of upstream operations. 4 The contractor may for the purpose of the upstream petroleum operations use gravel sand clay and stone in the contract area but not without consent or license granted under the relevant law. 20 Page 5 Further to the provisions of section 110 of the Act and subject to the provisions of the Constitution and any written laws the contractor may exercise all rights granted to it by this contract.

9. General Standards of Conduct

1 The contractor shall carry out the upstream petroleum operations diligently and in accordance with the provisions of this contract best petroleum industry practice and applicable law.

2 Without limiting the foregoing the contractor shall in accordance with the Act and regulations a maintain adequate financial technical and professional capacity throughout the contract period; b at all times ensure that any subcontractor or agent of the contractor acting on its behalf possesses the necessary skills and qualifications to perform the work; c ensure that all facilities such as machinery plant equipment materials supplies and installations used by the contractor in connection with the upstream petroleum operations are of proper and accepted construction standard and are kept in good repair; d use the resources of the contract area as productively as possible and ensure that petroleum discovered and produced are properly contained during upstream petroleum operations and brine drilling fluids mud or any other liquids solids or waste substances are properly contained and disposed of during upstream petroleum operations; e prevent damage to producing formations and to adjacent strata which bear petroleum brine or fresh water and prevent brine fresh water and petroleum entering through wells into strata bearing petroleum except where i approved brine and liquid waste injection well operations and ii secondary and tertiary recovery operations are being conducted; f properly confine petroleum and brine in steel storage tanks constructed for that purpose and not place petroleum brine and drilling fluids in open drilling pits and earthen reservoirs for storage or drilling completions and production operations except temporarily in an emergency; 21 P a g e g dispose of oil brine salt water and other liquid and solid waste in accordance with best petroleum industry practice to avoid damage to the environment and pollution; and h comply with the applicable laws of environment protection health and safety. 10. Joint Liability and Indemnity 1

Where the contractor consists of more than one person their liability shall be joint and several. 2 The contractor shall cause as little damage as possible to the surface and subsurface of a contract area including domestic animals wildlife trees crops buildings roads surface waters underground water aquifers soils facilities and infrastructure and other property thereon and shall forthwith repair any loss or damage caused and shall pay full and reasonable compensation for any loss suffered as determined by an internationally recognized independent expert appointed by both parties. 3 The Cabinet Secretary may if he has reasonable cause to believe that the upstream petroleum

operations may endanger persons or property cause pollution harm marine life or interfere with navigation and fishing order the contractor to take reasonable remedial measures or order the contractor to discontinue the relevant upstream petroleum operations until such measures or mutually agreed alternatives thereto are implemented. 4 The contractor shall maintain appropriate and adequate third party liability insurance and workmens compensation insurance and shall provide the Cabinet Secretary with evidence of those insurances before the upstream petroleum operations begin. 5 The contractor shall indemnify defend and render the Government free from all claims and damage which but for the conduct of the upstream petroleum operations by the contractor or a subcontractor would not have arisen or occurred. 11. Wells and Surveys 1 Unless such notice is waived the contractor shall not drill a well or borehole or recommence drilling after a one hundred and eighty 180 days cessation without thirty 30 days prior notification to the Cabinet Secretary and the Authority which notice shall set forth the 22 P a g e contractors reasons for undertaking such drilling and shall contain a copy of the drilling programme. 2 The design and construction of a well or borehole and the conduct of drilling shall be in accordance with the drilling permit issued by the Authority and best petroleum industry practice. 3 No borehole or well in a contract area shall be drilled without a drilling permit from the Authority which may give special considerations of the distance of the contract boundary area. 4 Production of a well shall be in accordance with the production permit issued by the Authority and the contractor shall produce the well using best petroleum industry practice and conservation of petroleum resources principles; 5 Conversion and operation of a well to an underground injection control well shall be in accordance with the underground injection control well permit issued by the Authority and the contractor shall only inject brine and liquid waste into the well as permitted using best petroleum industry practice; 6 Plugging and abandonment of a well shall be in accordance with the plugging and abandonment permit issued by the Authority using best petroleum industry practice; 7 The contractor shall not a plug and abandon a well or remove any permanent form of casing therefrom without giving forty eight 48 hours prior notification to the Authority and an abandoned well shall be securely plugged to

prevent environmental damage pollution subsea damage or water entering or escaping from the strata penetrated; or b commence drilling reenter or plug a well unless a representative of the Authority has been given a reasonable opportunity to be present. 8 The contractor shall state in its application to plug and abandon a well on land whether that well is capable of providing fresh water supply. 9 The contractor shall within sixty 60 days of termination or expiry of this contract or the surrender of part of the contract area deliver up all productive wells in the said surrendered 23 P a g e area in good repair and working order together with all casings and installations which cannot be moved without damaging the well but the Authority may require the contractor to plug and abandon the well at the contractors expense by notifying the contractor within thirty 30 days after such termination or expiry is effected or at least ninety 90 days prior to surrender of a development area. 10 Where the contractor applies to permanently plug and abandon an exploratory or an appraisal well in which petroleum of potentially commercial significance has not been found the Cabinet Secretary in consultation with the Authority may request the contractor to deepen or sidetrack that well and to test the formations penetrated as a result of such operation or to drill another exploratory or appraisal well within the same prospect area subject to the following provisions a any such additional upstream petroleum operations shall be at the sole cost risk and expense of the Cabinet Secretary and shall be paid for in accordance with the accounting procedure. The Government shall advance to the contractor the funds necessary to conduct the operations; b the contractor shall not undertake such additional work if it will interfere with the conduct of the contractors upstream petroleum operations or if it is not commercially technically or operationally feasible; c in the event that the upstream petroleum operations undertaken under this subclause 1110 result in a commercial discovery which the contractor elects to evaluate and/or develop as a commercial field the contractor shall reimburse the Government six hundred per cent 600 of the costs and expenses incurred by the Government for the conduct of the operations and such sum shall be paid within thirty 30 days of the notification made by the contractor. If the contractor does not make such election the Government shall have the right to continue the petroleum operation on this commercial discovery at the sole

cost risk and expense of the Government. 11 The contractor shall give the Cabinet Secretary and Authority thirty 30 days notice of any proposed seismic and/or geophysical surveys which notice shall contain complete details of the programme to be conducted. At the request of the contractor the Cabinet Secretary may waive the notice period. 24 P a g e 12.

12. Offshore Operations 1 The contractor shall ensure that facilities erected offshore in Kenya's territorial waters and exclusive economic zone shall be a constructed placed marked buoyed equipped and maintained so that there are safe and convenient channels for shipping; b fitted with navigational aids approved by the Cabinet Secretary; c illuminated between sunset and sunrise in a manner approved by the Kenya Ports Authority and Kenya Maritime Authority; and d kept in good repair and working order. 2 The contractor shall pay compensation as determined by expert for any damage to and/or any interference with including but not limited to fishing rights caused by the upstream petroleum operations. 13. Upstream Petroleum Operations Facilities 1 With the written consent of the Cabinet Secretary which consent shall not be unreasonably withheld the contractor shall have the right to construct access roads drill water wells and to place facilities necessary to conduct the upstream petroleum operations including but not limited to storage tanks flow lines shipment installations transmission pipelines water pipelines and cables located inside or outside the contract area. Such consent of the Cabinet Secretary may be conditional on the use by other contractors of the excess capacity if any of those facilities. Where the Cabinet Secretary and the contractor agree that a mutual economic benefit can be achieved by constructing and operating common facilities the contractor shall use its best efforts to reach agreement with other contractors on the construction and operation of such common facilities. 2 Other contractors may use the facilities of the contractor on payment of a reasonable compensation which includes a reasonable return on investment to the contractor and provided that the use does not unreasonably interfere with the contractor's upstream petroleum operations. 25 P a g e 3

The Cabinet Secretary may after consultation with the Authority and contractor consent to the placement of facilities such as flow lines transmission pipelines water pipelines and cables in the contract area by other persons but those facilities shall not unreasonably interfere with the upstream petroleum

operations of the contractor. 4 Subject to clause 17 on termination or expiration of this contract or surrender of part of the contract area the contractor shall remove all petroleum operation facilities from the contract area or the part surrendered other than those that are situated in or related to a development area or at the option of the Cabinet Secretary the contractor shall transfer them at no cost to the Government in their current condition in which case the Government shall be responsible for operating maintaining plugging and abandoning and decommissioning of such facilities. 5 When the rights of the contractor in respect of a development area terminate expire or are surrendered the contractor shall transfer to the Government at no cost the upstream petroleum operations facilities that are situated in the development area or that are related thereto unless such facilities are or may be utilized by the contractor in upstream petroleum operations under this contract but the Government may require the contractor to remove the facilities at the cost of the contractor in accordance with clause 17.

14. Data and Samples 1 The contractor shall keep logs and records of the well construction drilling deepening perforations production plugging and abandonment of boreholes and wells in accordance with best petroleum industry practice and containing particulars of a the strata and subsoil through which the borehole or well was drilled; b the casing tubing and downhole equipment and alterations thereof inserted in a borehole or well; c petroleum fresh water aquifers brine and workable mineral or mine workings encountered; and d any other matter related to upstream petroleum operations required by the Cabinet Secretary and Authority.

26 P a g e 2 The contractor shall record in an original or reproducible form of good quality and on seismic tapes where relevant all geological geochemical geophysical and engineering information and data relating to the contract area obtained by the contractor and shall deliver in electronic and hard copies of that information and data the interpretations thereof and the logs and records of boreholes and wells to the Authority in a reproducible form as soon as is practicable after that information those interpretations and those logs and records come into the possession of the contractor. 3 The contractor may remove for the purpose of laboratory examination or geological analysis petrological specimens and samples of petroleum brine and fresh water encountered in a borehole and/or well

and as soon as practicable shall without charge give the Authority a representative part of each specimen and/or sample removed but no specimen or sample shall be exported from Kenya without prior notification to the Authority. 4 The contractor shall keep records of and supply data and information concerning the upstream petroleum operations as requested by the Authority. 5 The contractor shall provide data information and samples to the Authority in a form and manner as prescribed in the Act and regulations. 15. Reports 1 The contractor shall supply to the Cabinet Secretary and Authority daily reports on drilling completions and production operations and weekly reports on exploration including seismic and geophysical operations. 2 The contractor shall report in writing to the Cabinet Secretary and Authority the progress of the upstream petroleum operations according to the following schedule a within thirty 30 days from the last day of March June September and December covering the previous ninety 90 days; b within ninety 90 days of the last day of December covering the previous year; c within ninety 90 days of the date of expiry or termination of this contract. 3 A report under subclause 15.2 shall contain in respect of the period which it covers 27 P a g e a details of the upstream petroleum operations carried out and the factual information obtained; b a description of the area in which the contractor has operated; c an account of the expenditure on upstream petroleum operations in accordance with the accounting procedure; d a plat map including a record of coordinates including all pits boreholes wells and facilities used for upstream petroleum operations; e on expiry or termination of this agreement details of the upstream petroleum operations including all the matters described in paragraphs a to d; and f all information required by clause 14 not hitherto supplied. 16. Environmental Provisions 1 During the performance of the upstream petroleum operations the contractor shall comply with environmental principles and safeguards prescribed in the Environmental Management and Coordination Act and regulations made thereunder and all other relevant laws and shall take reasonable measures to ensure the protection of the environment and prevention of pollution in accordance with the best petroleum industry practice in similar physical and ecological environments. 2 Prior to surrendering a portion of the contract area the contractor shall take reasonable measures to abandon the area to be

surrendered in accordance with best petroleum industry practice in similar physical and ecological environments. Such measures shall include removal and closure of facilities material and equipment together with reasonable measures necessary for the preservation of fauna flora and ecosystems all in accordance with best petroleum industry practice in similar physical and ecological environments. The contractor shall only be responsible for site restoration or environmental damage to the extent the same pertains solely and directly to upstream petroleum operations conducted pursuant to this contract. 3 The contractor shall take reasonable precautions and measures in accordance with the Kenyan laws and best petroleum industry practice in similar physical and ecological environments to prevent any pollution which may arise directly or indirectly as a result of the upstream 28 P a g e petroleum operations and to protect the environment fauna and flora water sources and any other natural resources when carrying out upstream petroleum operations. 4 The contractor shall in accordance with best petroleum industry practice in similar physical and ecological environments respect the preservation of property agricultural areas and fisheries when carrying out upstream petroleum operations. 5 The contractor shall conduct a strategic environmental and social impact assessment and submit the report thereof to the National Environmental Management Authority within one hundred and eighty 180 days after the effective date. Such environmental and social impact assessment shall establish the effect of upstream petroleum operations to be undertaken under this contract on the environment human beings livestock wildlife or marine life and shall include emergency and acent response plans. 6 The contractor shall take reasonable measures to minimize any adverse material impact on national parks and nature reserves which may arise directly as a result of the upstream petroleum operations in accordance with best petroleum industry practice in similar physical and ecological environments. 7 If a contractors failure to comply with the requirements of this clause 16 results in pollution the contractor shall in accordance with best petroleum industry practice promptly take all necessary measures to control the pollution. If such pollution results directly from the gross negligence or willful misconduct of the contractor the cost of cleanup and repair activities shall be borne by the contractor and shall not be included as petroleum

costs under this contract. 8 The contractor shall notify the Authority within forty eight 48 hours in writing in the event of any emergency or major accident and shall take such action as may be prescribed by the Government's emergency procedures the contractor's emergency and accident response plans developed pursuant to subclause 165 and by best petroleum industry practices. 9 If the contractor does not act promptly so as to control clean up or repair any pollution or damage the Authority may after giving the contractor reasonable notice under the circumstances take any actions that are necessary in accordance with best petroleum industry 29 P a g e practices and the costs and expenses of such actions shall be borne by the contractor and shall not be cost recoverable. 10 The contractor is not responsible for any preexisting environmental conditions or any acts of unrelated third parties. 17. Plugging and Abandonment and Decommissioning Operations 1 Decommissioning Costs a The decommissioning plan is to form part of the development plan and shall include a schedule for the amortization of costs and recovery of costs which are estimated to be incurred when the development is decommissioned. b The contractor shall exercise its judgment in good faith to book sufficient accruals for future plugging and abandonment and decommissioning operations to cover the expenses which are expected to be incurred under the decommissioning plan. The contractor shall examine on an annual basis the estimated costs of plugging and abandonment and decommissioning operations and if appropriate revise them and submit them to the Authority for approval. c The contractor shall commence booking accruals for plugging and abandonment and decommissioning costs in the first calendar quarter in which the ratio of cumulative production to overall recoverable reserves reaches fifty 50 percent or ten years before the expiry of the production permit whichever is earlier. d All plugging and abandonment and decommissioning costs allocated to the decommissioning fund shall be recoverable as petroleum costs at the time that the accrual is entered in the books. 30 P a g e e The contractor shall book an accrual on a calendar quarter basis for the amount of future plugging and abandonment and decommissioning costs according to the following formula Where FTA is the amount to be accrued for future plugging and abandonment and decommissioning costs in respect of the relevant calendar

quarter. ECA is the total estimated cost of plugging and abandonment and decommissioning operations established pursuant to this clause 17. CPP is the volume of petroleum produced during the calendar quarter in which the plugging and abandonment and decommissioning accrual was booked. PRR is the contractors estimated remaining recoverable reserves at the end of the calendar quarter in which the plugging and abandonment and decommissioning accrual was booked; as such estimates may be revised by contractor from time to time. AFB is the accrued decommissioning fund at the end of the previous calendar quarter including accrued interest on the escrow account established under subclause 17.5.

2 Commencement of plugging and abandonment and decommissioning operations

a Plugging and abandonment and decommissioning shall be scheduled to occur after a producing field reaches its economic limit.

b On or before the start of the 720 calendar day period prior to the expected start date of plugging and abandonment and decommissioning the Authority shall notify the contractor which of the facilities and assets identified in the development plan shall not be plugged and abandoned and decommissioned but which shall revert to the ownership of the Government in accordance with clause 13 of this contract. No further funds to cover plugging and abandonment and decommissioning costs shall be reserved or accrued for 31 P a g e the facilities and assets so identified and a corresponding adjustment shall be made if necessary by the contractor.

c If the Cabinet Secretary in consultation with the authority elects not to use the facilities and assets identified in the development plan in subclause 17.2b of this contract the Authority shall have the right to require the contractor to remove them at the contractors expense in accordance with the decommissioning plan it being understood that the plugging and abandonment and decommissioning operations shall be carried out by the contractor in accordance with best petroleum industry practice this contract and in accordance with the time schedule and conditions defined in the decommissioning plan which shall have been approved.

3 Plugging and abandonment and decommissioning upon termination of development area

a If the contractor recommends plugging and abandonment and or decommissioning of facilities assets or wells belonging to it in connection with a termination of a development area pursuant to clause 44 of this contract the

Government may elect to take ownership of and continue using such facilities assets and wells by giving the contractor written notice of such decision within sixty 60 calendar days of the Governments receipt of the contractors notice of relinquishment. Upon so notifying the contractor which notification is effective as of the effective date of the contractors relinquishment the Government shall take ownership of and be responsible for plugging and abandonment and decommissioning of such facilities assets and wells. b If the Government does not elect to continue using such facilities assets or wells the contractor shall be responsible for their plugging and abandonment and decommissioning upon termination of this contract or of the development area within the corresponding development area. The contractor may in consultation with Government defer the plugging and abandonment and decommissioning operations for a reasonable length of time if this would result in operational efficiencies which minimize the cost for all parties. 32 P a g e 4

Facilities assets and wells which the Government continues to use With respect to any facilities assets or wells which the Government elects to own pursuant to this contract a The Government shall conduct such continued use and/or plug and abandon or decommission in accordance with best petroleum industry practice and in such a manner that does not interfere with continuing upstream petroleum operations; and b The Government may plug and abandon and decommission such facilities assets and wells as and when the Government dees. 5 Disbursements of funds for plugging and abandonment and decommissioning costs a The Contractor shall advise the Government on an annual basis its best estimate of the projected date of plugging and abandonment of individual wells and decommissioning of the producing field based on the then current estimate of when the economic limit will be reached according to the then current production forecast and realized petroleum prices. b As and when the contractor commences booking accruals pursuant to these provisions the Contractor and the Government shall cause the accrued costs of plugging and abandonment and decommissioning operations to be set aside in a separate USDollar interest bearing escrow account in the joint names of the contractor and the Government established at a mutually acceptable financial institution in Nairobi Kenya to be used solely for

paying the decommissioning costs. The account is to be funded on a quarterly basis by the contractor and the Government where the Government is participating in proportion to the contractors then current participating interest under this contract and out of its share of ongoing cost petroleum and profit petroleum attributable to the contractor and the Government entities or by cash payment if production is insufficient. A final reconciliation shall be submitted to all entities and the Government following completion of all plugging and abandonment and decommissioning operations and adjustments made in accordance with subclause 176 below.

6 Adjustments to accruals for plugging and abandonment and decommissioning costs

a If excess accruals which were booked in the decommissioning fund for plugging and abandonment and decommissioning costs remain following completion of all plugging and abandonment and decommissioning operations then such excess funds shall be distributed to the contractor and the Government where the Government has participating interest as if such funds represented profit petroleum in the calendar quarter in which plugging and abandonment and decommissioning is completed.

b Any plugging and abandonment and decommissioning cost accruals which have been booked in the decommissioning fund for purposes of removing facilities or assets that the Government deems should not be removed shall be paid by the contractor to the Government where the Government has participating interest concurrently with the transfer of ownership of such facility asset or well to the Government. The Government represents that the transferred funds shall only be used in respect of its plugging and abandonment and decommissioning operations.

c If the amounts accrued for plugging and abandonment and decommissioning costs are insufficient to complete the plugging and abandonment and decommissioning activities additional funds for such activities shall be provided from a portion of crude oil or natural gas which the contractor is entitled to receive under this contract from any development area or if no production is available by cash payment by the contractor and the Government where the Government has participating interest in the same ratio as would be applicable for distribution of excess amounts under subclause 176a.

18. Insurance

1 The contractor shall take up and maintain in respect of upstream petroleum operations

all insurance required by applicable Kenyan law and as the Government and the contractor may agree from time to time. Such insurance shall be of the type and in such amount as is required by applicable law and is customary in accordance with best petroleum industry practices and at least include insurance against the following risks a loss or damage to all installations and equipment which are owned or used by the contractor in the upstream petroleum operations; b pollution caused in the course of the upstream petroleum operations by the contractor for which the contractor may be held responsible; 34 P a g e c property loss or damage or bodily injury suffered by any third party in the course of the upstream petroleum operations by the contractor for which it may be liable to indemnify the Government; d the cost of removing damaged facilities and cleaning up operations following an accident in the course of the upstream petroleum operations by the contractor; and e the contractors liability for its employees engaged in the upstream petroleum operations. 2 The contractor shall give preference to Kenyan insurance companies. 3 In relation to development and production operations the contractor shall submit to the Government a programme for the provision of an All Risks insurance which may inter alia cover physical damage to the facilities under construction and installation as well as legal liabilities arising out of the development and production operations. 4 The contractor shall require its subcontractors to carry equivalent insurance of the type and in such amount as is required by applicable law and is customarily in accordance with best petroleum industry practice. 5 Any insurance policy relating to this contract shall name the Government as an additional insured party and shall include a waiver of subrogation protecting the Government against any claim loss and damage resulting from any petroleum operation conducted by or on behalf of the contractor under this contract to the extent that the contractor is liable for such claim loss or damage under this contract. The contractor shall not be liable for any claims arising from negligence or willful misconduct of the Government. 6 Upon its written request the Government shall be provided with insurance certificates including necessary details for any insurance policy maintained by the contractor which relates to this contract. 35 P a g e PART IV LOCAL . Adherence to Laws and Regulations 1 The contractor shall comply with all the Kenyan local policies laws and

regulations as amended from time to time.

20. Employment and Training of Kenyans

1 In accordance with the provisions of the Act and regulations the contractor and its subcontractors shall employ Kenyans in the upstream petroleum operations and shall until the expiry or termination of this contract conduct training courses and programmes that will progressively increase employment of Kenyans.

2 The training courses and programmes in subclause 201 above shall be established and conducted in consultation with the Cabinet Secretary.

3 The contractor shall ensure that Kenyan nationals are selected and trained consistent with contractors performance standards in relation to activities referred at subclause 233.

21. Training Fund

1 In addition to the obligation under subclause 201 and commencing on the effective date the contractor shall for the purposes of section 88 of the Act contribute to the Government a minimum of U.S. dollars .. per year for the Government training fund established under section 882 of the Act.

2 The contractors obligation under subclause 211 shall be increased to a minimum of U.S dollars per year commencing with the adoption of the first development plan under subclause 293.

3 The Training Fund shall be managed by the Cabinet Secretary in accordance with the Energy and Petroleum Policy the Act and regulations.

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22. Preference for Kenyan Goods and Services

1 The contractor and its subcontractors shall maximize to the satisfaction of the Authority the usage of Kenyan goods and services businesses and financing.

2 The contractor and its subcontractors shall give preference to Kenyan materials and supplies for use in upstream petroleum operations in accordance with the provisions of the Act and regulations.

3 The contractor and its subcontractors shall give preference to Kenyan contractors for services connected with upstream petroleum operations in accordance with the provisions of the Act and regulations.

4 The contractor and its subcontractors shall procure supplies and services from locations in Kenya where practicable in accordance with the provisions of the Act and regulations.

5 The contractor shall a on or before the beginning of each calendar year to which it applies submit to the Cabinet Secretary and Authority a tentative schedule of the contemplated services and supply contracts with an estimated value exceeding the equivalent of U.S. dollars per contract to be let during the forthcoming calendar year showing the

anticipated tender date and approximate value and the goods and services to be provided; b for contracts with an estimated value exceeding the equivalent of U.S. dollar . per contract undertake to select its contractors and subcontractors from adequately qualified indigenous Kenyan companies by means of competitive bidding or by another appropriate method in accordance with best petroleum industry practice; c as soon as practicable after their execution provide to the Cabinet Secretary and the Authority a copy of each contract requiring a payment in US dollars or equivalent and a brief description of the efforts made to find a Kenyan supplier or service contractor; d the minimum amount specified under this subclause 225 may be changed from time to time by the regulations made under the Act.

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The contractor shall give equal treatment to local enterprises by ensuring access to all tender invitations and by including high weighting on local value added in the tender evaluation criteria.

23. Technology Transfer

1 The contractor and its subcontractors shall develop a Technology Transfer Programme in accordance with the Energy and Petroleum Policy the Act and regulations to promote the transfer of technology and skills on upstream petroleum operations to indigenous Kenyan employees and government officials.

2 The Technology Transfer Programme shall be aimed at building and developing in Kenya specialized technical management and professional skills relevant to upstream petroleum operations and any necessary facilities requisite for advancement of technical skills in upstream petroleum operations.

3 The contractor shall transfer to Kenyans technology and business expertise in all areas of upstream petroleum operations including but not limited to i Fabrication; ii Information Technology support including seismic data acquisition processing and interpretation support; iii Operations and maintenance support; iv Maritime services; v Business support services including insurance accounting human resource services consulting marketing legal and contract negotiations; vi Financing; vii Trading;

4 In addition to the requirements in subclause 233 above the contractor shall develop indigenous Kenyans to take more value added analytical and decision making roles in areas such as i a technical or professional nature including general management design engineering project management seismic data processing human resource development legal economics

auditing and accounting; and 38 P a g e ii business strategic skills including leadership business development executive management commercial analytical negotiating strategy development and trading know how and acumen. 24. Record Keeping and Reports 1 In accordance with its obligations under the Energy and Petroleum Policy the Act and regulations the contractor shall maintain records to facilitate the determination of the local of expenditure incurred in respect of upstream petroleum operations. 2 These records shall include supporting documentation certifying the cost of local materials labour and services used and shall be subject to audit by the Authority. 3 Pursuant to subclause 241 the contractor shall prepare and submit reports to the Authority in accordance with the specified timeframe in the regulations. PART V RIGHTS AND OBLIGATIONS OF THE GOVERNMENT 25. Rights of the Government 1 The Government may acquire a part of the contract area for a public purpose other than searching for or extracting petroleum but not to the extent that will prevent the carrying out of upstream petroleum operations within the contract area and the Government shall not without good cause acquire a part of the contract area on which upstream petroleum operations are in progress. 2 The contractor shall not carry out upstream petroleum operations on such an acquired part but may a enter upon that part but not materially interfere with the public purpose; and b carry out directional drilling from an adjacent part. 3 The Cabinet Secretary and the Authority or a person authorized by the Cabinet Secretary or the Authority in writing may at all reasonable times inspect any upstream petroleum operations and any records of the contractor relating thereto and the contractor shall provide where available facilities similar to those applicable to its own or to subcontractors staff for 39 P a g e transport to the upstream petroleum operations subsistence and accommodation and pay all reasonable expenses directly connected with the inspection. 4 The Cabinet Secretary may require the contractor to perform an obligation under this contract by giving reasonable written notice and if the contractor fails to comply with the notice the Cabinet Secretary may execute the obligation for which the contractor shall pay forthwith amounts expended by the Cabinet Secretary in the execution of the obligations. The Cabinet Secretary may give written notice to perform an obligation at any time but

not later than ninety 90 days after the termination or expiry of this contract or the surrender of a part of the contract area.

26. Obligations of the Government

1 The Government may at the request of the contractor make available to the contractor such land as the contractor may reasonably require for the conduct of upstream petroleum operations in accordance with Chapter Five⁵ of the Constitution and the relevant land laws and where the land is private land the Government may subject to section 118 of the Act acquire the land in accordance with the applicable laws.

2 The contractor shall pay or reimburse the Government any reasonable compensation that may be required for the setting apart use or acquisition of any land for the upstream petroleum operations.

3 Where the contractor has occupied Community Land for the purpose of the upstream petroleum operations before that land has been set apart the contractor shall notify the Cabinet Secretary in writing of the need to set apart such land as provided for under Chapter Five of the Constitution and any other applicable land laws.

4 The Government shall grant or cause to be granted to the contractor its contractors and subcontractors such wayleaves easements temporary occupation or other permissions within and without the contract area as are necessary to conduct the upstream petroleum operations and in particular for the purpose of laying operating and maintaining pipelines and cables and passage between the contract area and the point of delivery of petroleum.

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5 The Government shall at all times give the contractor the right of ingress to and egress from the contract area and the facilities wherever located for the conduct of upstream petroleum operations.

6 Subject to the national security requirements and the Kenyan Immigration Laws and Regulations the Government shall not unreasonably refuse to issue and/or renew entry and work permits for technicians and managers employed in the upstream petroleum operations by the contractor or its subcontractors and their dependants.

PART VI WORK PROGRAMME DEVELOPMENT AND PRODUCTION

27. Exploration Work Programme and Detailed Budget

1 The contractor shall submit in writing and make a presentation to the Cabinet Secretary thirty 30 days after the effective date a detailed report of the exploration work programme and detailed budget for the first contract year.

2 The contractor shall submit in writing and make a presentation to the Cabinet Secretary ninety 90

days before the end of each contract year a detailed report of the exploration work programme and a detailed budget for the next contract year. 3 The Cabinet Secretary may submit to the contractor within thirty 30 days of the receipt of the annual exploration work programme and budget suggested modifications and revisions thereof. The contractor shall consider the inclusion of such suggested modifications and revisions in light of best petroleum industry practice and shall provide the Cabinet Secretary with the exploration work programme and budget which the contractor has adopted. 4 After adoption of the annual exploration work programme and budget the contractor may make changes to that annual exploration work programme and budget if those changes do not materially affect the original objectives of that exploration work programme and budget and shall state the reasons for those changes to the Cabinet Secretary. 5 The agreed final work programme and budget shall be approved by the Cabinet Secretary in writing. 41 P a g e 28.

Discovery and Appraisal Work Programme 1 The contractor shall in accordance with section 641 of the Act notify the Cabinet Secretary of a discovery of petroleum and shall forthwith submit an initial discovery report with all relevant information to the Cabinet secretary not later than thirty 30 days after completion and testing of such exploration well. 2 If the contractor considers that the discovery merits appraisal it shall submit and orally present to the Cabinet Secretary within ninety 90 days following the date of submission of the discovery report a detailed statement of the appraisal work programme and budget which shall provide for the expeditious appraisal of the discovery and the provisions of subclauses 273 and 274 shall apply to the appraisal work programme and budget. 3 The Cabinet Secretary shall review the submitted appraisal programme and within ninety 90 days of submission the Cabinet Secretary may request for amendment of the appraisal programme. 4 After the appraisal work programme and budget have been adopted by the Cabinet Secretary the contractor shall within ninety 90 days evaluate the discovery and where appraisal warrants more time then the Cabinet secretary may upon request by the contractor extend such time for a period reasonably required to expeditiously complete appraisal work. 5 In the event of a discovery in the last year of the second additional exploration period the Cabinet Secretary shall at the request of the

contractor extend the term of the second additional exploration period in respect to the prospective area of the discovery and for the period of time reasonably required to expeditiously complete the adopted appraisal work programme and budget with respect to such discovery and to determine whether or not the discovery is commercial but in any event such extension to the second additional exploration period shall not exceed.. months. 6 The contractor shall not more than ninety 90 days after the appraisal is completed report to the Cabinet Secretary the commercial prospects of the discovery including all relevant technical and economic data. Including but not limited to location areal extent lateral extent thickness estimate of inplace and recoverable petroleum and their determination of whether 42 P a g e the discovery is commercial or whether further appraisal is required by submitting for approval to the cabinet secretary a supplementary appraisal report. 7 If the appraisal report relating to a particular discovery states that the contractor is of the opinion that the discovery is noncommercial the contractor and the Cabinet Secretaryshallmeet to discuss in good faith ways in which it might be possible to proceed with the development of such discovery on a commercial basis with the possibility of amending the terms of this contract but for avoidance of doubt the Cabinet Secretaryshall be under no obligation whatsoever to agree to any such amendments proposed by the contractor or vice versa. 8 If the contractor reports under subclause 286 that the discovery is a commercial discovery a development plan shall be submitted to the Cabinet Secretary for approval within one hundred and eighty 180 days of the completion of the appraisal work programme unless otherwise agreed and upon written application of the contractor the term of this contract shall be extended by the Cabinet Secretary ifnecessary in respect of the area of that commercial discovery provisionally established in accordance with the adoption of a development plan. 29. The Development Plan and Annual Work Programme and Budget 1 The field development plan shall be submitted by the contractor to the Authority for review which shall advice Cabinet Secretary for approval.This fielddevelopment plan shall bebased on sound engineering and economic principles and in accordance with best petroleum industry practice and considering the Maximum Efficient Rate of production appropriate to the commercial discovery. 2 The Development

Plan submitted by the contractor to the Cabinet Secretary shall contain details of the proposed development area relating to the commercial discovery which shall correspond as closely as possible to the extension of the discovered accumulation in the contract area as determined by the analysis of all the relevant available information. 3 Except with the consent of the Cabinet Secretary and without prejudice to the generality of subclause 291 the development plan shall include a

A description of the proposed commercial discovery in the development area that is identified for the development and management programme;

43 P a g e b Details of the following upstream petroleum operations

- i geologic seismic and geophysical exploration analysis and appraisal including production simulation profiles;
- ii proposed well locations and production treatment storage and transportation facilities to be located in the development area;
- iii spacing well construction drilling process casing and cement programs well logs completion methods and production operations of the wells required for production of petroleum in the development area;
- iv facilities for transporting petroleum from the Development Area to the Crude Oil Delivery Point and the Natural Gas Delivery Point;
- v identification of any alternative markets and sales of all petroleum resources especially natural gas;

c The initial production profiles for all petroleum reserves in the commercial discovery including the production life the commencement of production and the anticipated daily rates of petroleum production;

d The decommissioning plan in such detail as the Authority requires including in accordance with clause 17 a calculation of the quarterly accrual charges to be paid by the contractor to the decommissioning fund for individual well plugging and abandonment operations and overall field decommissioning costs;

e A detailed environmental impact assessment for the commercial discovery which identifies current and possible environmental issues and concerns and a plan for ensuring environmental compliance during the life of the field;

f A contractors proposal for ensuring the safety health security and welfare of persons and facilities in or about the proposed upstream petroleum operations;

g The contractors proposals for stimulating local including i maximizing the procurement and use of Kenyan goods and services inupstream petroleum operations to local communities;

44 P a g e ii identifying specific skills training programs and

technical courses that shall directly translate to the employment of citizens of Kenya and shall ensure occupational health and safety requirements fairness in gender practices and career advancement opportunities; iii coordination with stakeholders and local communities in open and timely posting of job descriptions and minimum skills requirements for employment to fully address local issues and concerns; h The contractors complete finance program for the Annual Development Work Programme and Budget; i Details and copies of all contracts agreements and arrangements for the sale of petroleum at the identified delivery point; j Such other data and information as the law requires and as the Cabinet Secretary otherwise requires and is relevant to the development plan. 4 The Authority and the contractor shall jointly consider the development plan within ninety 90 days of submission thereof and the Authority may within that period unless otherwise agreed submit suggested modifications justifications and revisions thereof. The contractor shall consider the inclusion of such suggested modifications and revisions in the light of best petroleum industry practice and the development plan shall be adopted by mutual agreement. 5 Where the Authority proposes no modifications and revisions the development plan of the contractor shall be adopted ninety 90 days after its submission unless it is adopted by mutual agreement of the parties before that period has elapsed. The ninety 90 days period for analysing the proposed development plan shall be extended for an additional period of up to ninety 90 days if the Authority so notifies the contractor. 6 After a development plan has been adopted the contractor shall proceed promptly and without undue delays to implement the development plan in accordance with best petroleum industry practice. The Annual Development Work Programme and Budget shall commence within one hundred and eighty 180 days from the date of adoption of the development plan. 7 In connection therewith the contractor shall submit and make a detailed presentation to the Cabinet Secretary and Authority prior to the first day of October of each year following the 45 P a g e adoption of the development plan a detailed report of the Annual Development Work Programme and Budget for the next calendar year and the provisions of subclauses 273 and 274 shall apply mutatis mutandis to any proposed revision to the development plan and to the Annual Development

Work Programme and Budget. 8 Where the development operations extend into the area to which the commercial discovery relates provided that the extension lies wholly within the contract area at that date subject to the advice by the Authority the Cabinet Secretary shall adjust the relevant development area to include that extension as determined by the analysis of all the relevant available data and information. 30. Unitization Where a petroleum deposit in a contract area extends beyond the said contract area the same shall be developed pursuant to a unitization agreement in accordance with section 72 of the Act. 31. Marginal and Noncommercial Discoveries 1 Where the contractor determines that a discovery is marginal or noncommercial the contractor may propose a modification to this contract based on an alternative economic evaluation and after consideration the Cabinet Secretary may accept or reject the proposed modification. 2 Unless otherwise agreed if the contractor fails to commence the evaluation of a commercial discovery within two 2 years following the notice of a commercial discovery or if within two 2 years following the completion of an evaluation work programme the contractor considers the commercial discovery does not merit development the Cabinet Secretary may request the contractor to surrender the area corresponding to such commercial discovery and the contractor shall forfeit any rights relating to any production therefrom. The area subject to such surrender shall not exceed the extension of the discovered accumulation as determined by the structural closure of the prospective horizon and all other relevant available information. Any such surrender by the contractor shall be credited in accordance with subclause 42 hereof. 46 P a g e 32. Natural Gas 1 The contractor shall have the right to use natural gas extracted from reservoirs within the contract area for the upstream petroleum operations in the contract area included but not limited to power generation pressure maintenance and recycling and reinjection operations. 2 The terms and conditions relating to the use and production of associated natural gas shall be as follows a In the event the contractor elects to process and sell associated natural gas the contractor shall notify the Government and for the purposes of cost recovery and entitlement of production such associated natural gas shall be treated by the parties in the same manner as other natural gas. b In the event the contractor elects

not to process and sell associated natural gas and where that natural gas is not used for the purposes specified in subclause 321 the Government may at the field separator process and utilize that natural gas without compensation but the Government shall pay for all costs and expenses related thereto which shall include but not be limited to any engineering studies new facilities and equipment required for the gathering transport processing and utilization thereof and the operations and maintenance of the same shall be at the sole risk cost and expense of the Government; provided that such offtake does not significantly disrupt or delay the conduct of the upstream petroleum operations. c The contractor may return associated natural gas not used for the purposes specified in subclause 321 taken by the Government pursuant to subclause 322b or sold by the contractor pursuant to subclause 322a to the subsurface structure and the costs of such reinjection shall be recoverable to the extent that such reinjection is included in the development plan. 3 The terms and conditions relating to the evaluation work programme and the commercial assessment of the production and sale of nonassociated natural gas shall be as follows a On completion of an evaluation work programme relating to a discovery of nonassociated natural gas made by the contractor the commercial assessment period in respect of such discovery shall if requested by the contractor commence for a period of years 47 P a g e exercisable at the sole option of the contractor. An extension may be granted upon application by the contractor to the Government for a second period of up to years. An appraisal report submitted under this clause 32 shall include the estimated recoverable reserves projected delivery rate and pressure quality specifications and other technical and economic factors relevant to the determination for available market for such nonassociated natural gas. The contractor shall at any time during the commercial assessment period inform the Government by notice that the petroleum reservoir located in any discovery of nonassociated natural gas made by the contractor in respect of which an appraisal report has been submitted is commercial. b If the contractor does not request for a commercial assessment period pursuant to clause 323a above within ninety 90 days from the date on which the appraisal report was submitted the contractor shall inform the Government by notice whether any discovery of

nonassociated natural gas made by the contractor in respect of which an appraisal report has been submitted is commercial. c Where the contractor pursuant to this clause 32 gives notice that any discovery of nonassociated natural gas made by the contractor is commercial that notice shall for the purpose of this contract be a notice of commercial discovery and processing and utilization shall follow a development plan approved in accordance with clause 29. 4 The commercial assessment period shall end on the first to occur of a the date following that on which the contractor gives a notice of commercial discovery under subclause 323; or b the date that the contractor voluntarily surrenders that portion of the contract area to which the commercial assessment period relates; or c expiry of the period to which contractor is entitled to under subclause 323. 5 The contractor shall be deemed to have relinquished all rights to the discovery of nonassociated natural gas if it has not given a notice of commercial discovery under subclause 323 by the end of the commercial assessment period or the earlier relinquishment of that portion of the contract area. 6 Where the discovery is a natural gas discovery the contractor shall 48 P a g e a prepare a report Market Evaluation Report identifying potential market for natural gas expected volumes for such market infrastructure potentially required to access such market expectations of price for the natural gas supplied to such market and identify options including time frames for marketing the natural gas within three 3 years after the discovery evaluation is completed. b be responsible for investigating market opportunities and shall seek to develop a market for nonassociated natural gas produced from any development area and shall sell such nonassociated natural gas on a joint dedicated basis on terms common to all the parties constituting the contractor. Every contract for the sale of such nonassociated natural gas made by the contractor under this clause 32 shall be subject to approval by the Cabinet Secretary. In applying for such approval the contractor shall demonstrate to the Cabinet Secretary that the prices and other terms of sale of such nonassociated natural gas represents the market value obtainable for such nonassociated natural gas taking into consideration a fair market cost for transporting such nonassociated natural gas from the delivery point to the purchaser and having regard to the alternative uses and markets that can be developed for such

nonassociated natural gas. 7 With its application for approval of any gas sales contract pursuant to subclause 325 the contractor may apply in respect of any development area from which nonassociated natural gas will be produced for sale under that gas sales contract for an extension of the development period specified in subclause 36 and where such extension is necessary to facilitate the sale of gas under any such gas sales contract the Cabinet Secretary shall grant such necessary extension. 8 Flaring of natural gas a Flaring of natural gas in the course of the activities provided for under this contract is prohibited except i shortterm flaring necessary for production testing ii when required for emergency or safety reasons or iii with the prior authorization of the Authority in each case in accordance with the Act regulations and best petroleum industry practices.

49 P a g e b The contractor shall submit such request to the Authority which shall include an evaluation of reasonable alternatives to flaring that have been considered along with information on the amount and quality of natural gas involved and the duration of the requested flaring. 33.

Production Levels and Annual Production Programme 1 The contractor shall produce petroleum at the maximum efficient rate and follow conservation of petroleum resources principles in accordance with best petroleum industry practice. 2 Prior to the first day of October of each year following the commencement of commercial production the contractor shall submit and orally present to the Cabinet Secretary and the Authority a detailed statement of the annual production programme and budget for the next calendar year and the provisions of subclause 273 and 4 shall apply to the Annual Production Programme and Budget. 3 The contractor shall endeavor to produce in each calendar year the forecast quantity estimated in the annual production programme. 4 The crude oil shall be run to storage constructed maintained and operated by the contractor and petroleum shall be metered or otherwise measured as required to meet the purpose of this contract in accordance with clause 34. 34. Measurement of Petroleum 1 The contractor shall prior to installation submit to the Authority for approval the processes procedures systems and technologies for determining the volume and quality of petroleum produced. 2 The instruments used for measuring petroleum produced shall be calibrated in accordance with the Weights and Measures Act. 3 The volume and

quality of petroleum produced and saved from the contract area shall be measured by methods and equipment customarily used in best petroleum industry practice and approved by the Authority. 50 P a g e 4 The Authority shall approve and inspect the methods and equipment used for measuring the volume and determining the quality of petroleum and shall appoint an inspector to supervise the measurement of volume and determination of quality of petroleum. 5 Where the method of measurement has caused an overstatement or understatement of a share of the production the error shall be presumed to have existed since the date of the last calibration of the measurement devices unless the contrary is shown and an appropriate adjustment shall be made for the period of error. 6 The Cabinet Secretary and the contractor shall determine when approving the development plan related to a commercial field the measurement point at which production shall be measured and the respective shares of petroleum allocated.

35. Valuation of Crude Oil and Natural Gas

1 The value of crude oil for all purposes under this contract shall be denominated in USDollars and shall be calculated each calendar year on a quarterly basis adjusted at the Crude Oil Delivery Point as follows a where there have been sales of crude oil produced from the contract area to third parties at arms length during that calendar quarter the value shall be the weighted average per unit price actually paid in those sales at the F.O.B. point of export or at the point that title and risk pass to the buyer adjusted for grade gravity and quality of such crude oil as well as for transportation costs and other appropriate adjustments for grade gravity and quality of such crude oil transaction where the seller and the buyer are independent of one another and do not have directly or indirectly any common interest; or b where there have been no sales of crude oil produced from the contract area to third parties at arms length during that calendar quarter the value shall be the fair market value determined as the average per unit prevailing market price actually paid during that calendar quarter in arms length sales for export under term contracts of at least ninety 90 days between unrelated purchasers and sellers for crude oil produced in Kenya and in the major crude oil producing countries and adjusted for grade gravity and quality of such crude oil as well as for transportation costs and any other appropriate adjustments. If necessary a value of crude oil shall be determined

separately for each crude oil or crude 51 P a g e oil mix and for each point of delivery. The value of crude oil shall be mutually agreed at the end of each calendar quarter and applied to all transactions that took place during the quarter. 2 Where the Cabinet Secretary and the contractor cannot reach an agreement on the value of crude oil within thirty 30 days of the end of any calendar quarter such determination shall be made by an internationally recognized expert appointed by the Cabinet Secretary in consultation with the Authority and the contractor but if they fail to agree within thirty 30 days on the appointment of such expert then by the Secretary General of the International Chamber of Commerce. The expert shall report his determination within twenty 20 days of his appointment and his determination shall be final and binding upon the Government and the contractor. 3 Pending the determination of the value of crude oil for a calendar quarter the value of crude oil determined for the preceding calendar quarter shall be provisionally applied to make calculation and payment during such calendar quarter until the applicable value for that calendar quarter is finally determined pursuant to subclause 351. Any adjustment to provisional calculation and payment if necessary shall be made within thirty 30 days after such applicable value is finally determined. 4 Natural gas shall be valued based on the actual proceeds received for sales provided that for sales of natural gas between the contractor and any affiliate the value of such natural gas shall not be less than the then prevailing fair market value for such sales of natural gas taking into consideration to the extent possible such factors as the market the quality and quantity of natural gas and other relevant factors reflected in natural gas pricing. The Cabinet Secretary shall have the right to review and approve natural gas sales contracts. 5 The Contractor shall deliver to the Cabinet Secretary and Authority monthly statements showing calculations of the value of petroleum produced and sold from the contract area which statement shall include but not limited to the following information a quantities of crude oil sold by the contractor during the preceding month constituting arms length sales together with corresponding sale prices; 52 P a g e b quantities of crude oil sold by the contractor during the preceding month to the contractor's related parties together with the corresponding sale prices; c inventory in storage belonging to the contractor at the beginning and at the end of the month; and d

quantities of natural gas sold by the contractor and the Government together with sale prices realized.

PART VII COST RECOVERY PRODUCTION SHARING TAXATION GOVERNMENT PARTICIPATION AND DOMESTIC SUPPLY OBLIGATIONS

36. Cost Recovery and Uplift

1 Subject to the provisions of this contract the contractor shall be entitled to recover the petroleum costs incurred and paid by the contractor pursuant to the provisions of this contract and duly entered in the contractor's books of accounts supplemented by the Uplift referred to in subclause 36.3 by taking and separately disposing of an amount equal in value to a maximum of sixty percent (60%) of each category of all petroleum produced from the contract area during that fiscal year and not used in upstream petroleum operations. Such cost recovery petroleum including the recovered Uplift is hereinafter referred to as Cost Petroleum consisting of two (2) categories: Cost Oil and Cost Gas.

2 The petroleum costs may be recovered in the following manner:

a The petroleum costs with the exception of development costs incurred in respect of the contract area shall be recoverable either in the fiscal year in which these costs are incurred or the fiscal year in which commercial production occurs whichever is the later; and

b Development costs incurred in respect of each development area shall be recoverable in five (5) fiscal years at an annual rate of twenty percent (20%) by straightline amortization at that rate starting either in the fiscal year in which such development costs are incurred or the fiscal year in which commercial production from that development area commences whichever is the later.

3 Paragraph c For the purpose of this clause development costs shall have the meaning referred to in the Accounting Procedure Appendix B.

d The development costs and production costs incurred in respect of a development area shall not be recoverable until commercial production from that development area commences.

e To the extent that in a fiscal year the petroleum costs and Uplift that are recoverable according to subclauses 36.2a, 36.2b and 36.3 exceed the value of all Cost Oil or Cost Gas for such fiscal year under subclause 36.1 the excess shall be carried forward for recovery by the contractor in the next succeeding fiscal year or fiscal years until fully recovered but in no case after the termination of this contract.

f To the extent that in a Fiscal Year the petroleum costs and the Uplift that are recoverable according to subclauses 36.2a, 36.2b and

363 are less than the maximum value of the Cost Petroleum as specified in subclause 361 the excess shall become part of and be included in the profit petroleum as provided for in subclause 37 hereafter. g For the purpose of valuation of Cost Oil and Cost Gas the relevant provisions of clause 35 hereof shall apply. h The cost recovery of petroleum and Uplift shall be recovered in the following priority order 1. Production Costs 2. Exploration Costs 3. Development Costs 4. Uplift 5. Decommissioning Costs i For the application of this contract the contractor shall keep detailed accounts of Cost Petroleum classified into Exploration Costs Development Costs Production Costs and Decommissioning Costs in accordance with the Accounting Procedure. j The petroleum costs under this contract are not recoverable against other contract areas held by the contractor in Kenya. k In the event that the contractor produces crude oil and natural gas from the contract area the petroleum costs incurred by the contractor shall be classified in the accounts as Cost Oil and 54 P a g e Cost Gas when required in accordance with the principles provided for in the Accounting Procedure. 3 An amount equal to fifteen percent 15 of the development costs related to a development area incurred and paid during a given fiscal year shall be referred to as Uplift for that development area and fiscal year. Such Uplift regarding the development costs of one fiscal year shall be recoverable under subclauses 361 and 362 in five 5 equal installments starting in the fiscal year in which the related development costs are incurred or the fiscal year in which commercial production for that development area commences whichever is the later. The Uplift shall be applicable only to the development costs incurred in the first five 5 fiscal years of an approved development plan starting the fiscal year of its date of approval. 37. Profit Petroleum Sharing and RFactor 1 Each category of the total petroleum produced and saved from the contract area and not used in upstream petroleum operations or commercial production less the Cost Petroleum as specified in subclauses 361 and 362 shall be referred to as the profit petroleum and each category of profit petroleum shall be shared taken and disposed of separately by the Government and the contractor on a quarterly basis according to the value of the RFactor in respect of the contract area as determined at the end of the preceding Calendar Quarter; or Petroleum Profit Commercial

Production Cost Petroleum i. The RFactor at a given date shall be calculated as follows whereby X is equal to the Contractors Cumulative Cash Inflows at the end of the preceding Calendar Quarter and Y is equal to the Contractors Cumulative Cash Outflows at the end of the preceding Calendar Quarter 55 P a g e or For purposes of the Rfactor determination in subclause 3711 Cumulative Cash Inflows at the end of the preceding Calendar Quarter are equal to Cumulative Contractor Cost Petroleum or Cost Petroleum from the Effective Date to the end of the preceding Calendar Quarter; plus Cumulative Contractor Profit Petroleum or Profit Petroleum from the Effective Date to the end of the preceding Calendar Quarter; minus Cumulative Production Costs or Production Costs from the Effective Date to the end of the preceding Calendar Quarter; minus Cumulative Decommissioning Costs or Decommissioning Costs from the Effective Date to the end of the preceding Calendar Quarter. or s Cumulative Cash Outflows at the end of the preceding Calendar Quarter are equal to Cumulative Exploration Costs or Exploration Costs from the Effective Date to the end of the preceding Calendar Quarter; plus Cumulative Development Costs or Development Costs from the Effective Date to the end of the preceding Calendar Quarter or 56 P a g e Cumulative Cash Outflows Exploration Costs Development Costs [Note the following calculation]; Development Costs 20 per year x 5 years [in subclause 362b] ii. The share of each category of Profit Petroleum to which each Party shall be entitled during a Calendar Quarter in relation to the value of the RFactor determined at the end of the preceding Calendar Quarter shall be equal to the quantities of crude oil and natural gas resulting from the application of the relevant percentage indicated below

Governments share	Contractors share	Rfactor
Less than 1.0	Equal to	or greater than 1.0 and less than 2.5
50	65	Equal to or greater than 2.5 [75]
50	35	[25]

iii. For each Quarter starting from the Quarter commercial production starts the contractor shall calculate the RFactor applicable to the relevant Quarter within thirty 30 days of the beginning of such Quarter and submit the determination to the Cabinet Secretary; iv. In the event that the contractor is unable to calculate the RFactor for the relevant Quarter before an allocation of Profit Oil or Profit Gas for such Quarter must be made then the percentage for allocation of Profit Oil and/or Profit Gas as the case may be for the previous

Quarter shall be used for the relevant Quarter; v. If the allocation of Profit Oil or Profit Gas as the case may be in the previous Quarter and the relevant Quarter is the same then no adjustment shall be made; vi. If the allocation of the Profit Oil or Profit Gas as the case may be in the two Quarters is different then the contractor shall make any adjustments to the Parties respective shares of Profit Oil or Profit Gas as the case may be to restore them to the position that they would have been in had the RFactor for the relevant Quarter been available from the start of such Quarter; and vii. If at any time an error occurs in the calculation of the RFactor resulting in a change in the percentage share of Profit Oil and/or Profit Gas the necessary correction shall be made and any adjustments shall apply from the Quarter in which the error occurred. The party having benefited from a surplus of Profit Petroleum shall surrender such surplus to the other Party beginning from the first day of the Quarter following the Quarter in which the error was recognized.

38. Production Sharing

1 Crude oil and natural gas production shall be respectively disaggregated into Cost Oil and Profit Oil and Cost Gas and Profit Gas using the relevant percentage calculated quarterly for Cost Petroleum in accordance with subclause 361 and for Profit Petroleum in accordance with subclause 364.

2 Cost Petroleum and Profit Petroleum calculations respectively disaggregated into Cost Oil Cost Gas Profit Oil and Profit Gas shall be done quarterly on an accumulative basis during a given fiscal year. To the extent that actual quantities costs and expenses are not known provisional estimates of such data based on the adopted annual production Work Programme and Budget under clause 33 shall be used.

3 Within sixty 60 days of the end of each Fiscal Year a final calculation of each category of Cost Petroleum and Profit Petroleum based on actual crude oil production and natural gas production in respect of that Fiscal Year and recoverable petroleum costs and Uplift shall be prepared and any necessary adjustments shall be promptly made.

4 If so directed by the Cabinet Secretary the contractor shall be obligated to lift and market part or the entire Government share of each category of Profit Petroleum and any Government or Appointee Participating Interest share of petroleum in a development area.

5 If any party fails to lift and market their share of petroleum the contractor may lift and market such party's share on its behalf.

6 When

the Cabinet Secretary elects not to take and receive in kind any part of a category of the Government share of Profit Oil the Cabinet Secretary shall notify the contractor three 3 months before the commencement of each semester of a calendar year specifying the quantity of production and such notice shall be effective for the ensuing semester. Any sale by the contractor of the Government share of Profit Oil shall not be for a term of more than one 1 year without 58 P a g e the Cabinet Secretarys consent. The contractor shall have the right and obligation to market the Governments share at the then prevailing fair market price. 7 The price paid by the contractor for the Government share of Profit Oil shall be the price established according to clause 35. The contractor shall pay the Government on a monthly basis such payments to be made within thirty 30 days after the end of the month in which the production occurred. 8 In the event of commercial production of natural gas the parties shall agree when the development plan related to such commercialization is adopted on the rules applicable to the disposal of the Government share of Profit Gas. 9 At a reasonable time prior to the scheduled date of commencement of commercial production the parties shall agree to procedures covering the scheduling storage and lifting of petroleum produced from and sold at the agreed upon Crude Oil Delivery Point and Natural Gas Delivery Point. 39. Taxation 1 The Contractor shall be subject to and shall comply with the requirements of the tax laws in force in Kenya. 2 In the event of any assignment or transfer of a participating interest under clause 47 the contractor or the entity within the contractor assigning or transferring an interest under this contract shall comply with the requirements of the income tax laws in force in Kenya imposing taxes on capital gains. 3 It is understood and agreed that the portion of each category of the Profit Petroleum which the Government is entitled to take and receive for a given fiscal year and which is calculated under clause 37 shall be exclusive of all taxes payable by the contractor. 4 The contractor agrees to pay and discharge as and when due such taxes due on its profit oil. The contractor shall prepare and file tax returns as provided for in the tax laws. The receipts shall be issued by the duly constituted authority for the collection of Kenya taxes. 5 In accordance with the laws of Kenya where the contractor consists of more than one entity the tax liabilities of each entity under this clause 39

shall be individual notwithstanding clause 59 Page 10 and the provisions of this clause 39 shall apply mutatis mutandis to each such entity including for filing an individual tax return or complying with any tax liabilities in respect of an assignment of an interest in the contract by a person.

40. Title and Risk to Petroleum

1 The title in the contractors share of petroleum shall pass to the contractor and risk therein shall remain with the contractor when it is delivered at the Crude Oil Delivery Point and the Natural Gas Delivery Point. Title in the Governments share of petroleum taken by the contractor pursuant to subclauses 386 5 6 and 7 shall pass to the contractor when it is delivered at the Crude Oil Delivery Point and the Natural Gas Delivery Point.

2 Notwithstanding subclause 401 petroleum shall be at the risk of the contractor until it is delivered at the Crude Oil Delivery Point and the Natural Gas Delivery Point. The contractor shall defend indemnify and hold harmless the Government from all claims asserted in respect of petroleum wherein the risk is with the contractor.

41. Government Participation

1 The Government may elect to participate in the upstream petroleum operations in any development area and acquire an interest of up to per cent . hereinafter referred to as Participating Interest of the total interest in that development area. The Government may participate either directly or through a National Oil Company.

2 The Government shall exercise the right to participate by giving notice to the contractor within one hundred and eighty 180 days from the date the development plan for a development area is adopted under subclause 294. Such notice shall specify the Participating Interest that the Government has elected in that development area. If the Government exercises its option to participate the contractor or each entity constituting the contractor prorata shall transfer to the Government that percentage interest specified by the Government. The Governments participation shall be effective from the date the development plan hereof is adopted.

3 If the Government exercises its right to participate in a development area the Government and the contractor shall execute the Participation Agreement in a format as prescribed in 60 Page Appendix C and made a part hereof within ninety 90 days after notice to the contractor under subclause 412.

4 The Government shall in exercise of its right to participate in a development area have the right to a vote in proportion to its participating interest with respect to all decisions

taken under the Participation Agreement; b own and separately take and dispose of its share in the petroleum produced and saved to which the contractor is entitled under this contract corresponding to its participating interest in that development area. The contractor shall not be obligated to market the Governments share of petroleum corresponding to the Governments participating interest in that development area; c assume its share of costs expenses and obligations incurred in respect of that development area from the effective date of its participation as defined in subclause 41.2 prorata in its participating interest; d own a participating interest share in all assets acquired for upstream petroleum operations in or related to the development area; e reimburse the contractor without interest prorata to the Government participating interest its share of all costs expenses and expenditure incurred in respect of the development area from the date the development plan for that development area has been adopted to the date the Government exercises its right to participate in that development area. This reimbursement shall be made within ninety 90 days after the Government exercises its right to participate.

42. Domestic Supply Obligations

1 The contractor shall have the obligation to supply in priority crude oil and/or natural gas for domestic consumption in Kenya and shall sell to the Government that portion of the contractors share of production which is necessary to satisfy the domestic supply requirement in accordance with the following provisions

2 In each calendar year the Cabinet Secretary shall notify the contractor not less than ninety 90 days prior to the beginning of that calendar year of the domestic supply requirement.

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The maximum amount of crude oil and/or natural gas that the Government may require from the contractors share of production shall be calculated each calendar quarter and shall be equal to the excess of total crude oil and/or natural gas domestic consumption in Kenya multiplied by a fraction the numerator of which is the average crude oil and/or natural gas production from the contract area and the denominator of which is the total crude oil and/or natural gas production from all producers in Kenya over the amount of crude oil and/or natural gas available to the Government from the contract area as in the form of Government share of production under clause 38 and in the form of Government participation share under clause 41. For the purpose of this subclause domestic

consumption does not include crude oil and/or natural gas refined in Kenya for export. 3 When the contractor is obligated to supply crude oil or natural gas for domestic consumption in Kenya the price paid by the Government shall be calculated in accordance with clause 35. Such sales to the Government shall be invoiced monthly and shall be paid within sixty 60 days of receipt of the invoice unless other terms and conditions are mutually agreed. 4 With the written consent of the Cabinet Secretary the contractor may comply with this clause by importing crude oil or natural gas and recovery of the same amount from subsequent production but appropriate adjustments shall be made in price and volume to reflect transportation costs differences in quality gravity and terms of sale. 5 In this clause Government includes an Appointee as defined herein and contractor does not include the Government where the Government has participated under clause 41. 6 In the event that natural gas can be produced from the contract area the obligation of the contractor to supply natural gas to the domestic market shall be agreed upon by the parties when approving the development plan related to such gas production after taking into consideration to the extent possible principles similar to those provided for in subclauses 421 and 2. 62 P a g e BOOKS ACCOUNTS AUDITS IMPORTS EXPORTS AND FOREIGN EXCHANGE PART VIII 43. Books Accounts and Audits 1 The contractor shall keep books and accounts in accordance with the accounting procedure and shall submit to the Cabinet Secretary and Authority a statement of those accounts not more than ninety 90 days after the end of each calendar year. 2 The contractor shall appoint an independent auditor of international standing approved by the Government to audit annually the books and accounts of the contractor and report thereon; and the cost of such audit shall be at the charge of the contractor and considered as recoverable cost. 3 The Government may audit the books and accounts within seven 7 calendar years of the period to which they relate and shall complete that audit within two 2 calendar years. 4 In the absence of an audit within seven 7 calendar years or in the absence of notice to the contractor of a discrepancy in the books and accounts within eight 8 calendar years of the period to which the audit relates the contractor's books and accounts shall be deemed correct. 5 Nothing in this clause shall be construed as limiting the right of the Government or Officer of

Government or a Government Agency pursuant to any power granted by law to audit or cause to be audited the books of any contractor or operator. 44. Exports and Imports 1 Save for the petroleum to be delivered to the Government pursuant to the terms of this contract the contractor shall own and receive its share of petroleum produced from the contract area and shall be entitled to export such petroleum or to otherwise dispose of the same subject to the limitations and conditions set out in the East African Community Customs Management Act 2004; the Customs and Excise Act; the Value Added Tax Act; and any other tax law in force in Kenya. The change of ownership of crude oil will occur at the Crude Oil Delivery Point and the change of ownership of natural gas will occur at the Natural Gas Delivery Point. 63 P a g e 2 The contractor and its subcontractors engaged in carrying out upstream petroleum operations under this contract shall be permitted subject to the limitations and conditions set out in East African Community Customs Management Act 2004 the Customs Excise Act and the Value Added Tax Act to import into Kenya all materials equipment and supplies including but not limited to machinery vehicles consumable items movable property and any other articles to be used solely in carrying out upstream petroleum operations under this contract. However the contractor and its subcontractors shall give preference to Kenyan goods and services in accordance with clause 22 hereof. In relation to materials equipment and supplies imported or to be imported pursuant to subclause 44.2 when the Authority or his representative has certified that they are to be used solely in carrying out upstream petroleum operations under this contract the contractor and its subcontractors shall make such imports subject to a approval of import licence; b exchange control approval subject to the provisions of clause 45 hereof; or f independent inspection outside of Kenya by general superintendence or other inspecting body appointed by the Government. 3 The actual costs of contracts for technical and other services entered into by the contractor for upstream petroleum operations and for materials purchased by the contractor for use in upstream petroleum operations shall be recoverable provided that those services and materials are reasonably required for upstream petroleum operations and provided further that the prices paid by the contractor are no higher than those currently prevailing in normal arms length transactions of

the open market for comparable services and materials. 4 The contractor and its subcontractors may sell in Kenya all imported items which are no longer needed for upstream petroleum operations. However if such imports were exempt from customs duty and VAT the seller shall fulfill all formalities required in connection with the payment of duties taxes fees and charges imposed on such sales. 5 Subject to subclauses 134 and 135 a contractor and its contractors and subcontractors may export from Kenya subject to applicable tax laws all previously imported items which are no longer required for the conduct of upstream petroleum operations under this contract. 64 P a g e 6 In the event that equipment and materials are required for subsequent upstream petroleum operations by another contractor in another contract area other than the contract area for which they were imported a permit may be issued by the relevant authority upon application by the contractor for such equipment and materials to be used for the purpose stated. 7 Customs duties as that term is used herein shall include all duties taxes on imports except those charges paid to the Government for actual services rendered which are payable as a result of the importation of the item or items under consideration. 45. Exchange and Currency Controls 1 As long as the contractor meets its obligations to the Government in terms of tax payments or any other payments contemplated by this contract and as long as the contractor complies with subclause 452 hereafter and is not in a material breach with this contract the Government shall by appropriate legal notice grant the contractor upon the effective date of this contract the freedom to a open and freely maintain accounts inside Kenya and foreign bank accounts outside Kenya in accordance with Central Bank of Kenya the Bank laws and regulations issued under the Exchange and Currency control laws of Kenya; b receive retain outside Kenya and freely dispose of foreign currencies received by it outside Kenya including the proceeds of sales of petroleum hereunder and a contractor shall not be obligated to remit such proceeds to Kenya with the exception of those proceeds as may be needed to meet in Kenya its expenses and payments to the Government; c pay directly outside Kenya for purchases of goods and services necessary to carry out upstream petroleum operations hereunder; d pay its expatriate employees working in Kenya in foreign currencies outside of Kenya. Such expatriate employees shall be only

required to bring into Kenya such foreign exchange as required to meet their personal living expenses and to meet payments of Kenyan taxes; 65 P a g e e freely repatriate abroad all proceeds from the contractors upstream petroleum operations in Kenya including but not limited to proceeds from the sale of assets and Petroleum; and f have rates of exchange for purchase or sale of currency in Kenya not less favourable to the contractor than those granted to any investor in Kenya.

2 In order to keep the Government and the the Bank informed of its prospective and actual foreign exchange transactions the contractor shall inform the Government and the Bank in writing and in such form and detail as the Government or the Bank may request a of the location of the contractors bank accounts in Kenya and abroad which latter accounts shall be opened in banks approved by the Bank; b annually before the commencement of each calendar year of the contractors estimated receipts and disbursements of foreign exchange by principal headings during the year which statement may be amended from time to time if this appears necessary; and c quarterly within thirty 30 days of the end of each calendar quarter of the contractors actual receipts and disbursements of foreign exchange by principal headings during the preceding quarter. 3 Subject to the obligation to give preference to Kenyan goods and services as stipulated under clause 22 the contractor shall have the right to enter all contracts and subcontracts necessary to carry out upstream petroleum operations without prior approval by the Bank or any other Government agency. The Government reserves the right to inspect the records or documentation related to such contracts and subcontracts and in accordance with clause 43 to appoint independent auditors to examine the accounts of the contractor and the contractor shall provide a copy of such contracts within thirty 30 days after their execution provided however that where the Government disputes anything in the contracts the value in dispute shall not be included until the dispute has been resolved in respect of a the qualifying expenditure under the Income Tax laws and regulations; b the Certificate of Approved Enterprise; and d the qualifying payment under the Exchange and Currency control laws and regulations. 66 P a g e 4 The Government shall grant to the contractor a Certificate of Approved Enterprise in accordance with the Foreign Investments Protection laws of Kenya. The amount

recognized by the certificate as having been invested shall be the actual amount for the time being invested by the contractor as set forth in its books of account maintained and audited in accordance with this contract provided however that the contractor shall not repatriate any proceeds of sale of an asset forming part of either a qualifying expenditure under the Income Tax laws and regulations; b any asset subject to a Certificate of Approved Enterprise without written approval and the necessary amendments to the relevant certificate. Proceeds arising from any other source may be repatriated after the Government has certified that such repatriation is in order. PART IX GENERAL

46. Payments 1 All sums due to the Government or the contractor shall be paid in USD or other currency agreed to by the Government and the contractor. 2 Any late payment due to the Government shall attract interest at the rate of LIBOR plus three percent 3 per annum. 47.

Assignment 1 After notice to the Cabinet Secretary the contractor may assign part or all of its rights and obligations under this contract to an affiliate with the prior approval of the Cabinet Secretary provided such assignment shall result in the assignor and the assignee being jointly and severally liable for all of the assignors obligations hereunder. 2 The contractor may assign to a person other than an affiliate part or all of its rights and obligations under this contract and other direct and indirect transfers of interest or participation in the contract may be transferred in each case with the consent of the Cabinet Secretary which consent shall not be unreasonably withheld and which shall be granted or refused within ninety90 days of receipt by the Cabinet Secretary of notice from the 67

P a g e contractor that it intends to make such an assignment but the Cabinet Secretary may require such an assignee to provide a guarantee for the performance of the obligations of the contractor. 3 The contractor shall report to the Cabinet Secretary any material changes in the corporate structure ownership and financial position of the contractor and its parent company. 4 The contractor shall report to the Cabinet Secretary any Change in Control in its corporate structure including a Change in Control outside Kenya arising by acquisition or exchange of shares which shall be deemed and treated as an assignment within Kenya for the purposes of clause 47. Any Change in Control shall be subject to the prior consent of the Cabinet Secretary. 5 The contractor shall furnish to the

Cabinet Secretary copies of all agreements and deeds related to an assignment. 6 At any time at which the contractor is constituted by more than one entity the reference in clause 47 to the Contractor shall be construed as a reference to each one of those entities. 7 Any assignment pursuant to this clause shall be fully disclosed by the assignor to the Kenyan tax authority. Any tax arising from any assignment pursuant to the Income Tax Act shall be paid by the assignor in the manner specified in the Income Tax Act. 8 An assignment under clause 47 means any assignment or transfer sale or merger directly or indirectly including by Change in Control of any right power or interest in the contract area and this contract.

48. Manager Advocate and Joint Operation Agreement

1 The contractor shall notify the Cabinet Secretary before the upstream petroleum operations begin of the name and address of the person resident in Kenya who will supervise the upstream petroleum operations and prior notice of any subsequent change shall be given to the Cabinet Secretary.

2 The contractor shall appoint an advocate resident in Kenya with power of representation in all matters relating to this contract of which appointment the Cabinet Secretary shall be notified before the upstream petroleum operations begin and prior notice of any subsequent change shall be given to the Cabinet Secretary.

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3 Where the contractor consists of more than one person the contractor shall deliver to the Cabinet Secretary a copy of the Joint Operating Agreement between those persons.

4 The appointment of an operator by a contractor and any change in operator shall be subject to prior approval by the Cabinet Secretary.

49. Confidentiality

1 All information including the data samples and reports referred to in clauses 14 and 15 which the contractor may supply to the Government under this contract shall be supplied at the expense of the contractor.

2 The parties shall keep the information that the other party may supply under this contract confidential and shall not disclose it to any other person other than to a person employed by or on behalf of the party except where such information is required to be published in accordance with the provisions of the Constitution or by a lawful order issued by a court of competent jurisdiction to disclose except with the consent of the other party which consent shall not unreasonably be withheld.

3 Notwithstanding subclause 49.2 the Cabinet Secretary may use any information supplied

for the purpose of preparing and publishing reports and returns required by law and for the purpose of preparing and publishing reports and surveys of a general nature. 4 The Cabinet Secretary may publish any information which relates to a surrendered area at any time after the surrender and in any other case three 3 years after the information was received unless the Cabinet Secretary determines after presentation by the contractor that a longer period shall apply. 5 This contract is a public document and the Government shall have the right to publish and keep it publicly available. The Government may publish such information concerning this contract as may be required by the laws of Kenya including for purposes of obtaining ratification of the contract by Parliament in accordance with Article 71 of the Constitution or in accordance with internationally accepted standards and norms concerning transparency in the extractive industries.. 69 P a g e 50. Force Majeure 1 In this clause force majeure means an occurrence beyond the reasonable control of the Cabinet Secretary or the Government or the Authority or the contractor which prevents any of them from performing their obligations under this contract. 2 Where the Cabinet Secretary the Government or the contractor is prevented from complying with this contract by force majeure the person affected shall promptly give written notice to the other and the obligations of the affected person shall be suspended provided that that person shall do all things reasonably within its power to remove such cause of force majeure. Upon cessation of the force majeure event the person no longer affected shall promptly notify the other persons. 3 Where the person not affected disputes the existence of force majeure that dispute shall be referred to arbitration in accordance with clause 53. 4 Where an obligation is suspended by force majeure for more than one 1 year the parties may agree to terminate this contract by notice in writing without further obligations. 5 Subject to subclause 504 the term of the contract shall be automatically extended for the period of the force majeure. 51. Waiver A waiver of an obligation of the contractor shall be in writing signed by the Cabinet Secretary and no waiver shall be implied if the Cabinet Secretary does not exercise a remedy under this contract. 52. Governing Law 1 This contract shall be governed by interpreted and construed in accordance with the Laws of Kenya. 2 The contractor agrees that it shall obey and

abide by all laws and regulations in force in Kenya. 3 If after the effective date of this contract the economic benefits of a party are substantially affected by the promulgation of new laws and regulations or of any amendments to the applicable laws and regulations of Kenya the parties shall agree to make the necessary 70 P a g e adjustments to the relevant provisions of this contract observing the principle of the mutual economic benefits of the parties. 4 Nothing in this clause shall be interpreted as imposing any limitation or constraint on the scope or due and proper enforcement of the laws of Kenya of general application and which are in the interest of health safety conservation or the protection of the environment for the regulation of any category of property or activity carried on in Kenya; provided however that the Government shall at all times during the conduct of upstream petroleum operations ensure in accordance with clause 16 that measures taken in the interest of health safety conservation or the protection of the environment are in accordance with best petroleum industry practices. 5 The decisions of the Cabinet Secretary under the contract shall be taken and made in accordance with the provisions of the Act and regulations.

Amicable Settlement 53. Dispute Resolution 1 Except as otherwise provided in this contract any difference or dispute arising out of or in relation to or in connection with this contract shall as far as possible be settled amicably. If any difference or dispute remains unresolved either party shall have the right to serve upon the other party a detailed statement stating the issues in dispute. Within fourteen 14 days of receipt of the statement or other mutually agreed period the Cabinet Secretary and the chief executive of the contractor shall meet to resolve the difference or dispute. Where no settlement is reached within thirty 30 days from the date of the meeting either party shall have the right subject to clause 2 to have such difference or dispute be resolved through arbitration in accordance with UNCITRAL arbitration rules adopted by the United Nations Commission on International Trade Law. Expert Determination 2 In lieu of resorting to arbitration the Cabinet Secretary and the contractor where they consider appropriate by mutual agreement may refer the dispute for determination by a sole expert to be appointed by agreement of the parties. In such case the parties shall agree on the terms of reference for the expert determination schedule and other

procedural matters. The decision of the sole expert shall be final and binding. The sole expert shall make a determination within ninety 90 days of his appointment. Where the sole expert fails to make a determination within the allotted time either party may call for the matter to be resolved through arbitration as provided herein below.

Arbitration 3 The arbitration procedure shall commence by a written request of either party applicant party to the UNCITRAL with a simultaneous notification to the other party. The arbitration proceedings shall commence within sixty 60 days of the date of receipt of that request by the UNCITRAL.

4 The number of arbitrators shall be three 3 and shall be appointed as follows a each party shall appoint one 1 arbitrator and so notify the other party and the Secretariat of the UNCITRAL of such appointment within thirty 30 days of the expiry of the period specified in subclause 533. b where the applicant party fails to appoint its arbitrator within the thirty 30 day period it shall be deemed to have abandoned its application. c where the defending party has not appointed its arbitrator within thirty 30 days following the receipt of the notice the applicant party may request the UNCITRAL to appoint an arbitrator within thirty 30 days of the date of receipt of that request by the UNCITRAL. d within forty five 45 days after the appointment of the last arbitrator the two arbitrators shall select by mutual agreement a third arbitrator who shall be designated as the chairman of the arbitral tribunal. e where the two arbitrators fail to select the third arbitrator either party may request in writing the Secretary General of the International Centre for Settlement of Investment Disputes to appoint the third arbitrator. The Secretary General shall forthwith send a copy of that request to the other party. The Secretary General shall comply with the request within thirty 30 days from the receipt thereof or such longer period as the parties may agree. The Secretary General shall promptly notify the parties of any appointment or designation made by him pursuant to the aforesaid request.

72 P a g e 5 The arbitrators shall not be of the same nationality as either of the parties. If any arbitrator fails or is unable to act his successors shall be appointed in the same manner as the arbitrator whom he succeeds.

6 The arbitrators shall hear and determine the matter within ninety 90 days of the appointment of the third arbitrator. The decision of the majority of the arbitrators shall be final and binding on the parties and shall be enforceable under

the laws of the Republic of Kenya. Any party may apply to a court of competent jurisdiction for enforcement of such award. The arbitration award may take the form of an order to pay a sum of money or to perform an act or to refrain from an act or any combination of such orders. Notwithstanding the foregoing a party is entitled to seek preliminary injunctive relief or interim or conservatory measures from any court of competent jurisdiction pending the final decision or award of the arbitrators. 7 The place of arbitration proceedings shall be Nairobi Kenya. The language used for the proceedings shall be English language. 8 The applicable laws shall be the laws of the Republic of Kenya and the provisions of this contract shall be interpreted in accordance with those laws. 9 Each party shall pay for its own counsel and other costs however the cost of the arbitral tribunal shall be allocated in accordance with the decision of the arbitral tribunal. The costs of the sole expert shall be borne equally by both parties. The costs incurred in arbitration or the sole expert determination shall not be recoverable costs under the contract. 10 The parties shall continue to perform their respective obligations under the contract during any sole expert or arbitration proceedings. 11 The right to arbitrate differences or disputes arising out of this contract shall survive the termination of this contract.

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Notices 1 Any notice and other communication under this contract shall be in writing and shall be delivered by hand sent by registered post certified post or fax to the following address of the other; To the Government Ministry of Energy Petroleum FAO Hon Cabinet Secretary Kenyatta Avenue P.O. Box 3058200100 NairobiKenya To the Contractor .. 2 A notice shall be effective on receipt. 3 Any notice if sent by facsimile shall be deemed received by the party to whom it was addressed on the first business day after the day upon which the facsimile was received. Any notice if by personal delivery to any party shall be deemed to be received by the addressee on the date of delivery if that date is a business day or otherwise on the next business day following. In the event that a notice sent by facsimile includes a request for confirmation of the receipt thereof such a confirmation shall be sent no later than one 1 business day after receipt of the notice. The contractor may at any time and from time to time change its authorized representative or its address herein on giving the Government ten 10 days notice in writing to such effect. 74 P a g e

54. Heading and Amendments 1 Headings are inserted in this contract for convenience only and shall not affect the construction or interpretation hereof. 2 This contract shall not be amended modified or supplemented except by an instrument in writing signed by the parties. 3 In the event of a conflict between the provisions of this contract and its Appendices the provisions of this contract shall prevail. 4 In the event one of the provisions of this contract is or becomes invalid illegal or unenforceable such provision shall be deemed severed from this contract and the remaining provisions of this contract shall continue in full force and effect. 5 This contract shall be executed in six 6 originals four 4 for the Government and two 2 for the contractor. Signed on the day and year first before written SIGNED by the duly authorized Representative of the GOVERNMENT]] ..] THE CABINET SECRETARY]. In the presence of sign]]]] PRINCIPAL SECRETARY] 75 P a g e seal SEALED with the common seal of CONTRACTOR . In the presence of]]]]] Director.....] sign name]]] Director.....] sign name] Note Appendices to each petroleum agreement will a identify the block to which the petroleum agreement relates Appendix A; b provide for the accounting procedures to be followed by the contractor Appendix B; and c specify the terms and conditions of participation Appendix C. 76 P a g e APPENDIX A THE CONTRACT AREA The Area to which the Petroleum Agreement relates APPENDIX B ACCOUNTING PROCEDURE PART I GENERAL PROVISIONS 1.1. Interpretation. 1.2. Accounting obligations of the contractor. 1.3. Language and units of accounts. 1.4. Audits and inspection rights of the Government. 1.5. Revision of accounting procedure. PART II CLASSIFICATION OF EXPENDITURES AMONG COST CENTRES PART III COSTS EXPENSES EXPENDITURE AND CREDITS OF THE CONTRACTOR AND NONRECOVERABLE COSTS 3.1. Labour and related costs. 3.2. Material. 3.3. Transportation and employees relocation costs. 3.4. Services. 3.5. Damages and losses to joint property. 3.6. Insurance. 3.7. Legal expenses. 3.8. Duties and taxes. 77 P a g e 3.9. Offices camps and miscellaneous facilities. 3.10. General and administrative

expenses. 3.11. Other expenditure. 3.12. Credits under the contract. 3.12. No duplication of charges and credits. 3.14 Nonrecoverable costs and expenses. PART IV FINANCIAL REPORTS TO THE CABINET SECRETARY

1. PART I GENERAL PROVISIONS The purpose of this accounting procedure is to establish methods and rules of accounting for upstream petroleum operations and the principles set forth herein shall apply to upstream petroleum operations pursuant to the production sharing contract hereinafter referred to as the Contract to which this Appendix is attached.

1.1. INTERPRETATION 1.1.1. DEFINITIONS controllable material means material which the operator subjects to record control and inventory. A list of types of such material shall be furnished to the Government and nonoperators; joint account means the set of accounts maintained by the operator to record all expenditure and other transactions under the provisions of the contract. Such accounts will distinguish between exploration evaluation development decommissioning and production costs. After adoption of a development plan a separate joint account shall be maintained for each development area; joint property means all property acquired and held in connection with upstream petroleum operations under the contract; material means personal property including supplies and equipment acquired and held for use in upstream petroleum operations; 78 P a g e nonoperators means the entities constituting the contractor other than the operator and the Government when it participates. Words not defined herein but which are defined in the contract shall have the meanings ascribed to them therein.

1.1.2. PRECEDENCE OF DOCUMENT In the event of conflict between the provisions of this accounting procedure and the provisions of the contract the provisions of the contract shall prevail.

1.2. ACCOUNTING OBLIGATIONS OF THE CONTRACTOR 1.2.1. The contractor shall maintain financial accounts necessary to record in reasonable detail the transactions relating to upstream petroleum operations which shall be prepared in accordance with the International Financial Reporting Standards IFRS. 1.2.2. Within ninety 90 days after the Effective Date the contractor shall submit for approval to the Cabinet Secretary and discuss with the Cabinet Secretary and the Kenyan tax authorityies a proposed outline of a chart of accounts detailed classification of costs costs centres books records statements

and reports to be established in accordance with the Contract and this accounting procedure. Following such discussion and approval the contractor shall provide copies of the comprehensive charts of accounts and the manuals to be used which may be revised from time to time by mutual agreement. 1.2.3. The contractor shall provide details of the financial accounts in the form of monthly statements which shall a reflect all charges and credits related to upstream petroleum operations; b be prepared on an accrual basis so that expenditure is recorded as incurred when title to goods passes or when work is executed; and c present the total accounts for the contract area and each development area and the share of each nonoperator. 1.2.4. In addition when the contractor is constituted by more than one entity each such entity shall provide details of its financial accounts related to the upstream petroleum operations. 79 P a g e 1.3. LANGUAGE AND UNITS

OF ACCOUNTS 1.3.1. All books and accounts shall be maintained in the English language United States Dollars and Kenya Shillings provided that the United States Dollar accounts will prevail in case of conflict. Where necessary for clarification the contractor may also maintain accounts and records in other language and currencies. 1.3.2. It is the intent of this accounting procedure that neither the Government nor the contractor should experience an exchange gain or loss at the expense of or to the benefit of the other. However should there be any gain or loss from exchange of currency it shall be credited or charged to the accounts under the contract. 1.4. AUDITS AND

INSPECTION RIGHTS OF THE GOVERNMENT 1.4.1. The Government upon thirty 30 days advance written notice to the contractor shall have the right at its sole expense to audit the joint account and related records for any calendar year or portion thereof within the seven 7 year period following the end of such year. Notice of any exception to the contractors accounts of any calendar year must be submitted to the contractor within eight 8 years from the end of such year. 1.4.2. For purposes of auditing the Government may examine and verify at reasonable times all charges and credits relating to the upstream petroleum operations such as books of account accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records necessary to audit and verify the charges and credits. Furthermore the

auditors shall have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the contractor directly or indirectly serving the upstream petroleum operations including visiting personnel associated with those operations. 1.4.3.

All agreed adjustments resulting from an audit shall be rectified promptly in the contractors accounts and any consequential adjustments to payments due to the contractor or the Government as the case may be shall be made promptly. Any unresolved dispute arising in connection with an audit shall be referred to arbitration in accordance with clause 53 of the contract and until such dispute is resolved the contractor shall maintain the relevant documents in connection with such unresolved dispute and shall permit inspection thereof. 1.4.4. Disputes relating to tax shall be resolved through the tax disputes resolution processes as provided in the relevant tax laws. 1.4.5.

The contractor shall appoint an independent auditor of international standing approved by the Cabinet Secretary to audit annually the accounts and records of upstream petroleum operations and report thereon and the cost of such audit and report shall be chargeable to the joint account. 1.5.

REVISION OF ACCOUNTING PROCEDURE 1.5.1. By mutual agreement between the Government and the contractor this accounting procedure may be revised from time to time by an instrument in writing signed by both the parties. 1.5.2. The parties agree that if any procedure established herein proves unfair or inequitable to any party the parties shall meet and in good faith agree on the changes necessary to correct that unfairness or inequity. 2. **PART II CLASSIFICATION OF EXPENDITURES AMONG COST CENTRES**

2.1. The detailed categories of petroleum costs shall be agreed pursuant to subclause 1.2.2 of this Annex B and shall include the following main categories 2.1.1. exploration costs incurred for exploration operations; 2.1.2. development costs incurred for development operations; 2.1.3. production costs incurred for production operations; 2.1.4. decommissioning costs incurred for decommissioning operations; 2.1.5. Uplift. 2.2. Exploration costs in respect of the contract area are those costs which relate to exploration operations incurred in accordance with an approved annual exploration and appraisal work programmes and budget. They include for the purposes of accounting the evaluation operations in

respect of a discovery. 81 P a g e 2.3. Development costs in respect of a development area are those costs incurred in respect of the activities carried out in accordance with an approved development plan and the relevant annual development work programmes and budgets and consists of 2.3.1. Before the commencement of commercial production in a development area those costs whether of a capital or operating nature which relate to development operation; and 2.3.2. From the commencement of commercial production in a development area those costs of a capital nature only which relate to the continuation of the development of the commercial discovery and investments for the recovery of petroleum from such discovery. 2.4. Production costs in respect of a development area are those costs of an operating nature only excluding development costs and decommissioning costs which relate to production operations carried out from the commencement of commercial production in respect of such development area in accordance with approved annual production work programmes and budgets. 2.5. Decommissioning costs in respect of a development area are those costs or contributions to the decommissioning fund related to abandonment and decommissioning operations set out in clause 17 of the Contract. 2.6. The Petroleum costs in each category of costs that cannot be related to a certain area and the general and administrative costs referred to in Part III shall be allocated to categories of costs and to area in accordance with the approved methods set out in subclause 2.7 and 2.8. 2.7. The petroleum costs shall be allocated among the categories of upstream petroleum operations in the following manner 2.7.1. Exploration operations subdivided further into 2.7.1.1. Aerial geological geochemical and other surveys; 2.7.1.2. Each individual seismic survey; 2.7.1.3. Each individual exploratory well or appraisal well; 2.7.1.4. Infrastructure such as roads airstrips; 82 P a g e 2.7.1.5. Support facilities such as warehouses including an allocation of common service costs costs related to various upstream petroleum operations; 2.7.1.6. An allocation of the general and administrative costs; and 2.7.1.7. The exploration operations; 2.7.2. Development operation up to the delivery points subdivided further into 2.7.2.1. Aerial geological geochemical geophysical and other surveys; 2.7.2.2. Each individual development well; 2.7.2.3. Flow lines and gathering lines; 2.7.2.4. Field facilities; 2.7.2.5. Tank farms

and other storage facilities for petroleum; 2.7.2.6. Pipelines and trunks; 2.7.2.7. Infrastructure; 2.7.2.8. Support facilities including an allocation of common service costs costs related to various upstream petroleum operations; 2.7.2.9. An allocation of the general and administrative costs; and 2.7.2.10. Other development operations including engineering and design studies. 2.7.3. Production operations subdivided in the same manner as development operations. 2.7.4. Decommissioning operations subdivided in the same manner as development operations. 2.8. Petroleum costs shall be allocated to crude oil and natural gas where both products are being produced and saved. Such allocation shall be made in accordance with the following principles 2.8.1. Where costs are exclusively related to either crude oil or natural gas such costs shall be allocated completely to the respective category. 2.8.2. Where costs can be attributed to both crude oil and natural gas the costs shall be allocated pursuant to the method agreed by the parties in accordance with best petroleum industry practices.

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3. PART III COSTS EXPENSES EXPENDITURE AND CREDITS OF THE CONTRACTOR AND NONRECOVERABLE COSTS

Subject to the provisions of the contract the contractor shall bear and pay the following costs and expenses necessary to conduct upstream petroleum operations. Such petroleum costs are recoverable by the contractor in accordance with the provisions of the contract when incurred under approved annual Work Programmes and Budgets and duly entered in the Joint Account.

3.1. LABOUR AND RELATED COSTS

3.1.1. Salaries and wages of employees of the operator and its affiliates for portion of their time spent performing management administrative legal accounting treasury tax employee relations computer services engineering geological geophysical and all other functions for the benefit of petroleum operation whether temporarily or permanently assigned to the contract area as well as the cost of employee benefits customary allowances and personal expenses incurred under the usual practice of the operator and its affiliates and amounts imposed by governmental authorities which are applicable to such employees.

3.2. MATERIAL

3.2.1. The cost of material equipment and supplies purchased or furnished by the operator for use in upstream petroleum operations shall be charged to the joint account on the basis set forth below. So far as it is reasonably practical and consistent with efficient

and economical operations only such material shall be purchased for or transferred to the joint property as may be required for immediate use and/or for approved work programmes and the accumulation of surplus stock shall be avoided. 3.2.1.1. Except as otherwise provided in subclause 3.2.1.2 below material purchased leased or rented shall be charged at the actual net cost incurred by the operator. Net cost shall include but shall not be limited to such items as vendors invoice price transportation duties fees and applicable taxes less all discounts actually received. 3.2.1.2. Material purchased or transferred from the contractor or its affiliates shall be charged at the prices specified here below 84 P a g e 3.2.1.2.1. New material condition A shall be valued at the current international net cost which shall not exceed the price prevailing in normal arms length transactions on the open market; 3.2.1.2.2. Used material conditions B C and D 3.2.1.2.2.1. material which is in sound and serviceable condition and is suitable for reuse without reconditioning shall be classified as condition B and priced at seventyfive per cent 75 of the current price of new material defined in clause 3.2.1.2.1 above; 3.2.1.2.2.2. material which cannot be classified as condition B but which after reconditioning will be further serviceable for its original function shall be classified as condition C and priced at fifty percent 50 of the current price of new material as defined in clause 3.2.1.2.1 above. The cost of reconditioning shall be charged to the reconditioned material provided that the value of condition C material plus the cost of reconditioning do not exceed the value of condition B material; 3.2.1.2.2.3. material which cannot be classified as condition B or condition C shall be classified as condition D and priced at a value commensurate with its use. 3.2.2. INVENTORIES 3.2.2.1. At reasonable intervals inventories shall be taken by the operator of allcontrollable material. The operator shall give ninety 90 days written notice of intention to take such inventories to allow the Cabinet Secretary and nonoperators to be represented when any inventory is taken. Failure of any party to be represented after due notice given shall bind such party to accept the inventory taken by the operator. 3.2.2.2. The operator shall clearly state the principles upon which valuation of the inventory has been based. 3.2.2.3. Whenever there is a sale or change of interest in the joint property a special inventory may be taken by the operator provided the seller and/or purchaser of

such interest agrees to bear all of the expense thereof. In such cases both the seller and the purchaser shall be entitled to be represented and shall be governed by the inventory so taken. 85 P a g e

3.3. TRANSPORTATION AND EMPLOYEE RELOCATION COSTS

3.3.1. Transportation of material and other related costs such as origin services expediting crating dock charges forwarders charges surface and air freight and customs clearance and other destination services.

3.3.2. Transportation of employees as required in the conduct of upstream petroleum operations including employees of the operators affiliates whose salaries and wages are chargeable under subclause 3.1.1 and 3.4.2.

3.3.3. Relocation costs of the contract area vicinity of employees permanently or temporarily assigned to upstream petroleum operations. Relocation costs from the contract area vicinity except when an employee is reassigned to another location classified as a foreign location by the operator. Such costs include transportation of employees families and their personal and household effects and all other relocation costs in accordance with the usual practice of the operator and its affiliates.

3.4. SERVICES

3.4.1. The actual costs of contract services professional consultants and other services performed by third parties other than services provided by the contractor or its affiliates but the prices paid by the contractor shall not be higher than those generally charged for comparable services.

3.4.2. Costs of technical services such as but not limited to engineering and related data processing performed by the contractor and its affiliates for the direct benefit of upstream petroleum operations engineering and related data processing performed by the contractor provided such costs shall not exceed those currently prevailing if performed by third parties in normal arms length transaction for like services.

3.4.3. Costs of use of equipment and facilities for the direct benefit of the upstream petroleum operations furnished by contractor or its affiliates at rates commensurate with the cost of ownership or rental and the cost of operation thereof but such rates shall not exceed those currently prevailing in the general vicinity of the contract area in normal arms length transactions on the open market for like services and equipment.

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3.5. DAMAGES AND LOSSES TO JOINT PROPERTY

3.5.1. All costs or expenses necessary for the repair or replacement of joint property resulting from damages or losses

incurred by fire flood storm theft accident or any other cause except insofar as those costs and expenses are caused by the willful misconduct of the operator. The operator shall furnish the Government and nonoperators written notice of damages or losses for each damage or loss in excess of fifty thousand U.S. dollars U.S.50000 as soon as the loss has come to the notice of the contractor.

3.6. INSURANCE 3.6.1. Premiums for insurance required under the contract provided that a party not participating in such insurance shall not share in the costs unless such insurance is compulsory under the laws of Kenya and provided further that if such insurance is wholly or partly placed with an affiliate of the contractor such premiums shall be recoverable only to the extent generally charged by competitive insurance companies other than an affiliate of the contractor.

3.7. LEGAL EXPENSES 3.7.1. All costs or expenses of litigation or legal services otherwise necessary or expedient for the protection of the joint property or other interest in the contract area including but not limited to legal counsels salaries and fees court costs and cost of investigation or procuring evidence. These services may be performed by the operators legal staff or an outside firm as necessary.

3.8. DUTIES AND TAXES 3.8.1. All duties taxes except taxes based on income profit or gains fees and governmental assessments of every kind and nature which have been paid by the contractor with respect to the Contract unless specifically excluded under this Contract.

3.9. OFFICES CAMPS AND MISCELLANEOUS FACILITIES 3.9.1. Cost of establishing maintaining and operating the offices suboffices camps warehouses housing and other facilities directly serving upstream petroleum operations. The costs shall be allocated to the operations served on an equitable basis.

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3.10. GENERAL AND ADMINISTRATIVE EXPENSES 3.10.1. This charge shall be made monthly for services of all personnel and officers of the operator and its affiliates outside Kenya and those not otherwise provided herein. It shall include services and related office costs of personnel performing management administrative legal accounting treasury tax employee relations computer services purchasing engineering geological geophysical and all other functions for the direct benefit of upstream petroleum operations. General and administrative expenses incurred wholly and exclusively for the Kenyan operations are wholly deductible. General

and administrative expenses which have not been incurred wholly and exclusively incurred for Kenyan operations will be charged on an allocation criteria provided by the contractor subject to approval of the Cabinet Secretary and Kenyan Tax Authorities. 3.10.2. Within ninety 90 days following the end of each quarter the operator shall determine the actual costs incurred in performing such services and shall charge or credit the joint account for the difference between the actual cost incurred for the quarter and the provisional rate charged during the quarter. 3.10.3. On request of the Government or a nonoperator the operator shall make available at its Kenyan office all supporting documents used for the determination of the charges. Such documents shall include but shall not be limited to time allocation reports prepared by employees providing services described in part cash vouchers supporting cash expenses included in the overhead pool intercompany billings supporting charges for services provided by operators affiliates e.g. building rentals telecommunications paid by the operators parent company summary or impersonalized computer run supporting salaries wages and employee benefits and other such documents as may be mutually agreed. 3.11. OTHER EXPENDITURE 3.11.1. Other reasonable expenditure not covered or dealt with in the foregoing provisions which are incurred by the operator and its affiliates for the necessary proper economical and efficient conduct of upstream petroleum operations only with the approval by the Cabinet Secretary. 88 P a g e 3.11.2. Interest and financing charges incurred on loans or other forms of financial accommodation raised by the contractor for expenditure in upstream petroleum operations under the contract shall be nonrecoverable costs in accordance with subclause 3.14 below. 3.12. CREDITS UNDER THE CONTRACT 3.12.1. The net proceeds of the following transactions shall be credited to the account for cost recovery purposes under the contract 3.12.1.1. the net proceeds of any insurance or claim in connection with the upstream petroleum operations or any assets charged to the accounts under the contract; 3.12.1.2. revenue received from other parties for the use of property or assets charged to the accounts under the contract; 3.12.1.3. any adjustment received by the contractor from the suppliersmanufacturers or their agents in connection with defective equipment or material the cost of which was previously

charged by the contractor under the contract; 3.12.1.4. rentals refunds or other credits received by the contractor which apply to any charge which has been made to the accounts under the contract; 3.12.1.5. proceeds from all sales of surplus material or assets charged to the account under the contract; and 3.12.1.6. the prices originally charged to the accounts under the contract for inventory materials subsequently exported from Kenya. 3.13. NO DUPLICATION OF CHARGES AND CREDITS 3.13.1. Notwithstanding any provision to the contrary in this accounting procedure it is the intention that there shall be no duplication of charges or credits in the accounts under the contract.

89 P a g e 3.14. NONRECOVERABLE COSTS AND EXPENSES 3.14.1. Costs and expenses not specifically identified as recoverable in this clause shall not be recoverable by the contractor. Such nonrecoverable costs and expenses include but are not limited to the following 3.14.1.1. taxes on income or profit paid to any Government authority except taxes and duties that may be included in the costs of material and equipment purchased for upstream petroleum operations; 3.14.1.2. any payment made to the Government by reason of the failure of the contractor to fulfill its minimum work and expenditure obligations in respect of the initial exploration period the first additional exploration period or the second additional exploration period under the contract; 3.14.1.3. the cost of any letter of guarantee if any required under the contract; 3.14.1.4. the signature bonus set out in clause 6 of the contract; 3.14.1.5. the surface fees set out in clause 6 of the contract; 3.14.1.6. training fees and other related costs. 3.14.1.7. costs of marketing or transportation of petroleum beyond the delivery point; 3.14.1.8. interest arrangement costs and any foreign exchange costs relating to loans or other financing arrangements raised by the contractor for capital expenditure in upstream petroleum operations under the contract; 3.14.1.9. any accounting provision for depreciation andor amortization excluding any depreciation andor amortization expressly permitted under the contract; 3.14.1.10. costs incurred before the Effective Date; 3.14.1.11. Any foreign exchange and currency hedging costs; 3.14.1.12. Donations or charitable contributions andor services relating to public relations; 3.14.1.13. Costs that were not incurred within an approved Annual Work Program and Budget as revised or are of a category not permitted by this Contract; 90

P a g e 3.14.1.14. Decommissioning Costs actually incurred which have been effectively funded from the Decommissioning Fund through contributions made to such Fund which are already recovered when those Costs are incurred; 3.14.1.15. Costs in excess of those in line with the international market price for goods or services of similar quality supplied on similar terms prevailing at the time such goods or services were obtained or ordered by the contractor; 3.14.1.16. Any costs not reasonably required for the upstream petroleum operations; 3.14.1.17. Expenditures on research and development of new equipment materials and techniques; 3.14.1.18. Costs for which the records do not exist or which are not adequately documented; 3.14.1.19. Costs of arbitration and expert determination pursuant to clauses 35 and 53 of the Contract in respect of any dispute under this Contract; 3.14.1.20. Fines and penalties imposed under the laws of Kenya; 3.14.1.21. Costs due to a violation to this Contract or the laws and regulations applicable to the upstream petroleum operations including any amount spent on indemnities or penalties arising from the nonfulfillment of contractual obligations such as any payment made to the Government by reason of the failing of the contractor to fulfill its minimum exploration work and expenditure obligations under the Contract; 3.14.1.22. Costs incurred as a result of willful misconduct or negligence of the contractor its agents or subcontractors including any payments for damages under the Contract; 3.14.1.23. The acquisition costs or any other payments or charges in relation with the transfer of an interest in accordance with clause 47 of the Contract including but not limited to any payments of considerations private overriding royalties net profits and interests; 3.14.1.24. Corporate Social Responsibility Costs or Social Infrastructure Costs; and 3.14.1.25. any recoverable costs recovered elsewhere under the Kenyan laws. 91 P a g e 4. PART IV FINANCIAL REPORTS TO THE

CABINET SECRETARY 4.1. The reporting obligations provided for in this Part shall unless the contrary is stated apply to the operator. 4.2. The operator shall submit annually to the Cabinet Secretary the following 4.2.1. the annual work programme and budget three 3 months before the beginning of the year to which they apply and the budget shall be analyzed by item within the exploration programme evaluation programme development programme production programme and

decommissioning programme and show for each major budget item with reasonable detail the following 4.2.1.1. latest forecast of cumulative petroleum costs anticipated at the start of the budget year; 4.2.1.2. cumulative expenditure anticipated at the end of each quarter of the budget year; and 4.2.1.3. expenditure anticipated in future years to complete the budget item. 4.2.2. a schedule of the service and supply contracts to be let during the forthcoming year which require payment in foreign currency exceeding the equivalent of two hundred thousand U.S. Dollars USD200000.00 per contract showing the anticipated tender date and approximate value and the goods or services to be provided; 4.2.3. the audit report required by subclause 1.4.5. of this accounting procedure stating whether in the opinion of the auditors of the contract 4.2.3.1. the last annual expenditure report and records reflect a true and fair view of the actual expenditure of the contractor in accordance with the provisions of the contract; 4.2.3.2. the reports on petroleum revenue submitted truly and fairly determine the arms length value of disposals of Petroleum during the year. 4.3. The operator shall submit quarterly within thirty 30 days of each quarter to the Cabinet Secretary 4.3.1. a report of expenditure and receipts under the contract analyzed by budget item showing 4.3.1.1. actual expenditure and receipts for the quarter in question; 4.3.1.2. actual cumulative Petroleum cost to date; 92 P a g e 4.3.1.3. latest forecast cumulative cost at the year end; 4.3.1.4. variations between budget costs and actual costs and explanations thereof; and 4.3.1.5. with effect from adoption of the development plan the total payroll costs segregated between Kenyan and nonKenyan personnel and the total expenditure segregated between Kenyan and nonKenyan goods and services; 4.3.2. a cost recovery statement containing the following information disclosing costs incurred and recovered as attributed to either exploration development production or decommissioning activities 4.3.2.1. recoverable petroleum costs carried forward from the previous quarter if any; 4.3.2.2. recoverable petroleum costs incurred and paid during the quarter; 4.3.2.3. total recoverable petroleum costs for the quarter 4.3.2.1 plus 4.3.2.2 above; 4.3.2.4. quantity and value of cost Petroleum taken and separately disposed of by the contractor for the quarter; 4.3.2.5. volume and value of Petroleum recovered for the quarter; 4.3.2.6. amount of recoverable petroleum costs to be carried forward into

the next quarter if any; and 4.3.2.7. value of Governments share of production taken by the contractor pursuant to clause 38 of the contract. 4.4. A copy of each contract for goods or services valued in excess of Five Hundred Thousand U.S. Dollars USD 500000.00 shall be provided to the Cabinet Secretary as soon as practicable after its execution together with a contract summary containing 4.4.1. a description of the goods or services to be provided; 4.4.2. the approximate consideration for the contract; 4.4.3. the names of proposed bidders contractors or suppliers; and 4.4.4. a brief description of the efforts made to find a Kenyan supplier or contractor including the names of businesses considered and the reasons for rejecting them. 93 P a g e 4.5. After the commencement of production the operator shall within fifteen 15 days after the end of each month submit a production report to the Cabinet Secretary showing for each development area the quantity of petroleum 4.5.1. held in stocks at the beginning of the month; 4.5.2. produced during the month; 4.5.3. lifted and by whom during the month; 4.5.4. lost and consumed in upstream petroleum operations during the month; and 4.5.5. held in stocks at the end of the month. 4.6. A lifting party shall submit within fifteen 15 days after the end of each month a report to the Cabinet Secretary stating 4.6.1. the quantities and sales value of arms length petroleum sales made in that month; 4.6.2. the quantities sales value and arms length value of disposals of petroleum other than by sale at arms length during the month; and 4.6.3. the total petroleum revenue for that month. 4.7. The Contractor shall deliver to the Cabinet Secretary monthly statements showing calculations of the value of Petroleum produced and sold from the Contract Area and each Development Area which statements shall include inter alia the following information 4.7.1. Quantities of crude oil and/or natural gas sold by the contractor during the preceding month constituting arms length sales together with corresponding sale prices; 4.7.2. Quantities of crude oil and/or natural gas sold by the contractor during the preceding month that did not constitute arms length sales together with corresponding sale prices; 94 P a g e APPENDIX C PARTICIPATION AGREEMENT . Interpretation. 2. Participating interests and commencement. 3. Operator and duties of the Operator. 4. Operating committee and work programmes. 5. Costs and expenses. 6. Payments to the operator. 7. Materials

and equipment. 8. Relationship of the parties and tax provisions. 9. Surrenders and transfers. 10. Disposal of production. 11. Sole risk operations. 12. Confidentiality. 13. Liability. 14. Governing law. 15. Arbitration. 16. Force majeure. 17. Notices. 18. Term. 19. Final provisions. Exhibit A

Accounting procedure 95 P a g e PARTICIPATION AGREEMENT This Participation Agreement made and

entered into on this day of 20 by and between the Government of the Republic of Kenya hereinafter referred to as the Government represented for the purpose of this agreement by the Cabinet

Secretary for the time being responsible for petroleum hereinafter referred to as the Cabinet Secretary and incorporated under the laws of Kenya and having established a place of business at

Kenya hereinafter referred to as the Contractor. WHEREAS the Government and the contractor

have entered into a production sharing contract referred to as the Contract which expression includes its successors and assigns to which this Appendix is attached; WHEREAS the Government

may decide to exercise its option under clause 41 of the Contract; and WHEREAS the Parties wish to set forth the terms and conditions under which the Government has agreed to participate in the

upstream petroleum operations in each case such option is exercised; NOW THEREFORE the Parties agree as follows 1. Interpretation 1.1. In this Participation Agreement words in the singular

include the plural and vice versa and except where the context otherwise requires AFE means an authorization for expenditure; Government includes an appointee as defined in the Contract; joint

account means the accounts maintained by the operator to record all transactions related to operations in the participation area under this Participation Agreement; joint property means all

property acquired and held for use in connection with operations under this Participation Agreement; nonoperator means a party other than the operator; 96 P a g e operating committee means the

committee established by clause 4 hereof; operator means the party designated to conduct the upstream petroleum operations pursuant to clause 3 hereof and its successors and assignees;

participating interest means the respective undivided interest of each of the parties as it may exist at any given time in the participation area and under this Participation Agreement; participation area

means a development area in which the Government elects to participate under the Contract;

participation dates means the effective date of participation by the Government as defined in subclause 41.2 of the Contract; participation work programme means a programme of the upstream petroleum operations under this Participation Agreement; parties means collectively the Government and the entities constituting the contractor their respective successors or assignees; party means anyone of the parties; year means calendar year. 1.2. Words not defined in this Participation Agreement but which are defined in the Contract have the meanings given to them in the Contract.

1.3. In the event of any conflict between the Contract and this Participation Agreement the Contract shall prevail and this Participation Agreement shall be deemed amended accordingly. 2.

Participation Interests and Commencement 2.1. When and if the Government elects pursuant to clause 41 of the contract to participate in upstream petroleum operations in a participation area each entity constituting the contractor shall assign proportionately to the Government a part of its interest in the development area so that the rights interest and obligations of the contractor and the Government in such area shall be owned and borne as of the participation date in undivided interests as follows 97 P a g e Government.. per cent or such lesser amount as may be elected in accordance with clause 41 of the Contract; and Contractor .. per cent or such greater amount as may remain after the Governments election. 2.2. In the event a party shall transfer in whole or in part

its participating interest pursuant to clause 47 of the Contract and clause 9 of this Participation Agreement the participating interest of the parties therein shall be revised accordingly. 3. Operator

and duties of the Operator 3.1. The operator shall be the party acting as operator on the participation date and the operator shall have the rights and obligations of a nonoperator in respect of its participating interest. 3.2. The operator shall serve as operator until it resigns or is removed pursuant to the provisions of this clause or until it ceases to hold a participating interest hereunder.

In the event that an operator assigns the whole of its participating interest hereunder to one of its affiliates such affiliate shall become operator hereunder in the formers place. 3.3. Upon the affirmative vote of all the nonoperators the operator shall be removed as operator in case of any one of the following 3.3.1. bankruptcy of the operator or its parent company; 3.3.2. assignment for the

benefit of the operators creditors; 3.3.3. appointment of a receiver or manager with respect to the whole or any part of the property or assets of the operator; 3.3.4. entitlement of any person other than an affiliate of the operator to appoint a majority of the members of the board of directors of the operator by reason of any act default or neglect of the operator; 3.3.5. failure without justification by the operator to pay a sum due to or in the name of the joint account for more than sixty 60 days; 98 P a g e 3.3.6. the operators material breach of this Participation Agreement which remains without a remedy for more than thirty 30 days after the operator is notified by nonoperators of such breach; or 3.3.7. reduction in the operators participating interest to per cent .. or less. 3.4. An operator may at any time resign as operator by giving to the other parties notice in writing of such resignation. Such resignation shall be effective one hundred and eighty 180 days after the date of notice thereof or on the date on which a successor operator appointed by the parties other than the operator shall be ready and able to assume the obligations of operator in accordance with all the provisions of this Participation Agreement whichever shall first occur. 3.5. Should an operator so resign or be removed a successor operator shall immediately be appointed by the operating committee. A party having been removed as operator may not vote to succeed itself as operator. Such appointment shall be made by a vote of at least two 2 of the remaining parties holding not less than the percentage figure of the remaining participating interests set out in clause 4.6. For the purpose of this clause 3.5 operator includes any of its affiliates holding a participating interest in this Participation Agreement. 3.6. Removal or resignation of an operator shall not in any way affect its rights or obligations as a nonoperator party to this Agreement. On the effective date of removal or resignation the operator shall deliver to the successor operator any and all funds equipment materials appurtenances books records data interpretations information and rights acquired by and in the custody of the operator for the joint account of the parties including available petroleum not delivered to the parties shall with the successor operator prepare an inventory of joint property adjusting the joint account accordingly and shall cooperate as far as possible in effecting a smooth transfer of operating responsibilities. 3.7. An operator that is removed under Article 3.3.7 hereof may

charge to the joint account all reasonable and necessary expenditure incurred in demobilizing and repatriating personnel and equipment. 99 P a g e 3.8. The operator shall have control of the upstream petroleum operations in the participation area and shall have exclusive custody of all materials equipment and other property acquired thereof and shall perform the duties under this Participation Agreement diligently and in accordance with best petroleum industry practice and sound and accepted engineering management and accounting principles. The operator shall not be liable to any nonoperator for any acts or omissions claims damages losses or expenses in connection with or arising out of this Participation Agreement or the contract or upstream petroleum operations save those caused by gross negligence or willful misconduct of the operator. 3.9. The operator shall 3.9.1. consult with nonoperators and advise them of all matters arising from the upstream petroleum operations; 3.9.2. comply with the decisions of the operating committee; 3.9.3. keep the participating interests and all property acquired or used free from liens except for those authorized by clause 6 hereof; and 3.9.4. pay the costs of the upstream petroleum operations under this Participation Agreement promptly and make proper charges to nonoperators. 3.10. The operator shall submit a copy of an AFE to the nonoperators for each budget item of capital expenditure in the approved participation work programme and budget that costs more than U.S. dollars U.S.D. Where it is necessary to complete an expenditure in a budget item in the approved participation work programme the operator may exceed the budget for the budget item by the lesser of ten per cent 10 thereof or U.S. dollars. U.S.D and shall report promptly such excess expenditure to the nonoperators. The operator may spend not more than U.S.dollars U.S.D.....on upstream petroleum operations in the participation area not included in an approved participation work programme provided that such expenditure shall not be for items previously rejected by the operating committee. The operator shall report promptly that expenditure to the nonoperators and if it is approved in accordance with clause 46 the operator may make further 100 P a g e expenditurethereon or on other items not exceeding U.S. dollars. U.S.D.....in that year. The limits in this subsection may be changed from time to time by the operating committee. In the case of

emergency the operator may make such immediate expenditure and take such immediate action as may seem necessary for the protection of life or property or the prevention of pollution and such emergency expenditure shall be reported promptly to the parties by the operator. 3.11. A nonoperator may inspect the participation area theupstream petroleum operations and the books records and other information of the operator pertaining thereto. The operator shall supply to a nonoperator by telephone telefax email registered post or courier daily reports on drilling and such other reports in writing normally provided by an operator to a nonoperator in the international petroleum industry including but not limited to reports on well tests and core analysis and copies of drilling logs well surveys and velocity surveys. The operator shall furnish any other information reasonably requested by nonoperator if such information is readily available. 3.12. The operator shall obtain and maintain all insurance required by law and such other insurance as the operating committee may from time to time determine provided that in respect of such other insurance any party may elect not to participate provided such party gives notice to that effect to the operator. The cost of insurance in which all the parties are participating shall be for the joint account and the cost of insurance in which less than all the parties are participating shall be charges to such parties individually. The operator shall in respect of any insurance 3.12.1. promptly inform the parties participating therein when it is taken out and supply them with copies of the relevant policies when the same are issued; 3.12.2. arrange for the parties participating therein according to their respective participating interests to be named as coinsureds on the relevant policies with waivers of subrogation in favour of the parties; and 101 P a g e 3.12.3. duly file all claims and take all necessary and proper steps to collect any proceeds and if all the parties are participating therein credit them to the joint account or if less than all the parties are participating therein credit them to the participating parties. Subject as stipulated above any of the parties may obtain such insurance as it deems advisable for its own account at its own expense providing such insurance is acceptable under the applicable law. If the operator is unable to obtain such other insurance required by the operating committee it shall so advise the parties and thereafter it shall be discharged of its

obligation to obtain such insurance. The operator shall take all reasonable steps to ensure that all contractors including subcontractors performing work in respect of the upstream petroleum operations and the joint property obtain and maintain all insurance required by the law and obtain from their insurers a waiver of subrogation in favour of the parties. 3.13. The operator may prosecute defend and settle claims and litigations arising out of the upstream petroleum operations and may compromise or settle such claims or litigations which involve an amount not exceeding the equivalent of one hundred thousand U.S. dollars US 100000.00 without the approval of the operating committee. Any claim or litigation involving an amount in excess of the equivalent of one hundred thousand U.S. dollars U.S. 100000.00 shall be reported promptly to the nonoperators and a nonoperator shall have the right to be represented by its own counsel at its expense in the compromise settlement or defense of such claims or litigation. 3.14. The operator shall fulfill the reporting obligations of the Contractor unless otherwise stipulated in this Participation Agreement and the Contract. 4. Operating Committee and Work Programmes 4.1. The parties shall establish an operating committee to supervise and control the upstream petroleum operations. The operating committee shall consist of one representative appointed by each of the parties provided always that more than one of the parties may appoint the same representative who shall represent them separately. 102 P a g e 4.1.1. Each party shall as soon as possible after the date of this Participation Agreement give notice to all the other parties of the name of its representative and of an alternate on the operating committee. Such representative may be replaced from to time by like notice. Representatives may bring to meetings of the operating committee such advisers as they consider necessary. The representative of a party or in the absence of the representative his alternate shall be deemed authorized to represent and bind such party with respect to any matter which is within the powers of the operating committee. The representative of the party which is the operator shall be the chairman of the operating committee and shall report the proceedings. 4.2. Except as otherwise provided in this Participation Agreement the powers and duties of the operating committee shall include 4.2.1. the consideration and determination of all matters relating to general

policies procedures and methods of operation hereunder; 4.2.2. the approval of any public announcement or statement regarding this Participation Agreement or the upstream petroleum operations; 4.2.3. the consideration revision and approval or disapproval of all proposed participation work programmes budgets and AFEs prepared and submitted to it pursuant to the provisions of this Participation Agreement; 4.2.4. the determination of the timing and location of all wells drilled under this Participation Agreement and any change in the use or status of a well; 4.2.5. the determination of whether the operator will represent the parties regarding any matters or dealings with the Cabinet Secretary any other governmental authorities or third parties in so far as the same relate to the upstream petroleum operations provided that there is reserved to each party the unfettered right to deal with the Cabinet Secretary or any other governmental authorities in respect of matters relating to its own participating interest; and 4.2.6. the consideration and if so required the determination of any other matter relating to the upstream petroleum operations which may be referred to it by the parties or any of them or which is otherwise designated under this Participation Agreement for reference to it. 103 P a g e 4.3. The operator shall when requested by a representative of any party call a meeting of the operating committee. The operator may do so at any time to keep the parties informed on the upstream petroleum operations. 4.4. A request to call a meeting of the operating committee shall state the purpose of that meeting and except in an emergency the operator shall give the parties at least fifteen 15 days written notice with an agenda of the meeting but where a meeting is called in an emergency the operator shall give as much notice thereof as possible by telephone or email and except with the consent of all the parties the business of a meeting shall be only that for which it was called. 4.5. The operator may instead of calling a meeting submit matters to the parties by written notice upon which each party may vote within the period prescribed in the notice which shall not be less than three 3 days or more than fifteen 15 days from the date notice is received. Failure of a party to vote within the above time limits shall be deemed a negative vote. 4.6. Each party shall have a voting interest equal to its participating interest. Unless otherwise provided in this Participation Agreement all decisions of the operating

committee shall be made by the affirmative vote of at least two 2 parties holding not less than .per cent of the participating interests. 4.7. The operator shall at least one hundred and twenty 120 days before the end of each year submit to the parties for approval a participation work programme and budget which shall contain details of the upstream petroleum operations to be carried out in the next year and allocation of funds therefor including administrative overheads and third party expenditure in accordance with the accounting procedure attached to this Participation Agreement as exhibit A. 4.8. Unless unanimously agreed at least sixty 60 days prior to the beginning of the year the operator shall call a meeting of the operating committee to discuss and approve a participation work programme and budget for the ensuing year and such work programme and budget shall be approved not later than thirty 30 days prior to the commencement of such year and the decision of the operating committee shall bind the parties. Upon 104 P a g e approval of such work programme and budget the operator is hereby authorized and obliged to proceed with it in accordance with such approval. 4.9. Such approved participation work programme and budget may be reviewed and revised from time to time by the operating committee. Any party may in writing request a review of an approved participation work programme or budget or of a project within a programme if that project costs more than U.S. dollars U.S.D and the request shall state the objections of the party which shall be considered by the operating committee who may amend the participation work programme or budget. 5. Costs and Expenses 5.1. Except as otherwise specifically provided in the contract and this Participation Agreement all cost and expenses incurred by the operator in the conduct of operations hereunder shall be borne by the parties in proportion to their respective participating interests set forth in clause 2. 5.2. All costs and expenses incurred by the operator in the conduct of upstream petroleum operations hereunder shall be determined and settled in accordance with best internationally accepted accounting practice consistent with the provisions of the contract and its accounting procedure as complemented by the provisions of exhibit A to this Participation Agreement and the operator shall keep its records of costs and expenses in accordance therewith. 6. Payments to the Operator 6.1. A nonoperator shall pay its share of an

expenditure relating to the petroleum operation within fifteen 15 days of receipt of the account of the operator. 6.2. The operator may upon twenty 20 days written notice request a nonoperator to advance a share of the estimated expenditure for the following month stipulating the due date of payment provided however that such due date of payment shall not be before the first banking day of that month and the operator shall include with such notice an estimate of the cash calls for the next ninety 90 days Operators estimate of expenditure shall not 105 P a g e exceed the approved years budget. The operator may at any time upon fifteen 15 days written notice request additional advances to cover unforeseen expenditure. 6.3. Cash requirements shall be specified by the operator in the currencies required for the upstream petroleum operations and the nonoperators shall advance their shares in the currencies specified. 6.4. If any nonoperators advances for a given month exceed its share of cash disbursements for the same month the next succeeding cash advance after such determination shall be reduced accordingly. However nonoperators may request that excess advances be refunded. The operator shall make such refund within fifteen 15 days after date of such notice. 6.5. Where a party is in default of payment the operator and the nondefaulting parties shall have as security for amounts due hereunder from a defaulting nonoperator a lien on the participating interest share the interest in material and equipment acquired for the upstream petroleum operations and upon the proceeds from the sale of petroleum of that nonoperator and a nonoperator shall have for amounts due hereunder a similar lien on the same interests and property of the operator. 6.6. A lien may be exercised by a nondefaulting party by collecting the amount due from a purchaser of Petroleum and the statement of the operator of the amount due shall be proof thereof. 6.7. A late payment shall attract at LIBOR plus three per cent 3 or per cent whichever is the greater compounded monthly and calculated from the due date of payment. A payment not received within seventytwo 72 hours of the due date shall accrue interest from the due date and the nonpaying party shall be deemed to be in default from the due date of the payment. 6.8. A party which remains in default for five 5 days shall have no right to vote at any operating committee meeting held during the period of the default but shall be bound by all decisions of the operating

committee made during such period and the defaulting party's participating interest shall be deemed to be vested pro rata in the nondefaulting parties for voting purposes during the continuation of the default.

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6.9. Where a party fails to pay an amount required to be paid hereunder and remains in default for ninety 90 days the participating interest share of the defaulting party may be declared forfeit by the nondefaulting parties unless the amount due is an advance and the defaulting party provides an irrevocable letter of credit or other security acceptable to the operator for the amount due.

6.10. When the participating interest share of a defaulting party is declared forfeited the operator shall give notice thereof to all the parties and that share shall vest ratably unless otherwise agreed in the nondefaulting parties without payment of compensation and the defaulting party shall at its sole expense take all steps necessary to vest that share accordingly and the defaulting party hereby appoints the operator to act as its advocate to execute any and all documents required to effect such transfer. Notwithstanding the transfer of a defaulting party's participating interest share in accordance with the foregoing the defaulting party shall remain liable for its proportionate share of the commitments incurred before its rights lapsed.

6.11. Where a party is in default of payment the remaining parties shall advance the operator on demand a share of that payment in proportion to the participating interests of those parties. Any payments received from a defaulting party shall be credited to the accounts of the nondefaulting parties who advanced funds on behalf of the defaulting party.

7. Materials and Equipment

7.1. All materials and equipment acquired by the operator for upstream petroleum operations hereunder shall be owned by the parties in undivided shares in the proportion of their respective participating interests.

7.2. Except as may be otherwise approved by the operating committee the operator shall purchase for the joint account of the parties only such materials and equipment as are reasonably required in the conduct of operation provided for in approved participation work programmes or revisions thereof the operator shall not stockpile materials or equipment for future use without the approval of the operating committee.

7.3. Jointly acquired materials or equipment declared by the operator to be surplus shall be disposed of in such manner as the operating committee may direct; or if the book

value 107 P a g e thereof does not exceed U.S. dollars U.S.D the operator shall dispose of same in such manner as the operator shall deem appropriate; provided however that each Party may if practicable separately take or sell and dispose of its interest in such materials or equipment or may by notice in writing and subject to revocation at will authorize the operator for a period or periods of not more than one 1 year each to sell such materials and equipment for the account of the party or parties giving such authorization. Each party shall have the right to purchase at the prevailing market price in the area materials or equipment which the operator has declared to be surplus and which the operator intends to dispose of on the open market. 7.4. Subject to the provisions of clause 13 of the Contract upon termination of this Participation Agreement the operator shall salvage for the joint account all jointly owned materials and equipment which can reasonably be salvaged to be disposed of as provided in clause 7.3 hereof. 8. Relationship of the Parties and Tax Provisions 8.1. The parties declare that it is not their intention by entering into this Participation Agreement to create or be considered as a partnership or any other similar entity. 8.2. Each party shall be responsible for and shall pay its own taxes to the Kenyan authorities on its operations hereunder subject to the provisions of clause 39 of the Contract recognizing that a party hereunder may be subject to the laws of its place of incorporation in addition to the laws of Kenya. 9. Surrenders and Transfers 9.1. Any party desiring that all of the participation area be surrendered voluntarily shall notify the other parties in writing accordingly specifying its reasons therefor and thereafter 9.1.1. each party shall within thirty 30 days after receipt of the notice inform the other parties in like manner whether it concurs in or opposes the proposed surrender; 9.1.2. if all the parties concur in the proposed surrender the participation area shall be surrendered as soon as possible under the Contract; 9.1.3. if one or more of the parties oppose the proposed surrender the party or parties desiring to surrender shall upon request by the opposing parties transfer and convey without 108 P a g e warranty of title free and clear of all liens charges and encumbrances and without right to compensation all of its or their interests in the participation area and material left thereon to said opposing party or parties each in the proportion that its or their participating interests hereunder

bears to the sum of the participating interests of all the opposing parties or as otherwise agreed by the opposing parties. The transferring party or parties shall bear 9.1.3.1. its or their participating interest shares of costs expenses and liabilities incurred hereunder which are attributable to the participation area for the period prior to the effective date of such transfer of interest; 9.1.3.2. its or their participating interest shares of all costs and expenses incurred by the operator after such date under any contracts entered into by the operator in execution of a participation work programme theretofore approved by the operating committee; and 9.1.3.3. its or their participating interest shares of any accrued obligations under the contract which are not included in 9.1.3.1 or 9.1.3.2 above but shall thereafter have no further rights or other obligations in connection therewith; and 9.1.4. a transfer under clause 9.1.3 above shall be effective as among the parties thirty 30 days after the opposing parties receipt of the transferring partys first mentioned notice proposing surrender. Thereafter until such transfer has received whatever approvals may be necessary under the provisions of the Contract or applicable law the transferring party or parties shall hold at most legal but not equitable title to the interests transferred for the benefit of the opposing party or parties. The transferring party or parties receiving the interests transferred shall execute and deliver such documents and do such other acts as may be necessary to give legal effect to such transfer to obtain all approvals thereof as may be required from the Cabinet Secretary and otherwise to effectuate the purposes of this clause; 9.1.5. notwithstanding the foregoing if the operating committee determines that per cent or more of the estimated discovered and recoverable reserves under the participation area have been produced no party shall be allowed to surrender or 109 P a g e required transfer of interest in this Participation Agreement and the Contract without the unanimous consent of all parties. 9.2. No transfer of any interest under this Participation Agreement and the Contract shall be made by any party otherwise than in respect of an undivided interest in all or part of its participating interest in this Participation Agreement and the Contract and in accordance with the following provisions of this clause 9. 9.3. If any party receives a bona fide offer for the purchase of all or a portion of an offereepartys participating interest in this Participation

Agreement and the participation area which the offereeparty is willing to accept the offeree party shall give notice thereof in writing to the other parties 9.3.1. such notice shall set forth the identity of the offeror the terms and conditions including monetary and other considerations offered in good faith and all other relevant particulars; 9.3.2. for a period of thirty 30 days next following the receipt of such notice the otherparties shall have an option to purchase the entire interest proposed to be sold on the same terms offered by the offeror as set forth in the respective offer; 9.3.3. if more than one of the parties should exercise its right to purchase said interest each shall have the right to acquire such interest in the proportion that the participating interest hereunder of such party bears to the sum of the participating interests of all the parties exercising such right except as they may otherwise agree; 9.3.4. if within such a period of thirty 30 days none of the other parties shall exercise its rights to purchase said interest the sale to said offeror may be made under the terms and conditions set forth in the notice given; provided that the sale shall be consummated within six 6 months from the date of such notice and that the sale and any transfer shall be in accordance with the Contract and applicable laws; 9.3.5. for the purposes of this paragraph an offer to purchase shall also include an acceptance of an entitys offer to sell. 9.4. The limitations of clause 9.3 shall not apply to a transfer of a participating interest by a party to an affiliate of such party or by the Government to an appointee or from an appointee to another appointee nor shall they apply to a transfer of a participating interest effected as a result of merger consolidation reorganization or sale of capital stock of the parent company of a party. 9.5. Every transfer of a participating interest in the participation area shall be made expressly subject to this Participation Agreement and shall include a corresponding interest in jointly acquired equipment and facilities. No transfer of an interest hereunder shall be effective unless made by an instrument in writing duly executed by the parties thereto in accordance with applicable law and until the same has received all consents required under this Participation Agreement and the Contract. A transfer shall provide that the transferor remains liable for obligations incurred before the date of transfer and such obligations shall in addition become the obligations of the transferee. Where after the transfer the

transferee or transferor owns a participating interest of less than five per cent 5 they shall be jointly represented. 9.6. A transfer other than to an affiliate of an appointee shall be of sufficient financial standing to meet its participating interest share of its obligations under the Contract and this Participation Agreement. In the event of a transfer of a participating interest to an affiliate of a party the transferor party shall remain responsible for the full performance by the affiliate of the obligations undertaken by the said party under this Participation Agreement and the Contract and if such affiliate ceases to be an affiliate the participating interest shall be transferred back to the party. 9.7. In this Article transfer means a transfer assignment sale or other disposal of the interest of a party.

10. Disposal of Production 10.1. Each party shall separately own take in kind and dispose of its participating interest share of that portion of the petroleum produced and saved from the participation area to which the contractor is entitled under clause 38 of the Contract. 10.2. Within six 6 months following the signing of this Participation Agreement the parties shall in accordance with the provisions of the Contract and in light of the gathering and transportation facilities available under the adopted development plan in good faith establish a set of rules governing the scheduling lifting and other necessary provisions for 111 P a g e the crude oil offtakes of the parties consistent with best petroleum industry practice which shall provide among other things such detailed terms and procedures as required for 10.2.1. shortterm production forecasts; 10.2.2. nominations and calculation of entitlements; 10.2.3. scheduling of deliveries; 10.2.4. lifting tolerances; 10.2.5. underlift overlift and makeup provisions; 10.2.6. passage of title and risk; 10.2.7. penalties assessable to the parties which cause shutin or reductions of production; and 10.2.8. other related matters. Whatever is mutually agreed by the parties shall be deemed to form part of this Participation Agreement. The above terms and procedures shall apply separately to each grade of crude oil that is segregated and separately stored for offtake. 10.3. The contractor if so directed by the Cabinet Secretary shall be obligated to lift and market part or all of the Government's share of profit crude oil and/or profit natural gas. When the Cabinet Secretary elects not to take and receive in kind any part of the Government's share of profit crude oil and/or profit natural gas the Cabinet Secretary shall notify the contractor

ninety 90 days before the commencement of each half year specifying the quantity of production and such notice shall be effective for the ensuing half year. Any sale by the contractor of the Governments share of profit crude oil and/or profit natural gas shall not be for a term of more than one 1 year without the Cabinet Secretarys consent. 10.4. In the event of production of associated natural gas or of any discovery of natural gas the parties shall agree upon appropriate procedures for disposal of any natural gas available under this Participation Agreement and the Contract. 112 P a g e 11. Sole Risk Operations 11.1. Any party may undertake upstream petroleum operations at sole risk hereinafter referred to as sole risk project in a participation area subject to the provisions of this Article. 11.2. The following types of sole risk project may be proposed 11.2.1. the drilling of a well or the deepening sidetracking completing plugging backtesting or reworking of an existing well drilled for the joint account of the parties in order to test a formation in which no jointly owned well has been completed as a well producing or capable of producing petroleum; 11.2.2. the installation of production and transportation facilities. 11.3. The conduct of a project in a development area may not be the subject of a sole risk notice under this clause until after it has been proposed in complete form to the operating committee for consideration pursuant to clause 4 hereof and has not been approved within the period therein provided. In the event that such project fails to obtain the requisite approval of the operating committee then any party may serve notice on the other parties of its intention to carry out that project at sole risk. The other parties may give counternotice that they wish to participate in the project within sixty 60 days after receipt thereof but where a drilling rig is on the location and has not been released the period is reduced to seventytwo 72 hours after receipt thereof. The periods set forth in this subsection shall be extended for any period of time mutually agreed by the parties as necessary or desirable for acquiring or developing additional information on the sole risk project. 11.4. If all the other parties elect to participate in the project identified in the proposing partys notice within the period thereof provided such project is considered as being approved by the operating committee and the provisions of clause 4.8 of this Participation Agreement shall apply. 11.5. In the event that less than all the parties elect to participate in the

project the parties which elected to participate hereinafter referred to as sole risk parties shall be entitled to have the sole risk project carried out. The interest of each sole risk party in a sole risk project shall be in proportion to its participating interest in this Participation Agreement or in such other proportion as the sole risk parties may agree. Any sole risk project shall be carried out at the sole risk cost and expense of the sole risk parties in the proportion of their respective interests.

11.6. A sole risk project shall be carried out by the operator on behalf of the sole risk parties under the provisions of this participation agreement. No sole risk project may be commenced after one hundred and eighty 180 days following the expiration of the notice period prescribed in subclause 11.3 but the operator shall commence work as promptly as reasonably possible if the notice period of seventytwo 72 hours set forth in subclause 11.3 applies. The operator shall complete the sole risk project with due diligence provided that it does not jeopardize hinder or unreasonably interfere with upstream petroleum operations carried out under the Contract and adopted by the operating committee pursuant to clause 4 of this Participation Agreement. The sole risk parties may use for the sole risk project any production handling processing and/or transporting facilities which are joint property subject to a determination by the operating committee as to usage fees availability of capacity and production compatibility.

11.7. In connection with any sole risk project

11.7.1. the sole risk project will be carried out under the overall supervision and control of the sole risk parties in lieu of the operating committee;

11.7.2. the computation of costs and expenses of the sole risk project incurred by the sole risk parties shall be made in accordance with the principles set out in exhibit A attached hereto;

11.7.3. the operator carrying out the sole risk project shall maintain separate books records and accounts including bank accounts for the sole risk project which shall be subject to the same right of examination and audit by the sole risk parties;

11.7.4. the costs and expenses of the sole risk project shall not be reflected in the statements and billings rendered by the operator for upstream petroleum operations under the Participation Agreement; and

11.7.5. if the operator is carrying out a sole risk project on behalf of the sole risk parties the operator shall be entitled to request the sole risk parties in connection with the sole risk

project to advance their share of the estimated expenditure and shall not use joint account 114 P a g e funds or be required to use its own funds for the purpose of paying the costs and expenses of the sole risk project; furthermore the operator shall not be obliged to commence or having commenced to continue the sole risk project unless and until relevant advances have been received from the sole risk parties. 11.8. The sole risk parties shall indemnify and hold harmless the other parties against all actions claims demands and proceedings whatsoever brought by any third party arising out or in connection with the sole risk project and shall further indemnify the other parties against all damages costs losses and expenses whatsoever directly or indirectly caused to or incurred by them as a result of anything done or omitted to be done in the course of carrying out such sole risk project. 11.9. Subject to the provisions of subclause 11.10 below the sole risk project including data and information is wholly owned by the sole risk parties in accordance with the provisions of the Contract but the sole risk parties shall keep the other parties informed about the project. In the event that such project results in an increase of production of petroleum from the participation area the portion of such increase which is available to the contractor under the Contract shall be owned solely by the sole risk parties. Each of them shall have the right and obligation to take in kind and separately dispose of its proportional share of supplementary petroleum production. 11.10. Any party or parties which are not participating in the sole risk project may by giving thirty 30 days notice to the sole risk parties become participants in such project at any time after the sole risk parties have recovered from the supplementary petroleum production the following sums of money to which they are entitled on the project In the case of a project under clause 11.2.1 hereof per cent of the sole risk cost of such project plus one hundred per cent 100 of the cost of operating such well incurred by the sole risk parties In the case of a project under clause 11.2.2 hereof per cent of the sole risk cost of such project plus one hundred percent 100 of the cost of operating such facilities. The value of the supplementary production to which a sole risk party is entitled shall be the market value in sales at arms length determined in accordance with clause 35 of the Contract. 115 P a g e From and after the election of any party or parties to become participants in such project all relevant

wells facilities equipment and other property appurtenant thereto shall be owned jointly by the participating parties and each of the participating parties shall be entitled to receive its proportional share of the supplementary petroleum production.

12. Confidentiality

12.1. All information related to the upstream petroleum operations shall be confidential and shall not be disclosed to a person other than a party except to

12.1.1. an affiliate;

12.1.2. the Government and other public authorities to the extent necessary for the purpose of any applicable law;

12.1.3. a stock exchange to which a party is obliged to make disclosure;

12.1.4. contractors consultants legal counsels or arbitrators of a party where disclosure is essential;

12.1.5. a bona fide prospective purchaser of an interest of a party in the Contract but that purchaser shall undertake to treat that information as confidential;

12.1.6. a lender where disclosure is essential; or

12.1.7. a person to whom disclosure has been agreed by the parties.

12.2. A party making a disclosure to a person described in clause 12.1.5 or 12.1.6 shall give ten 10 days written notice thereof to the other parties.

12.3. The parties shall consult with each other prior to the release of any public statement or press release and except to the extent required by law rule or regulation of any governmental authority or stock exchange no party shall make any public statement or press release without the approval of all the other parties which shall not be unreasonably withheld. The operator shall utilize its best efforts to coordinate all such public statements to the end that all parties may effect simultaneous press releases.

12.4. The obligations of the parties under this clause 12 are continuing obligations and any party ceasing to be a party to this Agreement shall remain bound by this clause until this 116 P a g e Agreement is no longer in force between any remaining parties and the Contract has expired.

13. Liability

13.1. The parties shall be severally liable in accordance with their respective participating interests to third parties.

13.2. Where the Government has nominated an appointee as defined in the Contract and the appointee defaults the Government shall be liable.

13.3. If because of the operation of the joint and several liability provisions contained in the Contract anyone of the parties hereto shall be required to pay in full to the Government or any other party any sum which if the liability were several would be required separately from each of the parties or from one other party only then the parties shall

notify forthwith and request immediate payment of the parties proportionate share according to its participating interest. If within ten 10 days from receipt of said notice the other parties shall fail to make payment as provided above such parties shall be in default and the provisions of clause 6 above shall apply this being without prejudice to any other legal remedies available to the nondefaulting parties against the defaulting parties. 14. Governing Law 14.1. This Participation Agreement shall be governed by and be construed in accordance with the laws of Kenya. 15. Arbitration 15.1. A dispute under this Participation Agreement shall be referred to arbitration in accordance with clause 53 of the Contract. 16. Force Majeure 16.1. In this clause 16 force majeure means an occurrence beyond the reasonable control of any of the parties which prevents any of them from performing their obligations under this Participation Agreement. 16.2. Where a party is prevented from performing an obligation under this Participation Agreement by force majeure that party shall give written notice to the other parties and the obligation of the affected party shall be suspended for the period of the force majeure. 16.3. The affected party shall promptly notify the other parties when the period of force majeure terminates. 16.4. No party may claim force majeure as a reason for the failure to timely pay any monies pursuant to this Participation Agreement. 16.5. Where any Party disputes the existence of force majeure that dispute may be referred to arbitration as provided in clause 53 of the Contract. 17. Notices 17.1. All notice and other communication under this Participation Agreement shall be in writing and shall be delivered by hand sent by registered post certified post or fax to the following address of the other To the Government Ministry of Energy and Petroleum FAO Hon Cabinet Secretary Kenyatta Avenue P.O. Box 3058200100 Nairobi.Kenya. Fax 25420240910 Email csenergymin.go.ke To the Contractor .. 17.2. A notice shall be effective on receipt. 17.3. Any notice if sent by facsimile shall be deemed received by the party to whom it was addressed on the first business day after the day upon which the facsimile was received. Any notice if by personal delivery to any party shall be deemed to be received by the addressee on the date of delivery if that date is a business day or otherwise on the next business day following. In the event that a notice sent by facsimile includes a

request for confirmation of the receipt thereof such a confirmation shall be sent no later than one 1 business day after receipt of the notice. The contractor may at any time and from time to time change its authorized representative or its address herein on giving the Government ten 10 days notice in writing to such effect. 18. Term 18.1. This Participation Agreement shall come into force on the participation date and shall remain in force until 18.1.1. it is terminated by the written consent of all the parties; 18.1.2. all the Participating Interests are vested in one party; or 18.1.3. the expiration or termination of the Contract. 18.2. Before this Participation Agreement is terminated there shall be a final accounting and settlement of the joint account. 19. Final Provisions 19.1. Headings are inserted in this Participation Agreement for convenience only and shall not affect the construction for interpretation hereof. 19.2. This Participation Agreement shall not be amended modified or supplemented except by an instrument in writing signed by the parties. 19.3. Subject to the provisions hereof this Participation Agreement shall inure to the benefit of and be binding upon the successors and assignees of the parties hereto and each of them respectively. IN WITNESS WHEREOF the parties hereto have signed this Participation Agreement 119 P a g e on the day and year first above written. 120 P a g e EXHIBIT A ACCOUNTING PROCEDURE Attached to and made a part of the Participation Agreement. SECTION I GENERAL PROVISIONS 1.1. Interpretation. 1.2. Statements billings and adjustments. 1.3. Advances and payments. 1.4. Audits. SECTION II CHARGEABLE COSTS EXPENDITURE AND CREDITS 1. Section I General Provisions The purpose of this accounting procedure is to establish equitable methods for determining charges and credits applicable to operations under the Agreement. It is the intent of the parties that no party shall lose or profit by reason of its duties and responsibilities as either operator or as nonoperator and that no duplicate charges to the joint account for the same work shall be made. The parties agree that if any procedure established herein proves unfair or inequitable to any party the parties shall meet and in good faith endeavour to agree on the changes necessary to correct that unfairness or inequity. 1.1.1 In this Exhibit 1.1 Interpretation i the Agreement means the Participation Agreement of which this Exhibit forms part; ii the Contract means the production

sharing contract to which the Agreement is attached; iii words and expressions defined in the Agreement the Contract and its appendices have the meanings therein ascribed to them. 121 P a g e 1.1.2 In the event of any conflict between the provisions of the Agreement and this exhibit the provisions of the Agreement shall prevail. 1.1.3 By mutual agreement between the parties this accounting procedure attached to the Agreement may be revised from time to time by an instrument in writing signed by the parties. 1.2 Statements Billings and Adjustments 1.2.1 The operator shall maintain financial accounts and records necessary to record in reasonable details the transactions relating to upstream petroleum operations under the Agreement which shall be prepared in accordance with generally accepted standards of the International Petroleum Industry. The operator shall upon request by a party furnish a description of its accounting classifications. 1.2.2 Each party to the Agreement is responsible for preparing its own accounting and tax reports and paying of its own tax obligations to meet Kenyan requirements. The operator shall furnish the nonoperators with all reports statements billings and accounting documents necessary to maintain their own accounting records. 1.2.3 The operator shall bill the nonoperators on or before the last day of each month for their proportionate share of expenditure for the preceding month. Such billings shall be accompanied by statements of all charges and credits to the joint account summarized in reasonable detail by appropriate accounting classifications indicative of the nature thereof except that items of controllable material and unusual charges and credits shall be detailed. 1.2.4 The operator shall upon request by nonoperators furnish a description of such accounting classifications. 1.2.5 Amounts included in the billings shall be expressed in the currency in which the operators records are maintained. In the conversion of currencies when accounting for advances or payments in different currencies as provided for in clause 1.3 or any other currency transactions affecting operations under the Agreement it is the intent that none of the parties shall experience an exchange gain or loss at the expense of or to the benefit of the other parties. It is agreed that any loss or gain to the joint account resulting from the exchange of currency required for operations under the Agreement or from the translations required shall be charged or credited to the joint

account. The operator shall furnish the parties with a 122 P a g e description of the procedure applied by the operator to accomplish said translation or exchange of currencies and provide currency exchange data sufficient to enable nonoperators to translate the billings to the currency of the nonoperators accounts. 1.2.6 Payment of billings by nonoperators shall not prejudice the right of any nonoperators to protest or question the correctness thereof; however all bills and statements rendered to nonoperators by the operator during any year shall conclusively be presumed to be true and correct after twentyfour 24 months following the end of any such year unless within the said twentyfour 24 month period a nonoperator takes written exception thereto and makes claim on the operator for adjustment. No adjustment favourable to the operator shall be made unless it is made within the same prescribed period. The provisions of this subsection shall not prevent adjustments resulting from a physical inventory of the joint property or from a third party claim. 1.3 Advances and Payments 1.3.1 If an operator so requests nonoperators shall advance to the operator the nonoperators share of estimated cash requirements for the succeeding months operation in accordance with clause 6 of the Agreement. The operator shall make written request for the advance to nonoperators at least twenty 20 days prior to the first banking day of such succeeding month. The advance shall not be due and payable before the first banking day of the month for which the advance is requested. The request shall set out the funds in the currencies to be expended as estimated by the operator to be required. The nonoperators shall on or before the due date make corresponding advances in the currencies requested by depositing such funds to operators account at a bank as may be from time to time designated by the operator. 1.3.2 Should the operator be requested to pay any large sums of money for operations under the Agreement which were unforeseen at the time of providing the nonoperators with said monthly estimates of its requirements the operator may make a written request to the nonoperators for special advances covering the nonoperators share of such payments. Nonoperators shall advance to operator their share of such advances within fifteen 15 days after date of such notice. 123 P a g e 1.3.3 If nonoperators advances exceed their share of actual expenditure the next succeeding cash advance

after such determination shall be reduced accordingly. However nonoperators may request that excess advances be refunded. The operator shall make such refund within fifteen 15 days after date of such notice.

1.3.4 If nonoperators advances are less than their share of actual expenditure the deficiency shall at operators option be added to subsequent cash advance requirements or be paid by nonoperators within fifteen 15 days following operators billing to nonoperators of such deficiency.

1.3.5 If the operator does not request nonoperators as provided in clause 1.3.1 to advance their share of estimated cash requirements nonoperators shall pay their share of actual expenditure within fifteen 15 days following date of operators billing.

1.3.6 Payments of advances or billings shall be made on or before the due date; and if not so paid the unpaid balance shall be treated as provided under clause 6 of the Agreement.

1.4 Audits

1.4.1 A nonoperator upon at least thirty 30 days advance written notice to the operator and other nonoperators shall have the right at its sole expenses to audit the joint account and related records for any year or portion thereof within the twentyfour 24 month period following the end of such year; however the conducting of an audit shall not extend the time for the taking of written exception to and the adjustment of accounts as provided for in clause 1.2.5. The operator shall make every reasonable effort to cooperate with the nonoperators and the nonoperators shall make every reasonable effort to conduct audits in a manner which shall result in minimum inconvenience to the operator.

1.4.2 All adjustments resulting from an audit agreed between the operator and the nonoperator conducting the audit shall be rectified promptly in the joint account by the operator and reported to the other nonoperator. Any unresolved dispute arising in connection with an audit shall be referred to arbitration in accordance with clause 53 of the Contract.

1.4.3 Except as otherwise provided in the Contract the cost of any audit or verification of the joint account that is for the benefit of all parties shall be chargeable to the joint account if the parties mutually agree.

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Section 2 Chargeable Costs Expenditure and Credits

The operator shall charge the joint account for all those costs and expenditure necessary to conduct upstream petroleum operations under the Agreement pursuant to the provisions of clauses 3.1 to 3.11 of appendix B to the contract. The operator shall credit the joint account for all the

proceeds resulting from upstream petroleum operations under the Agreement pursuant to the provisions of clause 3.12 of appendix B to the Contract.

125 P a g e

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STRATEGIC ALLIANCE AGREEMENT BETWEEN NIGERIAN PETROLEUM DEVELOPMENT COMPANY LIMITED AND SEPTA ENERGY NIGERIA LIMITED FOR THE DEVELOPMENT AND PRODUCTION OF OMLS 438 AND 41.

b TFFRFE.FSTRATEGIC ALUANCE AGREEMENT BETWEEN IGERIAN PETROLEUM DEVELOPMENT CO PAN ITED and SEPTA ENERGY NIGERIA LIMITED for DEVELOPMENT AND PRODUCTION OF OML. B AND 41 of the one part; day of .. 2010 THIS AGREEMENT is made this BETWEEN NIGERIAN PETROLEUM DEVELOPMENT COMPANY LIMITED a company incorporated under ihe laws of the Federal Republic of Nigeria whose

registered office is at 62 Sapele Road Benin City hereinafter referred to as NPDC which expression shall where the context so admits include its successors and assigns AND SEPTA ENERGY NIGERIA LIMITED a company incorporated under the laws of the Federal Republic of Nigeria whose registered office is at Plot 99 Ajose Adeogun Street Victoria Island Lagos hereinafter referred to as SEPTA which expression shall where the context so admits include its successors and assigns of the other part. WHEREAS the Federal Government of Nigeria Government has granted consent vide a Deed of Assignment dated 16 September 2010 for the Nigeria National Petroleum Corporation NNPC] to assign its fifty five per cent 55 equity interest in the Contract Area to NPDC WHEREAS SEPTA has offered to carry NPDC's equity interest share of Petroleum Operation Costs and provide technical expertise as and when required in relation to Petroleum Operations in the Contract Area; WHEREAS Government in consideration of the huge capital outlay and other resources required for Petroleum Operations in the aforementioned areas has approved that NPDC enter into a strategic alliance with SEPTA for the provision WHEREAS NPDC and SEPTA warrant that they have the right power and authority to enter into this Agreement; e WHEREAS SEPTA represents that it has technical competence, professional skills and funds both local and foreign necessary to support NPDC in Petroleum Operations for the Contract Area and has agreed to provide the funds for carrying out Petroleum Operations and further agreed to support NPDC with technical expertise. NOW THEREFORE in consideration of the premises and mutual covenants herein contained the Parties hereby agree as follows ARTICLE 1 1.0 DEFINITIONS 1.1 In this Agreement including the recitals and the Annexes attached hereto unless the context otherwise requires words and expressions used shall bear the meanings stated herein Accounting Procedure means the rules and procedures set forth in Annex C attached hereto and forming part of this Agreement; Affiliate or Affiliated Company means a company or other entity that controls or is controlled by a Party or a company or other entity which controls or is controlled by a company or other entity which controls a Party; and for the purpose of this definition control means ownership by one company or entity of at least fiftyone per cent 51 of the voting stock if the other company is

company issuing stock or the controlling rights or interest if the other entity is not a company.

Available Crude Oil means the Crude Oil won saved and allocated to NPDC from the Contract Area.

Available Natural Gas means the non associated natural gas won saved and allocated to NPDC from the Contract Area.

Barrel means a quantity or unit of Crude Oil equal to fortytwo 42 United States gallons at the temperature of sixty degrees 60 Fahrenheit at normal atmospheric pressure.

Barrels of Oil Equivalent or BOE means the amount of energy equivalent contained in a barrel of crude oil 5.8×10^6 BTU.

BCF means billion cubic feet of Natural Gas.

Budget means the cost estimate of items included in Work Programme.

CAPEX means the costs referred to in Article 1 paragraph 2 of Annex C of this Agreement.

Agreement means this Strategic Alliance Agreement including the Annexes attached hereto.

Contract Area means the area covered by Oil Mining Leases OMLs 438 and 41 and any subdivisions arising therefrom in compliance with the relinquishment provisions of Paragraph 12 of the first schedule to the Petroleum Act.

The Coordinates of the Contract Area is as described in Annex A hereto.

Term of Agreement means the period referred to in Article 3.

Companies Income Tax or CIT means the tax obligations arising from the utilization of natural gas as defined in the Companies Income Tax Act Cap C20 LFN 2004 as amended CITA.

Contract Year means a period of twelve 12 consecutive calendar months from the Effective Date of this Agreement or from the anniversary of the Effective Date.

Cost Oil means the quantum of Available Crude Oil allocated to the Parties to enable the Parties to generate the proceeds to recover their respective costs incurred in carrying out Petroleum Operations under this Agreement.

Cost Gas means the quantum of non associated gas allocated to the Parties to enable the Parties to generate the proceeds to recover their respective costs incurred in carrying out Petroleum Operations with respect to non associated gas under this Agreement.

Crude Oil means mineral oil in its natural state before it has been refined or treated excluding basic sediments and water or other foreign substances.

Crude Oil Proceeds means the amount in Dollars determined by multiplying the Official Selling Price by the number of Barrels of Available Crude Oil lifted by either Party.

US.

Development means Petroleum Operations undertaken in the Contract Area for the purpose of

putting the Contract Area into production pursuant to any development programme approved in accordance with Article 9 hereof. cost not limited to Development Costs means the of developmental activities which includes but is not limited to drilling completing capping plugging and abandoning appraisal development water injection or gas injection wells the construction and installation the production storage transportation and delivery and evacuation of Crude Oil and Natural Gas as well as the installation of secondary recovery facilities. Development Costs Incremental Production activities. facilities and equipment required for Incurred include during shall cost also of Effective Date means the date of the execution of this Agreement by the Parties hereto being the day and year first above written Financial Year means a period of twelve 12 calendar months from the 1 January to the 31 December. Fixed Assets means immovable property and includes movable property which has been affixed installed constructed or attached to immovable property as part of the facilities utilised for carrying out Petroleum Operations. Foreign Exchange means currency other than acceptable to both NPDC and SEPTA. that of Nigeria that is Gross Negligence means any act of failure to act by the Operator or SEPTA which was intended to cause or which was in reckless disregard or wanton indifference to the harmful consequence that the Operator or SEPTA knew or should have known such act or failure would have on (a) safety of life or property or (b) Petroleum Operations or (c) books and accounts particularly of industry accounting standards and procedures. Incremental Production means monthly production of Crude oil or Natural Gas over and above Proven Developed and Producing reserves attributable to capital contributions by SEPTA 5 LIBOR means the seven day term London InterBank Offer Rate for U.S. Dollars for similar amounts to the sums in question quoted by Barclays Bank in London at 1100 a.m. on the first business day of the relevant period. Management Committee means the committee established by NPDC and SEPTA to carry out the functions set out in Article 7 of this Agreement Market Price means official selling price in a given month of the Crude Oil and non associated Natural Gas produced from the Contract Area in US Dollars per Barrel shall be related to Dated Brent Differential NNPC in accordance with the NNPCs monthly published price for the different grades of Crude Oil. MCF means million cubic feet of

Natural Gas. ~~le~~Dated Brent means the average of Platts midrange quotations of Dated Brent crude as published by Platts Crude Oil marketwire. Differential means the monthly premium as published by NNPC. The applicable pricing shall be on either Prompt Advanced or Deferred basis Prompt basis shall be five (5) consecutive published quotations after the bill of lading date with the bill of lading date as day zero. Advanced valuation shall be five (5) consecutive published quotations with the fifth day before the bill of lading day i.e the bill of lading day is day six. Deferred pricing option shall be five (8) consecutive published quotations with the 14 day after the bill of lading date as day one i.e. the bill of lading date is day zero. However each Party's preferred option must be indicated at close of work 4.00 pm of the sixth (6) working day before the first day of the laycan. In case either Party's preferred option is not advised to the PMT by close of work of the last working day prior to the first day of the laycan the Prompt option will apply in the valuation of that Party's lifting. ~~P~~ For Natural Gas it regulations. shall be US Dollars MCF according to the gas pricing Natural Gas means all gaseous hydrocarbons produced in association with Crude Oil or from reservoirs which produce gaseous hydrocarbons Natural Gas Proceeds means the amount in Dollars determined by multiplying the Official Selling Price by the number of Barrels of Available Crude Oil lifted by either Party. US. Operator means any operator appointed to carry out Petroleum Operations in the Contract Area. Operating Committee means the operating committee established under the joint operating agreement governing the operations of the Contract Area. Party means NPDC or SEPTA Parties means both NPDC and SEPTA. Petroleum Operations means all Crude Oil and Natural Gas Development and Production Operations precessing terminal activities for or with respect to the Contract Area. transportation and Crude Oil Petroleum Operations Costs means expenditures made and obligation incurred in carrying out Petroleum Operations as determined in accordance with this Agreement and the Accounting Procedure. Petroleum Profit Tax or PPT means the tax obligations arising from the Petroleum Operations as defined in the Petroleum Profit Tax Act Cap P13 LFN 2004 as amended PPT Act. Production Operations Costs means all costs incurred in carrying out Production Production Operations means all operations carried out subsequent to Development in

order to produce, treat, store, convey and deliver Crude Oil and Natural Gas from wells, platforms and facilities to a refinery terminal or other utilisation or marketing point. Profit Oil means the balance of Available Crude Oil after the allocation of Royalty Oil, Cost Oil and Tax Oil. Profit Gas means the balance of Available Natural Gas after the allocation of Royalty Gas, Cost Gas and Tax Gas. Proven Developed and Producing or PDP or p1 Developed means the monthly production forecast attached to this Agreement attributable to the Proven Developed and Producing reserves from the Contract Area not less than 26 Million BOE or greater than 40 Million BOE in the aggregate. Project Management Team or PMT means a team made up of personnel from NPDC and SEPTA appointed by the Management Committee and controlled by SEPTA for a minimum period of 3 years and no longer than 5 years from the Effective Date. Quarter means the time interval from; January 1 to March 31 inclusive, April to June 30 inclusive, July 1 to September 30 inclusive, October 1 to December 31 inclusive. Royalty means the amount payable pursuant to the Petroleum Act and Petroleum Drilling and Production Regulations Cap P10 LFN 2004 as amended. Royalty Oil means the quantum of Available Crude Oil allocated to NPDC which will generate an amount of proceeds equal to the actual payment of Royalty. Royalty Gas means the quantum of Available Natural Gas allocated to NPDC which will generate an amount of proceeds equal to the actual payment of Royalty. Tax Oil means the quantum of Available Crude Oil allocated to NPDC which will generate an amount of proceeds equal to the actual payment of PPT. Tax Gas means the quantum of Available Natural Gas allocated to NPDC which will generate an amount of proceeds equal to the actual payment of CIT. U.S. Dollars means the currency of the United States of America. Wilful Misconduct means in relation to the Operator or SEPTA an intentional, conscious, reckless and wanton disregard of any material provision of this Agreement; or any substantial part of the Work Programme as contained in Article 9. But shall not include an intentional and conscious disregard of either a or o above if life property or Petroleum Operations. the same relates to safeguarding of Work Programme means for the applicable period a statement itemizing the Petroleum Operations to be carried out in the Contract Area. Working Capital means the funds required to conduct

Production Operations. 2P Reserves means 335 Million BOE REST OF PAGE INTENTIONALLY LEFT BLANK ;pff ARTICLE 2 ENTRY FEE 2.1 2.2 23 2.4 2.5 NPDC ocknowledges SEPTAs obligation to pay Fifty Four 54 Milion U.S. Doflars 1o NPDC s an entry fee for participation in the development of 2P Reserves. The entry fee shall be paid into an account of and in the name of NPDC no later than Seventy 70 days after the execution of this Agreement. 70 days prior No later than the Work Programme for the capture of confingent resources up to 160 Million Barrels Crude Ol and 357 BCF of Natural Gas SEPTA shall pay to NPDC o further sum of Twenty Six Million Six Hundred Thousand 26.6 Million U.S. Dollars. the commencement of to The entry fee shall not be recoverable as Cost Ol or Cost Gas. This Agreement shall commence upon the payment of the eniry fee by SEPTA. REST OF PAGE INTENTIONALLY LEFT BLANK ARTICLE 3 DURATION OF THE AGREEMENT 3.1 32 33 full force and effect fil the cumulative This Agreement shall remain in production from the Confract Area has reached 165 Milion Barrels of Crude Ol and 900 8CF of Natural Gas making up o fotal of 335 Milion BOE sarrels of Oil Equivalent thereafter this Agreement shall terminate. Upon payment of the entry fee referred to in Article 2.3 the Agreement shall be renewed on the same lerns and conditions with respect to the capture of the contingent resources of 100 Milion Borrels Crude Oil and 357 BCF of Naturat Gas . if new producible reserves are added to the volumes referred to in Articie this Agreement shall subject to new ferns and 3.1 the duration of conditions agreed upon by the Parfies be extended il the full recovery of such new reserves. Subject to mutual agreement of the Parlies this Agreement may be terminated whenever it appears evident that the cumulative production referred to in Article 3.1 hereinabove cannot be economically attained. REST OF PAGE INTENTIONALLY LEFT BLANK M ARTICLE 4 RIGHTS AND OBUGATIONS OF THE PARTIES 4.1 In accordance with this Agreement SEPTA shall [a subject fo Article 8.1 and in accordance with the approved Work Programme and Budget SEPTA shall provides all the funds required for NPDCs 55 share of Pefroleum Operation Costs in respect of the Confract Areq; defiver to NPDC within seventy 70 days from the Effective Date o parent company guarantee from Seven Energy Intermnationat Limited in the form set out In Annex G covering the fotal amount

of the minimum disbursement required to meet NPDCs fifty five per cent 55 full Development of the Contract Area and additional funds which SEPTA may be obliged to provide in accordance with Article 8.2; of Petroleum Operation Costs share the for SEPTA shall carry out an agreed annual training programme in accordance with Article 14 hereof; in addition to the foregoing SEPTA shall also provide training facilities for NPDCNNPC staff with an annual sum of Three Hundred and Fifty Thousand US Dollars 350000]for a period of five 5 years from the Effective Date which amount shall be paid in January of each year into an account of and in the name of NPDC; be subject to all Nigerian laws orders and regulations applicable to Petroleum Operations; respect all the rights concerning industrial property and indemnify and hold NPDC harmless from and against all claims loss damage or action arising out of or resulting from violation of such rights Any such costs for SEPTA relating to the above shall be reimbursable unless such costs Wilful Misconduct on the part of SEPTA result from the Gross Negligence or not to transfer or assign any rights acquired and obligations undertaken by SEPTA under this Agreement without prior written consent of NPDC which consent shall be unreasonably withheld; nor its servants indemnify and hold agents and harmless NPDC its representatives from and against all losses fees including legal fees and expenses of whatsoever kind and nature which NPOC may suffer or be compelled to pay to employees representatives or agents of SEPTAs subcontractors as a consequence of any final decision given by a Nigerian court except where actions or failure to or representatives contributed to the losses in which case such costs as are attributable to the action or failure on the part of NFDRC shall be recoverable by SEPTA; its employees agents of NPDC or part act the on i lift in accordance with Annex E and freely have the right to export and retain abroad the receipts from the sale of its share of Available Crude Oil and Available Natural Gas allocated to it hereunder subject to Article 10; 4.2 In accordance with this Agreement NPDC shall a k c] d e have full access at all reasonable times during usual business hours to all books records inventories and accounts of any kind or nature maintained by PMT in relation to Petroleum Operations; PMT furnish well production cash call request and other data and information relating to the Contract Area; geophysical

geological drilling with oil have the right of access to the Contract Area at all reasonable times to inspect and observe Petroleum Operations of every kind and character carried on in the Contract Area. PMT shall provide NPDC with necessary facilities to gain such access provided that the provision of such facilities shall not unduly interfere with the conduct of Petroleum Operations hereunder; as an interface between PMT and the Department of Petroleum Resources DPR for all purposes relating to Petroleum Operations hereunder; assist PMT in every way possible to ensure that the provisions of this Agreement shall be carried out under applicable Nigerian laws and regulations including without limitation the obtaining of necessary approvals for the payments and transfers of funds provided for herein; and; f o have the right to nominate pursuant to Article 6 of this Agreement professional staff to occupy defined functional positions in the agreed organizational structure for Petroleum Operations for as long as this Agreement subsists after the takeover of Petroleum Operations pursuant to Article 6.5 hereof ensure that Petroleum Operations are conducted in good and in accordance with internationally accepted petroleum industry practices and with the object of avoiding waste and obtaining maximum ultimate recovery of Crude Oil and Natural Gas at minimum cost; workmanlike manner and h] ensure the renewal of each Oil Mining Lease in the Contract Area under the Petroleum Act CAP P10 LFN 2004 as amended and have a right of first refusal in the event SEPTA wishes to assign any interest under this Agreement to third party.

Article 5 POWERS AND OBLIGATIONS OF THE OPERATOR

5.1 In the event NPDC is designated as the Operator of the Contract Area or a conduct all joint operations with utmost good faith and in a good workmanlike manner in accordance with good industry practice and all applicable laws and regulations; b maintain full and accurate records of all Petroleum Operations performed under this Contract; c be always mindful in the conduct of its operations of the rights and overall interests of Nigeria; d give preference to such goods and services which are available in Nigeria and can be rendered by Nigerian citizens provided they meet the required specifications and are competitive in price; e For the purpose of arriving at Profit Oil and Profit Gas carry out the estimated and final PPT calculation in accordance with the PPT Act and CITA CAP C21 LFN 2004 and submit same on a

timely basis to NPDC; f Allocate 10 to each Party the right to lift in accordance with Annex E. and freely export and re-export abroad the receipts from the 10% share of proceeds from the sale of Available Crude Oil and Available Natural Gas allocated to it hereunder; g give to the Parties full access at all reasonable times during usual business hours to all books records inventories and accounts of any kind or nature maintained relating to Petroleum Operations provided that the Party gives to PMT not less than seven (7) days prior notice in writing and give the Parties the right of access to the Contract Area at all reasonable times to inspect and observe Petroleum Operations of every kind and character carried on in the Contract Area. PMT shall provide either Party with necessary facilities to gain such access provided that the provision of such facilities shall not unduly interfere the conduct of Petroleum Operations hereunder; with i i consult freely with and make full and frank disclosure to the Parties keep them currently concerning Petroleum advised of in connection therewith; matters of importance arising Operations and all except as otherwise provided in this Agreement or as may be authorized by the Management Committee PMT shall not permit or suffer any lien or other encumbrance to be filed or to remain against personal property thereon or related thereto nor against Crude Oil and Natural Gas produced and saved as a result of its operations hereunder unless such lien is imposed by a Court of competent jurisdiction; physical equipment real material only or k have the right to assign and retain such technical administrative and supervisory personnel as deployed to it and consultants as may be necessary for the conduct of Petroleum Operations subject to approval of the Management Committee; l keep accurate records and books of accounts with respect to Petroleum Operations which shall be available during normal business hours to NPDC and SEPTA authorized representatives. Such records and books shall comply with Annex C and generally accepted Accounting Principles and Procedure and with due regard to the requirements of the laws and regulations; m promptly provide to the Management Committee approvals for any expenditure when requested by a Party Parties Parties with copies of n not without the written approval of the Management Committee dispose of sell or re-export any property of such historic cost exceeding One Hundred Thousand Naira N100000.00 per unit or batch or such other

value as may from time to time be determined by Management Committee. Notwithstanding the provision herein PMT hereof shall furnish NPDC and SEPTA quarterly returns of all items of property disposed of regardless of value; time to utilize in Petroleum Operations equipment exclusively owned and made available by a Party and the charges thereafter to the operations shall be as specified in the Accounting Procedure; REST OF PAGE INTENTIONALLY LEFT BLANK

ARTICLE CONDUCT OF JOINT OPERATIONS

6.1 The Parties shall work together to ensure the efficient conduct of The Petroleum Operations in the Contract Area. To this effect an operating structure shall be established where the various departments shall be constituted into operating units and shall have the substantive positions and their respective deputies alternatively manned by the Parties as to this Agreement for as long as the conduct of specified in Annex B Petroleum Operations subsists. Subject to Article 6.5 hereof the Project Operations Manager position to which the operating structure reports shall be held initially by SEPTA for a period of three (3) years and thereafter the position shall be held by NPDC.

6.3 PMT shall be based in an NPDC office. An operational base shall be sited in a convenient location.

6.4 All personnel of PMT shall receive uniform treatment with respect to salaries and other benefits in line with their respective positions

6.5 6.6 6.7 as provided for Without prejudice to SEPTA's right to Cost Oil Profit Oil Cost Gas and Profit

10 PMT shall be fully responsible for Gas Petroleum Operations for a minimum of three (3) years but not exceeding 5 years from the Effective Date. Thereafter SEPTA shall cease to have control PMT. However where SEPTA has not recovered all costs before the expiration of five (5) years SEPTA shall be entitled to recover such costs

Article 11 Upon NPDC being fully responsible for Petroleum Operations NPDC shall continue with Petroleum Operations in accordance with the provisions of this Agreement. Litigation and settlement of claims in connection with the Contract Area or Petroleum Operations shall be conducted for and on behalf of the Parties by NPDC pursuant to the direction of the PMT; provided however not to that NPDC shall exceed N300000.00 Three Hundred Thousand Naira or the foreign currency equivalent without the approval of PMT. NPDC however shall promptly report any such aforesaid settlement to PMT. NPDC shall notify SEPTA of any process

served upon it or of any process it intends to serve in have authority claims and litigation setile 17 any action in relation to Petroleum Operations. Nothing contained in this Article 6.7 shall preclude SEPTA from acting on its own behalf and at its own expense if in its opinion it considers such action advisable or necessary to protect its particular interest hereunder. However SEPTA shall not pursue a course of action contrary to the course of action then being undertaken for the Petroleum Operations with respect to such litigation. in REST OF PAGE INTENTIONALLY LEFT BLANK W

ARTICLE 7 MANAGEMENT COMMITTEE 7.1 A Management Committee shall be established within thirty (30) days from the Effective Date of this Agreement for the purpose of providing orderly direction on all matters pertaining to Petroleum Operations and Work Programme. The powers and duties of the Management Committee shall include but not be limited to the following: a) b) [o] d e f g h i revision amendment and approval of the Programme and Budget; all proposed Work revision amendment and the proposed recommendations made by either Party or by any subcommittee with respect to Petroleum Operations; approval and ensuring that PMT carries out the decisions of the Management Committee and also Petroleum Operations is conducted in accordance with the relevant Nigerian laws; to ensure that the revision or approval of the sale or disposal of any items or movable property relating to Petroleum Operations in accordance with the provisions of this Agreement; resolution of all audit observations; the consideration of periodic performance in respect of approved Work Programme and Budget review of the award of contracts for Petroleum Operations with individual value of Five Hundred Thousand United States Dollars USD 500,000 and above; approval of qualified contractors and subcontractors list; any other matters relating to Petroleum Operations. 7.2 a) The Management Committee shall consist of eight (8) persons appointed by the Parties as follows NPDC SEPTA 4 4 b) Each Party shall designate by notice in writing to the other Party its representatives to serve as members of the Management Committee as provided in Article 7.2a hereof and their respective alternates which members or alternates shall be authorised to represent that Party with respect to the decisions of the Management Committee. Such notice shall give the names titles and addresses of the designated members and alternates S

s c d e At least fourteen 14 days prior to each scheduled Management Committee meeting the Secretary shall notify members of the meeting and deliver to each member an agenda of matters with briefs to be considered during each meeting. Matters which are not delivered within the period stated shall not be considered unless the Management Committee agrees. However no agenda shall be required in the event of an emergency meeting. Otherwise agreed by Party may change any of either Party's respective members or alternates from time to time by notifying the other Party in writing not less than ten 10 days in advance of the effective date of such change. NPDC shall appoint the chairman Chairman of the Management Committee. SEPTA shall appoint the secretary Secretary NPDC shall appoint the assistant secretary Assistant Secretary both of whom shall have no voting rights. The Secretary shall keep minutes of all meetings and records of all decisions of the Management Committee. The minutes of each meeting shall be approved by the Management Committee at the next meeting and signed by the Chairman and Secretary and copies thereof delivered to each Party.

f The Project Operations Manager and his Deputy if not members or alternates shall attend all Management Committee meetings but shall have no voting rights. i l b j i 7.3 7.4a by the Parties agreed otherwise Unless the Management Committee shall meet at on NPDC office once every three 3 calendar months or at such other intervals or venue as may be agreed by the Management Committee. The quorum for any meeting of the Management Committee shall consist of three 3 representatives of NPDC and three 3 representatives of SEPTA. The Chairman or his alternate and the SEPTA's Managing Director or his alternate must be present at every Management Committee meeting for a quorum to be formed. Except as otherwise expressly provided in this Agreement all decisions of the Management Committee shall be reached by the unanimous vote of the Parties. If unanimity is not obtained on any matter including any matter pertaining to Work Programme or Budget proposed to the Management Committee then the 20 rrrrm7.5 At Management Committee shall meet again to attempt to resolve such matter not later than fourteen 14 days after the meeting in which the proposed matter was rejected by a negative vote. Any portion of such proposal that is not rejected shall insofar as possible be carried out less seven 7 days prior to such second meeting

the Party casting the dissenting vote shall provide to the other Party in writing in reasonable detail the reasons for such dissenting vote. If such written reasons are not provided at least seven (7) days prior to such second meeting then the proposal shall be deemed approved. In such second meeting the agenda shall comprise such written reasons as provided by the dissenting Party. If unanimity is not obtained at the second meeting the Management Committee shall meet a third time within fourteen (14) days after the second meeting. If unanimity is not obtained during the third meeting then NPDC and SEPTA may agree to appoint an independent qualified expert to advise on the matter which advice shall be binding on the Parties. In the event of failure of the Parties to agree to the appointment of the said expert the provisions of Article 23 shall apply. If unanimity is not obtained at the second meeting, then not obtained in the third meeting, the Parties shall be bound and abide by each decision of the Management Committee duly made in accordance with the provisions of this Agreement. NPDC shall exercise its votes in such manner to give effect to decisions and procedures in accordance with the decisions of the Management Committee and shall implement Management Committee's decisions at any Operating Committee meeting. The Management Committee shall establish technical subcommittees and any other advisory subcommittees from time to time as it considers necessary such subcommittees legal services budget and finance and as follows: b Each subcommittee established pursuant to this Article 7.5 shall be given terms of reference by the Management Committee and shall be subject to such direction and procedures as the Management Committee may give or determine. Parties. The Management Committee shall appoint the members of the subcommittees which shall comprise equal representation from the subcommittees shall be appointed by the Management Committee. The chairmen and the secretaries of the subcommittees shall be appointed by the Management Committee. c The deliberations and recommendations of any subcommittee shall be advisory only and shall become binding and effective upon acceptance by the Management Committee. The Management Committee shall cease to exist upon the expiration of the conduct of Petroleum Operations by PMT thereafter a new body shall be established to be known as supervisory committee to take care of SEPTA's continued interest in the reserve. SEPTA shall attend all joint operating agreement Operating Committee meetings as NPDC's adviser. SEPTA

shall be an observer and not entitled to vote at the meetings.

7.6 7.7 ARTICLE 8 FUNDING OF PETROLEUM OPERATIONS

8.1 8.2 8.3 8.4 SEPTA shall provide all the funds required for NPDCs 55 share of Petroleum Operation Costs subject to Article 8.2 in accordance with approved Work Programme and the Work Programme shall be concluded by PMT subject to approval of the Management Committee within fifty 50 days from the Effective Date to estimate the capital investments for the Development and the required initial Working Capital. Based on this review the Management Committee shall capital investments which shall be covered by the parent company Guarantee. days approve the amount for Budget. A review of within seven days 7 The costs incurred by the Parties in carrying out Petroleum Operations shall be recovered by the Parties through Cost Oil or Cost Gas in accordance with Article 10 and the Accounting Procedure as set out in Annex C. All bank transactions shall be made through bank accounts opened and maintained by SEPTA exclusively for the Petroleum Operations. SEPTA shall open and maintain project bank accounts exclusively for funding Petroleum Operations and shall procure that NPDC shall have unlimited inquiry and audit on date and all information and transactional documents including all accounts records and balances as they occur from bank accounts and project bank accounts referred to in Articles 8.3 and 8.4 right to copies of If after takeover of Petroleum Operations by NPDC pursuant to Article 6.5 hereof Parties agree that production can be increased and the additional Development Costs are required to add facilities not included in the development programme including but not limited to infill well secondary recovery facilities additional processing facilities, deeper wells and artificial lift SEPTA shall provide NPDC share of Petroleum Operations Costs required to carry out such additional development activities.

8.4 8.7 The additional capital investments referred to in Article 8.6 hereof shall be recovered by SEPTA through Cost Oil and Cost Gas in accordance with Article 10 and the Accounting Procedure and SEPTA shall be entitled to receive a share of Profit Oil and Profit Gas over the additional production as provided for in Article 10.2 hereof. SEPTA shall bear all losses associated with funding NPDCs 55 share of Petroleum Operations under this Agreement.

ARTICLE DEVELOPMENT E AND BUDGETS

9.1 9.2 9.3 If NPDC is designated the

Operator of the Contract Area or part thereof within sixty 60 days from the Effective Date PMT shall submit to the Management Committee for approval the development plan which shall include the development programme and relevant Budget appropriately apportioned into yearly phases report the meetings of At the Management Committee to consider and approve the Work Programme and Budget for each year PMT shall submit a for conduct of Petroleum Operations in accordance with Annex B. During such meetings PMT of on organizational structure for the previous year. on organizationat structure performance ufiized review actual report shall the the be to of to be out info under caried phases quarterly The Development plan shall include the Work Programme and Budget apportioned the Development plan during the remainder of the financial year. In respect of subsequent financial years the Work Programme and Budget shall be submitted not later than 31st August of the preceding financial year. Such services Work Programme and Budget shall comprise all including and completion programmes construction and assembling of field installations and equipment as may be necessary to permit the production storage. transportation and delivery of Crude Oil and Natural Gas from the Contract Area. The Development programme and Budget shall decided as necessary. W environmental requisite studies limited drilling but not for. 9.4 PMT shall submit to Management Committee any revision of the annual Development programme and Budget. Any such revision of the approved Development Budget shall be made by mutual agreement in the event of emergency or extraordinary circumstances that require immediate action PMT may take actions it deems necessary to protect life and property and the interest of Parties and shall promptly notify Parties in writing within fortyeight 48 hours notwithstanding the provisions of this Article 9.4 any cost so incurred shall be recoverable. 4 REST OF PAGE INTENTIONALLY LEFT BLANK

24 PF.FPFA.FFL 5[L L ARTICLE 10 RECOVERY OF PETROLEUM OPERATIONS COSTS AND CRUDE OIL AND NATURAL GAS ALLOCATION 101 Crude Oil and Natural Gas Allocation The allocation of Available Crude Oil and Available Natural Gas shall be in accordance with Annex C Annex D and this Article 10 as follows a b Royalty Oil and Royalty Gas shall be allocated to NPDC in such quantum as will generate an amount of proceeds equal to NPDCs

Royalty applicable to the Contract Area. Cost Oil and Cost Gas shall be allocated to the Parties in such quantum as will generate an amount of proceeds sufficient to recover the following:

- i. Undepreciated costs defined in execution of this Agreement shall be allocated to NPDC; as the Accounting Procedures incurred prior to associated Capital Costs to Development Costs and Production Costs related to the Production of production profile attached hereto as Annex H shall be allocated to SEPTA; P1 Developed reserves as agreed in Incremental Investment Development Costs and Production Costs made by SEPTA shall be recovered from incremental volumes i.e. the monthly production from 2P reserves less the P1 Developed reserves as indicated in the production profile attached hereto as Annex H shall be allocated to SEPTA. Costs expended in United States Dollars will be recovered in United States Dollars through Cost Oil and Cost Gas allocations costs expended in currencies other than United States Dollars will be converted to United States Dollars at the last available exchange rate and recovered through Cost Oil and Cost Gas allocation.
- c) Tax Oil and Tax Gas shall be allocated to NPDC in such quantum as will generate an amount of proceeds equal to the PPT and CIT liability relevant to the production in the Contract Area.

After the above, Profit Oil being the balance of Available Crude Oil after deducting Royalty Oil Cost Oil and Tax Oil and Profit Gas being the balance of Available Natural Gas after deducting Royalty Gas Cost Gas and Tax Gas respectively shall be shared by the Parties pursuant to the Accounting Procedure as follows:

- i. Profit Oil and Profit Gas attributable to undepreciated costs associated to Capital Costs incurred prior to execution of the production profile this Agreement as attached hereto as Annex H the following ratio shall be allocated in indicated in NPDC Ninety per cent [90] SEPTA Ten per cent [10]. Up to the full recovery of Development Costs by SEPTA Profit Oil shall be allocated in the following ratio NPDC Forty per cent [40] SEPTA Sixty per cent [60]. Thereafter Profit Oil shall be allocated in the following ratio NPDC Sixty five per cent [65] SEPTA Thirty five per cent [35].
- ii. Up to the full recovery of Development Costs related to the be contingent allocated in the following ratio resources development Profit shall be NPDC Forty per cent [40] SEPTA Sixty per cent [60]. Thereafter Profit Oil shall be allocated in the following ratio NPDC Sixty five

per cent 65 SEPTA thirty five per cent 35 [26 iv. Up to the full recovery of Development Costs regarding non associated gas by SEPTA Profit Gas shall be allocated in the following ratio NPDC Forty per cent 40 SEPTA Sixty per cent 60 Thereafter Profit Gas shall be allocated in the following ratio NPDC Sixty five per cent 65 SEPTA Thirty five per cent 35 v. Up to the full recovery of the Development Costs of the contingent resources development Profit Gas shall allocated in the following ratio NPDC Forty per cent 40 SEPTA Sixty per cent 60 Thereafter Profit Gas shall be allocated in the following ratio NPDC Sixty five per cent 65 SEPTA thirty five per cent 35 103 Each Party shall take in kind and dispose of its allocation of Cost Oil Using Cost Procedure Annex D. in accordance with Oil and Profit Gas Profit Gas the Either Party may at the request of the other if the other Party's Cost Oil Cost Gas Profit Oil and Profit Gas pursuant to Article 10.1 and the lifting Party shall within thirty 30 days transfer to the account of the nonlifting Party the proceeds of the sale to which the nonlifting Party is entitled. Overdue payments shall bear interest at the annual rate of three 3 months LIBOR Either Party may purchase any portion of their respective allocation of Cost Oil Cost Gas Profit Oil and Profit Gas from the Contract Area.

10.6 Both Parties shall meet on a monthly basis as may be agreed to reconcile all Crude Oil and Natural Gas allocated and lifted during the period as per Annex E

ARTICLE 11 VALUATION OF AVAILABLE CRUDE OIL 1.1 Available Crude Oil shall be valued in accordance with the following procedures a On the commencement of production from new reservoirs PMT shall engage the services of an independent laboratory of good repute to determine the assay of the new Crude Oil b When a new Crude Oil stream is produced liftings shall be made for a trial marketing period of three 3 calendar months or the period required to lift the first three 3 cargoes whichever is shorter. During the trial marketing period PMT shall; c i i iv v collect samples of the new Crude Oil upon which the assay shall be performed as provided in Article 1.1 a above; determine quality and yield of the new Crude Oil; share in the marketing such that each Party markets approximately their proportionate share of the new Crude Oil notwithstanding the fact that a Party's share of Available Crude Oil may be lifted in the Process; payments thereafter shall be made in accordance with Article 10.5;

exchange information regarding the marketing of the new Crude Oil including documents which verify the sales price and terms of each lifting apply the actual F.O.B. sales price to determine the price of each lifting. Such F.O.B sales pricing for each lifting shall continue after the trial marketing period until a valuation of the new Crude Oil has been completed but in no event shall it be longer than ninety 90 days after conclusion of the trial marketing period. As soon as practicable but in any event not later than sixty 60 days after the end of the trial marketing period PMT shall review the assay yield and actual sales data. PMT shall present to M 28] i] proposal for the valuation of the new Crude Oil. A valuation method whether spot related or any other method acceptable to both Parties shall be established for determining the price for each lifting of Available Crude Oil. Such valuation method shall be in accordance with the Official Selling Price published by NNPC or relevant government authority. It is the intention of the Parties that such prices shall reflect the true market value of the new Crude Oil. The valuation method determined hereunder including the product yield values shall be mutually agreed within thirty 30 days of the foregoing which; deferment such valuation to an independent consultant. upon the conclusion of the trial marketing period the Parties shall be entitled to lift their share of Available Crude Oil pursuant to Article 10 and the Lifting Procedure meeting be failing referred to shall from when a new Crude Oil stream is produced from the Contract Area and is commingled with an existing Crude Oil produced in Nigeria which has an established Official Selling Price basis then such basis shall be applied to the extent practicable for determining the Official Selling Price of the new Crude Oil. PMT shall meet and decide on any appropriate modifications to such established valuation basis which may be required to reflect any change in the market value of the Crude Oil as a result of commingling. e 1.2 If in the opinion of either Party an agreed price valuation method fails to reflect the market value of the Crude Oil produced in the Contract Area then such Party shall propose to the other Party modifications to such valuation method once in every six 4 months but in no event more than twice in any year The Parties shall then meet within thirty 30 days of such proposal and mutually agree on any modifications to such valuation within thirty 30 days from such meeting failing which

determination of such valuation shall be referred to an independent consultant. P REST OF PAGE
INTENTIONALLY LEFT BLANK m TEEe29 ARTICLE 12 PAYMENTS 121 122 12.3 In each
accounting period enough Crude Oil and Natural Gas shall be allocated to meet Cost Oil and Cost
Gas obligations respectively. The method of payment of any sum due from SEPTA to NPDC and
vice versa shall be in accordance with the prevailing guidelines of the Federal Ministry of Finance of
Nigeria the Central Bank of Nigeria and in accordance with Annex C Unless otherwise provided
herein any payments which NPDC is required to make to SEPTA or which SEPTA is required to
make to NPDC pursuant to this Agreement shall be made within forty five 45 days following the end
of the month in which the obligation to make such payments occurs. Overdue payments shall bear
interest at the annual rate of three months LIBOR. 124 If any of the Parties engages in activities or
business outside Petroleum Operations the cost of the facilities assets and personnel if any used for
such business or activities shall not be chargeable to the operations 5 REST OF PAGE
INTENTIONALLY LEFT BLANK pt 30 ARTICLE 13 UTILISATION OF NATURAL GAS 131 132
NPDC's share of Natural Gas produced from the Contract Area pursuant to Development shall be
allocated in accordance with Article 10 The field development programme shall the Contract Area
and shall be subject to the approval of the Management Committee. address gas utilization for 13.1
Notwithstanding the provisions of Article hereof the associated Natural Gas produced with Crude Oil
may be utilized at no cost to the operations as fuel for Production Operations gas recycling
secondary recovery by gas injection gas lift or any other economical secondary recovery schemes
stimulation of wells or artificial lifts necessary for the Contract Areas full Development. Such usage
shall be with the prior written consent of NPDC such consent shall not be unreasonably withheld.
133 The Development plan to be approved pursuant to Article 9.1 will contain plans to use Natural
Gas both for operational and commercial purposes to meet the objective of zero flaring. 134 In the
event that gas is flared in the course of production the penalty shall be treated as part of Production
Cost. REST OF PAGE INTENTIONALLY LEFT BLANK pf i31 ARTICLE 14 TRAINING OF NPDC
PERSONNEL 14.1 142 Each year SEPTA shall submit a detailed programme for training for the

following year in respect of NPDC and NNPC personnel. The final training programme shall be mutually agreed by the Parties and shall reflect any specific requirement of NPDC for implementation by SEPTA. Costs and expenses incurred by SEPTA in training NPDC and NNPC personnel, both on the job training and work attachment shall be included in Development Costs or Production Costs depending on the period at which the relevant costs are incurred and recovered through Cost Oil and Cost Gas. 143 4.1d SEPTA shall also provide for training facilities in accordance with Article 15 SUBCONTRACTORS 151 Subject to NPDC becoming the Operator and within ninety 90 days from 152 subject to the provisions of this Article 15.1 PMT has the right upon the 153 a Approval shall not be required for contracts whose price is less than One Hundred Thousand 100000 United States Dollars or its equivalent in Naira or other currencies; 32 15.4 155 b PMT shall promptly deliver to Management Committee a copy of each of the contracts referred to in this Article 15.3 following the execution thereof. Notwithstanding the provision of this Article 15 all contract awards shall be by competitive tendering process. In any event for contracts whose contract price is equal to or exceeds One Hundred Thousand 100000 United States Dollars or the equivalent in Naira or other currencies PMT shall select its contractors from the list of approved qualified contractors as provided for in Article 15.1 hereof and such selection shall be by means of competitive bidding with preference being given to Nigerian persons and entities as provided for in Annex F of this Contract. The contract recommendation shall be considered and approved by the Management Committee. 15.6 Subject to Article 15.4 hereof PMT shall wherever possible utilize extend for Petroleum Operations existing valid contracts agreements with NPDC and/or SEPTA's Affiliates by direct negotiations subject to prior approval of the Management Committee.

REST OF PAGE INTENTIONALLY LEFT BLANK 33 ARTICLE 16 BOOKS AND ACCOUNTS

AUDIT AND OVERHEAD CHARGES 16.1 Books and Accounts responsible which shall be consistent with modern petroleum industry and Dollars. Officials of NPDC and SEPTA shall have reasonable access to such books and accounts during business hours. 162 Audits the Parties as satisfactory Any exception must be made in writing ninety 90 days following the end of such audit

and failure to give such written notice within such time shall establish the correctness of the books and accounts. REST OF PAGE INTENTIONALLY LEFT BLANK

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17 TAXES ROYALTIES RATES AND DUES

17.3 17.4 Customs duties and other duties levied on imports and services by reason of PMT activities in performing Development and Production Operations hereunder pursuant to 8.1 be regarded as Development Costs and Production Costs as the case may be and shall be recovered by the Parties in the manner provided for in this Agreement. and 8.2 Articles shall Taxes due on SEPTA's income in accordance with CITA shall be borne by SEPTA and shall not under any circumstances be reimbursable to SEPTA. NPDC shall pay its share of PPT and Royalty arising from the production of Crude Oil won and saved in the Contract Area. The Official Selling Price as advised by the relevant government authorities and established by this Agreement shall be used in determining the amount of NPDC's share of PPT and Royalty in respect of Available Crude Oil and Available Natural Gas produced and lifted from the Contract Area. SEPTA shall take all the necessary steps to ensure that the taxes which SEPTA must pay in accordance with this Article 18 shall be accurately paid as and when due. ARTICLE 18 IN 18.1 18.2 of this Agreement shall in the event NPDC becomes Operator all properly acquired under the provisions an insurance company of good repute by PMT in the name of the NPDC with limits of liability not less than those required by Nigerian laws and regulations. The premium for such policies shall be included in Petroleum Operations Costs. be adequately insured with In case of loss of or damage to property indemnifications paid by the insurance companies shall be entirely received by NPDC for which prompt report shall be made to PMT not later than seventy two (72) hours. The amount so received shall be lodged in an account of and in the name of NPDC that it shall nominate. PMT shall determine whether the lost or damaged property should be repaired replaced or abandoned. If the decision of PMT is to repair or replace PMT shall immediately replace or repair such lost or damaged property the cost of which is recoverable. In the event that the loss or damage is attributable to SEPTA's Gross Negligence such cost of replacement or repair shall not be recoverable as Petroleum Operations Cost. PMT shall take out and maintain an insurance policy

covering any and all damages caused to third parties as a direct or indirect result of Petroleum Operations in the name of NPDC. SEPTA shall defend and hold NPDC harmless from damages and losses caused to parties as a consequence of SEPTA Gross Negligence or Willful Misconduct in the performance of this Article. third All insurance policies under this Article 18 shall be based on good international petroleum industry practice and shall be taken out in the Nigerian market except for those concerning risks for which PMT cannot obtain coverage in Nigeria which shall be taken out abroad to the extent required by law in entering into contracts with any subcontractor for the performance of Petroleum Operations PMT shall require such subcontractor to take adequate insurance in accordance with Article 18.1 and 18.3 above and to properly indemnify NPDC and SEPTA for any damage done and to properly indemnify and hold NPDC and SEPTA harmless against claims from third parties. 8.3 18.4 18.5 18.6 PMT shall maintain other insurance policies in the name of NPDC required under Nigerian law

ARTICLE 19 CONFIDENTIALITY AND PUBLIC ANNOUNCEMENTS 19.1 The Parties shall keep information mutually exchanged and all plans maps drawings designs data scientific technical and financial reports and other data and information of any kind or nature relating to Petroleum Operations including any discovery of hydrocarbons as strictly confidential at all times and shall ensure that their entire or partial shall under no circumstances be disclosed by the Parties in any announcement to the public or to any third party without the other Parties prior written consent M The provisions of this Article 19 shall not apply to disclosure to [a b c d subcontractors Affiliates advisers assignees provided that such disclosures are required for the effective performance of the aforementioned recipients duties related to Petroleum Operations; auditors legal comply with statutory obligation or the requirements of any governmental agency in which case SEPTA will notify NPDC of any information so disclosed finance institutions involved in the provision of finance for the operations hereunder provided in the recipients of such data and information agree in writing to keep such data and information strictly confidential all such cases that a third party for the purpose of negotiating an assignment of interest hereunder provided an undertaking to keep the information disclosed confidential. party executes

such that 19.2 Parties shall take all necessary measures in order to make their employees agents representatives proxies and in the case of PMT subcontractors this comply with the same obligations of confidentiality provided for in Article 19 this Article The provisions of termination of provisions and restrictions arising therefrom shall be in force at all times. 19 shall not be voided by the expiry of this Agreement on any grounds whatsoever and these the accordingly continuing constitute obligation a The Parties shall use their best endeavours to ensure that their servants employees agents and in the case of PMT subcontractors shall not make any reference in public or publish any notes in newspapers periodicals or books nor divulge by any other means whatsoever any information on the activities under PMTs responsibility or any reports data or any facts and documents that may come to their knowledge by virtue of this Agreement without the prior written consent of the other Party. PMT shall submit to NPDC all statutory reports and information for submission to Government and other statutory bodies. 37ARTICLE 20 FORCE MAJEURE 201 Any failure or delay on the part of either P obligations or duties attributable to Force Majeure. A Force majeure delays default or inability to perform and its occurrence due to perils of navigation fire hostilities war declared or Undeclared blockade labour disturbances strikes riots insurrection civil commotion quarantine restrictions epidemics storms floods earthquakes accidents blowouts lightning and decisions of or orders of Government If operations are delayed curtailed or prevented by Force Majeure then the time for carrying out the obligation and duties thereby affected and obligations hereunder shall be extended for a period equal to the period thus involved. 20.2 203 REST OF PAGE INTENTIONALLY LEFT BLANK A 38 IREEEEEEEARTICLE 21 LAWS AND REGULATIONS 211 21.2 This Agreement shall be governed by and construed in accordance with the laws of the Federal Republic of Nigeria and any dispute arising therefrom shall be determined in accordance with such laws. in the event that any enactment of or change in the laws or regulations of Nigeria or any rules procedures guidelines instructions directives or policies pertaining to the Agreement introduced by any government department or parastatals or agencies occurs subsequent to the Effective Date of this Agreement which materially and adversely affects the rights and obligations or the economic

benefits of Parties the Parties shall use their best efforts to agree to such modifications to this Agreement as will compensate for the effect of such changes. If the Parties fail to agree on such modifications within a period of ninety (90) days following the date on which the change in question took effect the matter shall thereafter be referred at the option of either Party to arbitration under Article 22 hereof. Following arbitrators' determination this Agreement shall be deemed forthwith modified in accordance with that determination. REST OF PAGE INTENTIONALLY LEFT BLANK

OTARTICLE 22 ARBITRATION AND CONCILIATION 22.1 If a difference or dispute arises between NPDC and SEPTA concerning the interpretation or performance of this Agreement and if the Parties fail to settle such differences or dispute by amicable agreement then either Party may serve on the other a demand for arbitration. Within thirty (30) days of such demand being served each Party shall appoint an arbitrator and the two arbitrators thus appointed shall within a further thirty (30) days appoint a third arbitrator and if the arbitrators do not agree on the appointment of such third arbitrator or if either Party fails to appoint the arbitrator to be appointed by it such an arbitrator or third arbitrator shall be appointed by the Head of the Nigerian branch of Chartered Institute of Arbitrators in accordance with the provision of the Arbitration and Conciliation Act Cap A18 LFN 2004. Notice of the intention to apply to the Chartered Institute of Arbitrators shall be given in writing by the applicant Party to the other Party and when appointed the third arbitrator shall convene meetings and act as chairman thereat. If an arbitrator fails or is unable to act a successor shall be appointed by the respective Party or by the arbitrators in the event the chairman must be succeeded. The arbitration award shall be binding upon the Parties and the expenses shall be borne by the Parties in such proportion and manner as may be provided in the award. The venue of the arbitration shall be anywhere in Nigeria as agreed by the Parties. REST OF PAGE

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W 40 [ARTICLE 23 REPRESENTATIONS AND WARRANTIES 23.1 In consideration of NPDC entering into this Agreement SEPTA warrants as follows: (a) SEPTA is not affiliated directly or indirectly with SEPLAT Petroleum Development Company Limited; SEPTA has the power to enter into and perform this Agreement and has taken all necessary action to

execute deliver and perform the Agreement in accordance with the terms herein contained. c The execution delivery and performance of SEPTA will not contravene in any respect any of the provisions of this Agreement by 1 2 any law or regulations or order of any government authority Agency or Court applicable to or by which SEPTA may be bound. mortgage or any instrument 10 which SEPTA is a party or which is binding upon it or any of its respective revenues or assets. underlying agreement other or d e Full disclosure has been made to NPDC prior 10 the Effective Date of all facts in relation to SEPTA and its financial condition and affairs as is material and ought properly to be made known to NPDC. SEPTA have the requisite funds both in foreign and local currencies 10 carry out NPDCs 55 share of Petroleum Operations under the Contract Area. f The representations and warranties set out above shall survive the execution of this Agreement. 23.2 SEPTA shall provide a parent company guarantee. 41 ARTICLE 24 TERMINATION 24.1 NPDC shall be entitled to terminate this Agreement if any of the following events occur a b c e f g h y i SEPTA defaults in the performance of its material obligations set forth in Article 4.1 o. SEPTA defaults in the performance of its obligations as set forth in 4.1b of this Agreement. SEPTA assigns its rights and interests under this Agreement without a prior written notice and prior written consent of NPDC SEPTA is adjudged insolvent bankrupt or to have made restitution to its creditors by a Court of competent jurisdiction in Nigeria. SEPTA liquidates or terminates its corporate existence There is a breach of SEPTA's parent company guarantee It is established and confirmed that SEPTA and SEPLAT Petroleum Development Company Limited are Affiliates. The disposal of SEPTA's rights and interests under this Agreement through the sale of its parent company; The assignment of 335 Million BOE subject to Article 3.1. Termination for any of the events specified in this Article 24.1 ci above shall be with immediate effect and NPDC may by written notice to SEPTA declare the Agreement terminated. If the cause for termination is an event specified in Article 24.1a and b NPDC may give written notice thereof to SEPTA to remedy such default within a period not less than thirty (30) working days of receipt of NPDC's If upon the expiration of the said period such default has not been remedied terminated, or removed the Agreement shall automatically 24.4

245 Except such rights of SEPTA that may have accrued prior to the date of termination SEPTAs rights shall cease upon termination of this Agreement. Such termination shall take place without prejudice to any other rights or remedies which may be available to either Party Without prejudice to all other rights of NPDC herein contained SEPTA shall upon the termination of this Agreement permit inspection copying and auditing of operations accounts and records. REST OF PAGE INTENTIONALLY LEFT BLANK

43 ARTICLE 25 Notices 25.1 Any notices required to be given by either Party to the other shall be in writing and shall be deemed to have been duly given if sent and received by email mail fax telegam or cable confirmed by mail or registered post to or hand delivered at the following registered offices NIGERIAN PETROLEUM DEVELOPMENT COMPANY LIMITED 62 SAPELE ROAD BENIN CITY NIGERIA SEPTA SEPTA ENERGY NIGERIA LIMITED HALLIBURTON HOUSE PLOT 90 AJOSE ADEOGUN STREET VICTORIA ISLAND LAGOS NIGERIA Either Party shall notify the other promptly of any change in the above address. REST OF PAGE INTENTIONALLY LEFT BLANK

44 ARTICLE 26 GENERAL PROVISIONS I In consultation with NPDC SEPTA shall obtain and pay for all necessary permits or authority for the use of any patent device instrument and the like not belonging to SEPTA necessary for the operations and such cost shall be recovered. SEPTA agrees to defend at its own expense and after consultation with NPDC all legal proceedings brought against it or NPDC claiming infringement of a patent on any method or equipment selected or furnished by SEPTA or in its performance of the obligations under this Agreement provided NPDC notifies SEPTA promptly in writing of any such infringement or claim against it and gives SEPTA authority information and assistance at SEPTAs expense for the defense or assistance in defense of such proceeding. NPDC may be represented by its own counsel at SEPTAs cost and may participate in proceedings to which it and SEPTA are defendants provided however that SEPTA shall control the defense thereof. This Agreement is drawn up in the English Language and the affairs of the Agreement shall be conducted in the English Language. Except as provided in Articles 3 24 and 26.9 this Agreement shall not be terminated amended or modified in any respect except by mutual consent in writing of the Parties

hereto. The file of this Agreement the sequence and headings of the Articles of this Agreement have been adopted for identification and reference purposes only and do not affect the meaning or interpretation of this Agreement not and shall 26.5 if at any time any provision of this Agreement is or becomes illegal invalid or unenforceable in any respect under the laws of any relevant jurisdiction neither the legality validity or enforceability of the remaining provisions nor the legality validity or enforceability of such provisions under any other laws shall in any way be affected or impaired thereby and the remaining provisions of this Agreement shall be construed and enforced as if the Agreement did not contain such invalid illegal or unenforceable provisions 26.6 This Agreement together with attached Annexes shall constitute the entire agreement between NPDC and SEPTA in respect of the transaction contemplated herein and shall supersede all previous arrangements promises agreements correspondences etc. made In relation to Agreement. this SEPTA hereby represents and warrants that it has not engaged and shall not engage any person firm or company as a commission agent for purposes of this Agreement and that it has not given or offered to give directly or indirectly to any person any bribe gift gratuity commission or other thing of value as any inducement or reward for doing or forbearing to do any action or take any decision in relation to this Agreement or for showing or forbearing to show favour or disfavour to any person in relation thereto. any official SEPTA further represents that it shall not either directly or indirectly give to any person director employee representative or agent of NPDC or any Government commission any entertainment of significant cost or value and shall not procure the services of any commission agent or other third party to give any such gift fee reward concession bribe entertainment of significant cost or value or any thing of a similar nature for the purposes of influencing or inducing positively or adversely the execution of this Agreement or the doing of any act in connection with this Agreement. rebate fee gift or If SEPTA or any of its personnel representatives agents or subcontractors gives or offers to give [directly or indirectly to any person any such inducement or reward or anything of value NPDC shall terminate this Agreement immediately SEPTA without prior notification. It is hereby expressly stated that the termination of this Agreement under this provision

shall not be deemed a breach of the Agreement by NPDC and shall not give rise to any claim for cost or compensation or loss of profit on the part of SEPTA. NPDC agrees to indemnify keep indemnified and hold harmless SEPTA against any costs decommissioning liabilities and environmental liabilities of whatsoever nature and howsoever arising and any costs expenses liabilities or other charges incurred as a result of or in connection with any termination dismissal or redundancy of any person employed or engaged by NPDC arising prior to the Effective Date. REST OF PAGE INTENTIONALLY LEFT BLANK 46

ARTICLE 27 TRANSFER OF PROPERTY UPON TAKE OVER OF OPERATORSHIP BY NPDC

27.1 Upon the effective date of takeover of operatorship pursuant to Article 6.5 SEPTA shall through the PMT deliver and/or transfer to NPDC the following but not limited to i i iii possession of all property including all equipment inventories and funds held by SEPTA. originals pertinent maintained for the operations; and books of account and records originals of all documents agreements and other papers relating to the operations. 27.2 SEPTA shall upon delivery of above listed items. be certified as to having complied with the foregoing obligations. Provided SEPTA shall nevertheless remain liable for any obligations and liabilities arising solely from its failure to disclose any matters that ought to have been disclosed to NPDC prior to the takeover of operatorship. All expenses incurred in connection with the change of operatorship hereunder including the deliveries and transfers required by Article 27.1 shall be for Production Operations Account. e REST OF PAGE INTENTIONALLY LEFT BLANK wr 47

IN WITNESS WHEREOF THE PARTIES herein have caused this agreement to be executed the day and year first above written. Signed for and on behalf of NIGERIAN PETROLEUM DEVELOPMENT COMPANY LIMITED by Signature Designation In the presence of Signature..... e T Designation..... Signed for and on behalf of SEPTA ENERGY by A FH y Lea 48 EX10.2 4 exhibit102.htm EXHIBIT 10.2 Dated February 15 2011 Exhibit 10.2 ALLIED ENERGY PLC and CAMAC INTERNATIONAL NIGERIA LIMITED and NIGERIAN AGIP EXPLORATION LIMITED and CAMAC PETROLEUM LIMITED 1234 AGREEMENT NOVATING PRODUCTION SHARING CONTRACT Contents 1.2.3.4.5. Definitions and interpretation Novation Confirmation of

TermsRepresentations and WarrantiesMiscellaneousSchedule 1 Oyo Field34455This Agreement is dated February 15 2011 and is made BETWEEN1 ALLIED ENERGY PLC formerly Allied Energy Resources Nigeria Limited a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at Plot 1649 Olosa Street Camac HouseVictoria Island Lagos Allied Energy;2 CAMAC INTERNATIONAL NIGERIA LIMITED a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at Plot 1649 Olosa Street Camac House Victoria Island LagosCamac Nigeria;and together with Allied Energy Allied3 NIGERIAN AGIP EXPLORATION LIMITED a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at Plot PC 23 Engineering Close Victoria Island Lagos NAE; and4 CAMAC PETROLEUM LIMITED a company incorporated under the laws of the Federal Republic of Nigeriaand having its registered office at 35 Maloney Street Lagos CPLtogether the Parties and each a Party.WHEREASA. On 3 June 1992 Allied Energy was awarded an oil prospecting licence to block 210 OPL 210 an interest of 2.5in which Allied subsequently assigned to Camac Nigeria on 30 September 1992.B. On 28 August 2002 Allied were granted oil mining leases 120 and 121 OMLs with respect to the OPL 210 for a term of 20 years commencing from 27 February 2001.C. Pursuant to a Deed of Assignment dated 22 July 2005 Allied assigned to NAE a 40 interest in the OMLs with remaining 60 being retained by Allied.D. On 22 July 2005 Allied and NAE entered into a Production Sharing Contract PSC setting out the terms of agreement in relation to petroleum operations on the territory of the OMLs.E. On 7 April 2010 Allied Energy and CAMAC Nigeria novated to CPL the beneficial ownership of their respective interests in and all rights and obligations under the PSC in relation to the Oyo Field pursuant to the Agreement Novating Production Sharing Contract of the same date entered into by and among Allied Energy CAMAC NigeriaCPL and NAE the First Novation.F. Each of Allied Energy and Camac Nigeria now wishes to novate to CPL the beneficial ownership of their respective interests in and all rights and obligations in relation to the OMLs under the PSC that were not heretofore novated pursuant to the First Novation subject to the terms and conditions hereinafter set forth.NOW IT IS HEREBY AGREED as

follows

11.11.21.2.11.2.2 Definitions and interpretation In this Agreement unless the context otherwise requires In this Agreement unless the context otherwise requires all words and expressions defined in the PSC shall have the same respective meanings in this Agreement. references to clauses and schedules are to Clauses of and Schedules to this Agreement; headings do not affect the interpretation of this Agreement the singular shall include the plural and vice versa and references to one gender include all genders; 21.2.31.2.41.2.522.12.2 references to any English legal term or concept shall in respect of any jurisdiction other than England be construed as references to the term or concept which most nearly corresponds to it in that jurisdiction; a reference to any other document referred to in this Agreement is a reference to that other document as amended revised varied novated or supplemented at any time; and any phrase introduced by the terms including include in particular or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.

Novation Subject to Clause 3.3 and with effect from and including the Second Novation Date Allied Energy and Camac Nigeria assign to CPL all their respective rights liabilities duties covenants undertakings warranties and other obligations contained in the PSC in respect of the lease areas of the OMLs that were not assigned pursuant to the First Novation including all claims and demands in respect thereto arising in connection with the PSC. The rights liabilities duties covenants undertakings warranties and other obligations being assigned hereunder shall hereinafter be referred to as the Second Novated Interests. Subject to Clause 3.3 and with effect from and including the Second Novation Date CPL accepts all respective rights and liabilities of Allied Energy and Camac Energy under the PSC and agrees to perform all the duties and to discharge all the covenants undertakings warranties and other obligations of Allied Energy and Camac Energy respectively and to be bound by all the terms and conditions of the PSC in respect of the Second Novated Interests.

2.3 This Agreement shall become effective on the date Second Novation Date on which all the Parties hereto have signed this Agreement. Allied Energy shall indemnify and hold each of NAE and CPL harmless against all losses damages injuries expenses and actions of whatever kind and nature suffered by each of them respectively where such

losses, damages, injuries, expenses and/or actions are as the result of the failure of Allied Energy to notify the Department of Petroleum Resources (DPR) of the transaction described in this Agreement. Subject to Article 2.3, NAE acknowledges and agrees to the novation of the PSC contemplated under this Agreement and agrees to be bound by the terms of this Agreement. Unless the context otherwise requires, with effect from and including the Second Novation Date, references to Allied Energy and/or Camac Nigeria and/or Allied in the PSC as far as the Second Novated Interests are concerned in accordance with this Agreement shall be deemed to be references to CPL.

Confirmation of Terms Subject to Clause 3.3 of this Agreement and except where inconsistent with the provisions of this Agreement, the terms of the PSC and the First Novation are confirmed and shall remain in full force and effect. With effect from the Second Novation Date, this Agreement, the First Novation and the PSC shall be read and construed as one document.

2.42.533.13.23.3 For the avoidance of doubt, the Parties hereby confirm that 3.3.13.3.2 the terms and conditions of Articles 8.1a, 8.1c and 8.3 of the PSC relating to Royalty, Oil Tax, Oil and the Escrow Account shall remain unaffected by this Agreement and Allied Energy shall retain its rights and obligations under those Articles; the Parties understand and acknowledge that CPL is an Affiliate of Allied Energy and accordingly agree that the waiver by NAE of its rights in Article 8.1e of the PSC in favour of Allied Energy in respect of the Oyo field and the Second Novated Interests NAE Waiver remains applicable and such NAE Waiver will be deemed to extend to the interest of CPL in the Oyo Field and the Second Novated Interests. For the avoidance of doubt, if at any time CPL ceases to be an Affiliate of Allied, then the NAE Waiver shall no longer apply in accordance with Article 8.1e of the PSC.

3.3.33.3.43.3.544.14.1.14.1.255.15.2 all terms and conditions of the Cooperation Agreement between NAE and Allied Energy dated 15 January 2006 as amended remain in full force and effect and shall remain unaffected by this Agreement, including without limitation to procurement and engineering services provided by Allied Energy to NAE with respect to the Oyo Field and/or the Second Novated Interests.

notwithstanding anything to the contrary in this Agreement or the PSC, CPL shall not be entitled to appoint any representatives in the Management Committee nor to

exercise any right to vote therein in respect of any matters including with respect to the Second Novated Interests. It is understood that CPL's interest in the Second Novated Interests will be represented by Allied notwithstanding anything to the contrary in this Agreement or the PSC but without prejudice to Clause 3.3.1 the following provisions of the PSC shall not apply to CPL but will continue to apply to Allied or the First Party as the case may be Article 5 7.2 7.3 8.6 9 11 12 13.3 14.3. For the avoidance of doubt the evaluation procedures of Article 9 of the PSC shall be binding on CPL.

Representations and Warranties Each Party severally represents and warrants on behalf of itself that it has full power and authority under its memorandum or articles of association or other governing documents and otherwise to enter into and perform its obligations pursuant to this Agreement; and it has duly authorised, executed and delivered this Agreement and this Agreement constitutes valid and binding obligations enforceable against it in accordance with its terms.

Miscellaneous The provisions of Articles 16 Confidentiality and Public Announcements and 20 Laws and Language of the PSC shall apply mutatis mutandis to this Agreement. This Agreement may be executed in any number of counterparts each of which when executed and delivered shall be an original but all of which when taken together constitute a single instrument.

IN WITNESS WHEREOF the Parties have entered into this Agreement on the day and year first above written.

Signed for and on behalf of ALLIED ENERGY PLC
Signature s Kamoru Lawal
Name Kamoru Lawal
Designation Director

Signed for and on behalf of CAMAC INTERNATIONAL NIGERIA LIMITED
Signature s Kamoru Lawal
Name Kamoru Lawal
Designation Director

Signed for and on behalf of NIGERIAN AGIP EXPLORATION LIMITED
Signature s Ciro A. Pagano
Name Ciro A. Pagano
Designation Vice Chairman

Signed for and on behalf of CAMAC PETROLEUM LIMITED
Signature s Byron Dunn
Name Byron Dunn
Designation CEO

5 ANNEX A CORPORATE SECRETARY'S CERTIFICATION

KROMINCO INC. 2232 Don Chino Roces Avenue Makati City Metro Manila Tel nos. 8933278 8191130 8191125

SECRETARY'S CERTIFICATE

SUSANA L. CHUNG of legal age married Filipino Citizen with business address at 2232 Don Chino Roces Avenue Makati City after having been sworn to in accordance with law do hereby certify

10 2.0 3.0 4.0 5.0 That am the duly

elected and incumbent Corporate Secretary of KROMINCO INC. a corporation organized and existing under and in accordance with the laws of the Republic of the Philippines with principal office and place of business at the abovestated address; That as such Corporate Secretary am the custodian of the corporate records of KROMINCO INC. including the minutes of meetings of its Board of Directors; That the meeting of the Board of Directors held at its principal place of business on February 28 2008 at which meeting a quorum was present and acted throughout the following resolution were adopted and approved Resolved that the incumbent and concurrent Chairman MR. ERIC L. LEE and President ATTY. ROMEO S. PEREZ of KROMINCO INC. are granted the full authority to sign or enter into agreements compromise and or any binding legal instrumenis for in and behalf of the corporation in pursuit of the present corporate thrust; Resolved furthermore that relative to the above MPSA Application MR. ERIC L. LEE and ATTY. ROMEO S. PEREZ are authorized to sign for and in behalf of the corporation related to tiling of MINERAL PRODUCTION SHARING AGREEMENT MPSA and other similar and analogous instruments with all concerned government entities That the foregoing resolutions have not been altered modified or revoked and that the same are still in full force and effect That am executing this Certificate for whatever legitimate purpose it may serve. IN WITNESS WHEREOF have hereunto set my hand at Makati City on this day of GCi 3 i f BES OES OTA Aa ANE SWORN iobeforemethis s day of 2008 at ATL Cir y

affiant exhibited to me his Community Tax Certificate No. issued at on 2008. Veer Doc. No. 253 Page No. ae Book No. PIPE Series of ANNEX C UTILIZATION DEVELOPMENT WORK PROGRAM THREE YEAR MINING WORK PROGRAM 1.0. CORPORATE DATA 1.1. Project Name ; Dinagat Island Chromite Project 1.2. Name of Company KROMINCO INCORPORATED 1.3. Addresses LJele Head Office 2nd Floor UMC Building 2232 Chino Roces Avenue Makati City Metro Manila Tel Nos. 81911308132986 Fax No. 632 8191125 1.3.2. Mine Site Mt. Redondo Loreto 8415 Surigao del Norte 1.3.3. Liaison Office Yuipco Bldg. Navarro Street 8400 Surigao City Tel No. 2317376 1.4. Contact Person ENGR JESUS A. BIRONDO Resident Manager 2.0. PROJECT DESCRIPTION 2.1. Project Details Bled Project Location The Project Area covers Seven Hundred

Fifty Seven and 1181000 757.118 hectares located in the Municipality of Loreto Province of Dinagat Islands and bounded by the following geographic coordinates Corner Latitude Longitude 1 10 19 30 La ar a0 2 10 20 00 125 37 30 3 10 20 30 125 37 00 4 10 21 00 is 37 00 cS 10 21 00 125 37 3 6 10 21 30 123 .3f 30 Z 10 21 30 125 33. 30 8 10 21 00 123 38 30 9 10 21 00 125 39 00 pelses 10 10 20 30 125 39 00 ll 10 20 30 125 38 30 iZ 10 20 00 125 38 00 3 LO 19 30 125 38 00 Topography and Drainage The region is characterized by moderately rugged topography with the highest elevation of 980 meters above sea level. The mountain ridges generally trend northeast-southwest and are commonly mantled by reddish lateritic soil. The area is principally drained by the Kanlangugan Creek and its tributaries which form dendritic and radial drainage patterns attributed to the uniformity of the rocks over large areas. General Geology The company's mineral property found in the northern portion of Dinagat Island is underlain by ultramafic rocks which include highly serpentized dunite and harzburgite that are closely associated with hypabyssal gabbro bodies diabase. The ultramafic rocks are highly fractured and jointed because of their positions are within the Philippine Mobile Belt. In most of the areas covered by the exploration the ultramafic complex was seen to be overlain by lateritic soil in some areas containing high grade chromite sands. This phenomenon is attributed to the erosion of either massive chromite deposits themselves or dunite rocks containing disseminated chromite. The secondary chromite sands were subsequently carried down deposited and concentrated to lower levels along with the lateritic soils. Chromite mineralization in the region occurs mainly as parallel layering lenses pods and as disseminations or nodules in peridotite formed during the different stages of gravitational settling in the ophiolites Dunite-Harzburgite Transition Zone. The major faults in the area trend in the northeast-southwest direction. They have great influence in the topography and provide structural control over the chromite mineralization and deposition in the region. Estimated Capital Cost Based on the 1999 Financial Statement the company has current assets of PHP 125 Million.²¹ Os . Type of Mineral Mined Metallurgical Chromite. 4. Present Status of the Project The company then known as Malayan Wood Products Inc. started chromite production in 1979. In 1980 the company discovered the Mt. Redondo deposit

which is being mined until now. A 600 MT per day gravity concentrating plant was built at the mine site in Mt. Redondo Loreto Dinagat Islands. In June 1986 the mining operation was suspended due to the unilateral cancellation of the Operating Contracts by the then Minister of Environment and Natural Resources. The company appealed to the said cancellation and as a compromise a new Operating Contract was executed on February 27 1989 for a period of sixteen 16 years. Since the Asian crisis Krominco Incorporated remains to be the only metallurgical chromite mine in operation undertaking both mining and exploration at the same time. The company in spite of the slump of the World Market Price for chromite in 1999 to 2002 continuously operating until the Environmental Management Bureau issued a Cease and Desist Order CDO on March 22 2000. The said CDO was issued on the ground that the company is operating without an Environmental Compliance Certificate ECC. The CDO was lifted by the Department of Environment and Natural Resources on November 22 2000 after it found out that the company is qualified to exempted from the Environmental Impact Statement EIS System and therefore from the ECC requirement. However the operation was continually suspended due to continuous slump of the chromite prices. The company resumed operation in the 2 quarter of 2004 because of good market for chromite. . Mining Method Open Pit Mining Estimated Annual Production Projected average Annual Production is about 10000 MT of chromite Lumps ore direct shipping ore and another 10000 MT of chromite concentrate. combined. Zaks ts Type of Milling Process Gravity concentration. . Description of Milling Process Pls. see attached flow sheet Crushing and Milling The milling grade ore are fed to the dump bin of the jaw crusher to reduce the size to minus 34. The crashed materials from jaw crusher are conveyed to the double deck vibrating screen where water is introduced specifically at the top deck to separate the slimes. The screen oversize is recycled to the Symon cone crusher to further reduce the particle size to minus 58. The screen undersize goes to the fine ore bin then to the rod mill to reduce the size of the particle to about 80 minus 100 mesh. Classification and Concentration The rod mill product goes to the spiral classifier. The classifier slimes are pumped to the Krebs cyclone. The cyclone underflow is fed directly to the shaking tables while the cyclone overflow goes to the tailings

thickener. The classifier sand is pumped to the Riechert Spirals then to the shaking tables. At the shaking tables the chromite concentrate product which is about 48 CrO₃ goes to the final concentrate bins the middling is fed to the ballmill and the ballmill product is recycled back to the shaking tables while the tailings go to the tailings thickener. Reclaim Water and Tailings Ponds At the tailings thickener the overflow water is reclaimed back to the mill circuit using a pump. The thickeners underflow goes to the tailings pond. The solid wastes in the tailings are allowed to settle down and only the effluents leave the tailings pond. The solid wastes are then recovered through dredging by using a backhoe and are used for construction road surfacing domestic use and other purposes. Remarks The Krominco Mill Plant has a rated capacity of 600 MT per day. Plain water is introduced into the mill circuit to recover chromite minerals. No chemicals are added in the entire process.

2.2. Minerals Reserves and Resources 2.2.1. Ore Reserves

REDONDO OPEN PIT In view of its high potential for chromite mineralization much work was done in the area.

Preliminary exploration work comprising of test pitting xray drilling and deep diamond drilling disclosed economic and mineable ore reserves. Chromite occurs in the form of alternating layers or bands of high grade and milling grade chromite ore mostly found within dunite bodies and at the same time adjacent to the shear zone that is present in the area. The chromite bearing zone in Mt. Redondo generally strikes in the westeast and northwest southeast direction dipping southward though much deviation from these attitudes are expected and observed because of folding and the chromites proximity to the shear zone. Measured Chromite Reserves 329500 MT Indicated

Chromite Reserves 257000 MT **REDONDO OPEN PIT ORE RESERVES**

	HIGH	MEDIUM	LOW	WASTE	TOTAL	ORE	BENCH	GRADE	GRADE	GRADE	IN	ORE	RESERVES	MT	MT	MT	MT	MT
870	1300	1600	800	2000	5700	860	4800	6200	2500	5000	18500	850	13500	15500	2600	20000	51600	830
19200	12700	4600	23300	59800	820	9000	1400	1000	9600	21000	810	9000	5200	1600	11300	27100	800	
30300	11200	2000	26000	69500	790	49900	16000	5700	53700	125300	780	21500	6700	9900	44600	82700	770	
23900	5400	5700	27100	62100	760	21700	7000	3300	22300	54300	733	2800	600	0	5500	8900	TOTAL	
206900	89500	39700	250400	586500	SANGAY AREA In													

1990 1991 1996 and 1997 Krominco Incorporated conducted exploration activities comprising of geologic mapping auger drilling and Xray drilling in the Sangay area. The exploration work was able to outline three potential zones of chromite mineralization named Sangay 1 2 and 3. In Sangay 1 a deposit of chromite sand hosted by lateritic soils was delineated via Auger drilling. In Sangay 2 Xray drilling was able to outline a zone of mineralization of about 20 meters wide and 250 meters long of dominantly milling grade chromite. Exploration work in Sangay 3 area was unfinished and so was unable to affirm the presence of chromite boulders and numerous floats in the area though suggest that an economic deposit may be lying within the Sangay 3 area.

Sangay I Measured Chromite Reserves 16000 MT Chromite Sand Sangay 2 Measured Chromite Reserves 125000 MT

SOUTHEAST REDONDO PROSPECTS From 1994-1995 the Southeast Redondo deposit situated 800 meters southeast of the Redondo Open Pit was discovered. The prospect is a consolidation of two chromite deposits namely Southeast Prospect 1 and Southeast Prospect 2. The two prospects are 130 meters apart with initial assay results of 38 Cr₂O₃ and 54 Cr₂O₃ respectively. Further exploration work comprising of auger drilling test pitting and xray drilling delineated the presence of near surface high grade chromite that is found almost always overlying gabbro which in turn overlies the harzburgite basement. Analysis of all the geologic data suggests that the localized chromite deposits in the Southeast Redondo Prospects were brought up to the nearsurface by the gabbro dikes. Though the deposits are relatively small compared to the other areas what makes them favorable is their nearsurface occurrence. Prospect 1 Measured Reserves 900 MT Prospect 2 Measured reserves 700 MT Total Chromite Reserves 1600 MT

TOTAL CHROMITE RESERVES OF KROMINCO INCORPORATED 729100 MT

2.3.6 2d2 Didrede 2.2.4. 28. As of December 2007 the Company has Milling Ore Stockpiled ready for processing 42000 MT Average Grade The Chromite Reserves of Krominco have average grade of 30 Cr₂O₃. Cutoff Grades The company has two products each having a different cutoff grade. For Sorting Lumpy Ore 30 Cr₂O₃ For Milling Ore 12 Cr₂O₃ Estimated Mine Life Based on the companys Chromite Ore Reserves the Milling Ore stockpiled after sorting and the 600 TPD Mill Plant rated capacity the life of the mine is estimated at

ten 10 years and could go beyond because of the ongoing exploration in the whole contract area that expect to uncover more chromite deposits aside from extensions of the present Redondo deposit. Potential for Additional Reserves Exploration of the companys whole contract area is currently being done. This involves Auger drilling spaced 100 m x 100 m that is intended to spot other potential chromite deposits. Aside from that three 3 areas Sangay 1 2 and 3 which display good indications of chromite deposition are still to be tested further by auger and diamond drilling in order to locate the source of the chromite floats and boulders present in the area.

Access Transportation From Surigao City the project area can be reached in three to four hours by commercial motorized bancas which dock at the Loreto Pier though the company has its own piersite located at Sitio Cambinliw Barangay Santiago in Loreto. From the company piersite to the mine site located on the northern slope of Mt. Redondo it takes 15 to 20 minutes to travel by motor vehicle via an allweather road of eight kilometers that was built by the company. Surigao City is accessible either by interisland vessels from Cebu or by bus from Butuan City both having direct flights from Metro Manila.

2.4. Utilities 2.4.1. 2.4.2. Power Supply Milling operation and the other mine site facilities are supplied with 440 Volts 3 phase 220 Volts 2 phase by three units of Caterpillar Gensets 250 kW each in synchronized operation. One Genset unit 175 kW serves as alternate supply while another unit 25 kVA Perkins acts as the standby unit used for lighting loads only. All the Gensets are owned and operated by the company.

Water Supply The mine site has two 2 sources of water 1 by gravity from the nearby tributaries of Kanlangugan Creek and 2 from the companys freshwater dam which is the water source of water of the Mill Plant. The plant uses two 2 units of 30 HP water pumps for its water requirements.

2.5. Mining and Milling equipment 2.5.1. Equipment for Mining 2.5.1.1. Mobile Equipment 1 unit Caterpillar D7G Bulldozer 3 units 950 Wheel Loader 1 unit Caterpillar 320 D Excavator 1 unit Komatsu Grader 1 unit Caterpillar 325 L Excavator 2 units Volvo 861 Dumper 1 unit Volvo 5350 Dumper 4 units Isuzu Dump Truck 1 unit Atlas Copco ROC 301 Crawler Drill 1 unit Service Truck 2.5.1.2. Fixed and Miscellaneous Equipment 3 units Caterpillar 3304T 85 kW Prime Power Genset 3 units Caterpillar 3406TA 250 kW Prime Power Genset 1 unit

TOYO Brushless Generator 2 kW Power 1 unit Caterpillar 3208 Generator 1 unit Perkins P22 1 unit Joy Triple Frum Slusher Air hoses different sizes oilers moil points drill rods tungsten drill bits diamond drill bits etc. 2.5.2. Equipment for Milling 1 unit 1 unit 1 unit 2 units 4 units 2 units 3 units 12 units 4 units 2 banks 2 banks 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 4 pcs 2 pes 4 units 1 unit 1 unit 1 unit 1 unit 4 units 2 units 3 units 1 unit 1 lot 1 unit 1 unit 3 units 1 unit 1 unit Note SALA Screw Classifier 3 X 187 SALA Screw Classifier 3 X 36 Kurimoto Ball Mill SALA Vertical Slurry Pump 4 X 3 12kW SALA Vertical Slurry Pump 5 X 4 15kW Warman Slurry Pump 4 X 3 Slurry Tanks Diester No. 6 Concentrating Table single table Diester No. 999 Concentrating Table triple deck 7 Twin Reichert Spiral Concentrator 8 Twin Reichert Spiral Concentrator DorrOliver Thickener 40 X 13 DorrOliver Thickener Drive Reciprocating Feeder 3 X 6 Cedar Rapids Jaw Crusher 15 X 30 Symons 3 Cone Crusher Double Deck VScreen 4 X 8 PolyUrethana screen 4 X 4 Melwire Stainless Steel Curved Screen MCM Taylor Water Pump with 25 Hp Electric Motor Belt Conveyor 200 X 18 Belt Conveyor 40 X 24 Belt Conveyor 40 X 18 Belt Conveyor 20 X 14 Motor Control Center Krebbs D15B Cyclone Krebbs D10B Cyclone 25 kVA 3 Phase Drytype Step Down Transformer Electrical Wiring Switches Conduits etc. Run of Mine Ore Bin Dump Bin Fine Ore Bin Finished Product Concentrate Bin Double Deck VScreen 4 X 12 Byron Jackson Pump All mill equipment are fixed equipment 2.6. Workforce Information 2.6.1. 2.6.2. Total Operational Workforce Below is the update of the labor statistics and total operational workforce as of September 2006 Department No. of Employees 1. Administration 16 2. Accounting 7 3. Mine Production 30 4. Mine Engineering Safety; MEPEOCRDO 18 5. Motorpool Zi 6. Mill 36 7. Electrical 9 8. Geology and Exploration 8 9. Warehouse 4 10. Laboratory 9 11. General Services 9 12. Contractual Rotation Personnel i27 Total 300 Staff Organization Setup ENGR. JESUS A. BIRONDO Resident Manager of Krominco Inc. Engr. Jesus Birondo is a licensed Mining Engineer and obtained his bachelor degree from Mapua Institute of Technology. Before he joined Krominco Engr. Birondo was holding top positions in other mining companies engaging in copper gold nickel and chromite projects. His experience in mining operations is unprecedented. ENGR. REYNALDO M. GASPE Mine Superintendent of Krominco Inc. Engr. Reynaldo M. Gaspe is

the duly registered and licensed Mining Engineer and passed the board exam in 1982 the same year that he graduated. Engr. R. M. Gaspe holds the Mine Superintendent position for more than ten 10 years. From 1982 to 1994 he was then connected to Atlas Consolidated Mining and Development Corporation Atlas Ventures Incorporated and Manto Coal Mines before joining the company in 1995.

ENGR. WINIFREDO C. GENTAPA Mill Superintendent of Krominco Inc. Engr. Winifredo C. Gentapa is a holder of the degree of Bachelor of Science in Chemical Engineering. Engr. W. C. Gentapa holds the position of Mill Superintendent for more than ten 10 years. He has had wide experience in ore beneficiations in copper gold and chromite having been connected in the past to Atlas Consolidated Mining and Development Corporation and North Davao Mining Corporation.

ENGR. NILO L. DAMONDAMON Motorpool Superintendent of Krominco Inc. Engr. Nilo L. Damondamon is a duly registered and licensed Mechanical Engineer and is a bonafide member of the Philippine Society of Mechanical Engineers. Previously he was the Mobile Superintendent of North Davao Mining Corporation.

2.6.3. Housing The company provides staff house for staff personnel located at the mine site. Daily and contractual workers are staying in their houses about 4 to 7 kilometers from the operation area since the company provides service trucks to and from the minesite every shift.

2.7. Exploration Work Program For the next five years the exploration activities of Krominco Incorporated will focus on the systematic gathering of geologic data from all over the companys claim area. The exploration work program shall consist of auger drilling test pitting surface geologic mapping and diamond drilling. Foremost among the said activities is the 100 meter x 100 meter spaced auger drilling which will cover the whole contract area. Those areas with high chromite shall be further evaluated by digging closely spaced auger drilling and test pitting. If chromite indications are promising shallow winkie drilling will be undertaken to test the depth of the deposits. Deeper spray drilling will also be done once it is proven that the chromite extends even deeper than what the winkie drill can reach. Since the conduct of auger drilling of the whole contract area will need a very long time to complete more closely spaced auger drilling will also be done in the other prospects in order to speed up the delineation of possible occurrence of ore deposits. In

the same way as the above it will be followed by test pitting shallow drilling and deep penetrating xray drilling.

Year One

1. Scout Auger drilling 100 m x 100 m of the contract area
2. Continuation of Exploration of the Redondo Open Pit
 - 2.1. Detailed Surface Geologic Mapping
 - 2.2. Xray drilling in the Southeast Portion
 - 2.3. Shallow Winkie drilling
3. Geologic Investigation of the RedondoSangay Area
 - 3.1. Semidetailed auger drilling 20 m x 200 m
 - 3.2. Test pits/trenches
 - 3.3. Surface geologic mapping
 - 3.4. Detailed auger drilling
 - 3.5. Shallow winkie drilling
 - 3.6. Deeper xray drilling depending on the shallow drilling results

Year Two

1. Continuation of Exploration of the Redondo Open Pit
 - 1.1. Surface geologic mapping
 - 1.2. Xray drilling in the Southeast Portion
 - 1.3. Shallow winkie drilling
2. Geologic Investigation of the RedondoCambinliw Area
 - 2.1. Semidetailed Auger drilling 20 m x 20 m
 - 2.2. Test pits/Trenches 778 holes 8 hectares 225 meters 50 meters 9 hectares; 88 holes 40 m at least 10 pits 9 hectares 192 m; 64 holes 250 m; 10 holes 540 m; 12 holes 8 hectares 225 m 50m 9 hectares 88 holes 40 m; at least 10 pits
 - 2.3 Surface Geologic Mapping 9 hectares
 - 2.4. Detailed Auger drilling 192 m; 64 holes
 - 2.5. Shallow Winkie drilling 250 m; 10 holes
 - 2.6. Deeper Xray drilling depending on the shallow drilling results II 540 m; 12 holes

Year Three

1. Continued Exploration of the Redondo Open Pit
 - 1.1. Surface Geologic Mapping 8 has.
 - 1.2. Xray drilling in the Southeast Portion 225 m
 - 1.3. Shallow Winkie drilling 50m
2. Geologic Investigation of the Area Northeast of Redondo Mine Pit East of the Dam Area
 - 2.1. Semidetailed Auger drilling 20 mx 20 m 9 has.; 88 holes
 - 2.2. Test pits/Trenches 40 m; at least 10 pits
 - 2.3. Surface Geologic Mapping 9 ha
 - 2.4. Detailed Auger drilling 192 m; 64 holes
 - 2.5. Shallow Winkie drilling 250 m; 10 holes
 - 2.6. Deeper Xray drilling depending on the shallow drilling results II 540 m; 12 holes
3. Geologic Investigation of the 109111138136 Block Northern portion of the claim Area II
 - 3.1. Semidetailed Auger drilling 20 m x 20 m 9 ha; 88 holes
 - 3.2. Test pits/Trenches 40 m; at least 10 pits
 - 3.3. Surface Geologic Mapping 9 ha
 - 3.4. Detailed Auger drilling 192 m; 64 holes
 - 3.5. Shallow Winkie drilling 250 m; 10 holes
 - 3.6. Deeper Xray drilling depending on the shallow drilling results 540 m; 12 holes

Exploration Program Cost Estimates

The companys Exploration Program for the next three years is projected to cost P3333700.00 averaging around P1111200.00 per year. Mining Work Program Mining activity will still

be focused in the Redondo Open Pit for the next five years. The company will continue to extract metallurgical chromite through the open pit method. Excavation will be done with the use of two 2 units of backhoe excavators 1.5 cubic meters capacity each assisted by three 3 units of articulated trucks 20 MT capacity each and seven 7 units of Isuzu dumptrucks 12 MT capacity each. The average annual material movement is projected to be 400000 MT. Pls. see attached section of 3year Mine Development Plan Year One 1 1. Continuation of Mine Development and Ore Extraction in the Redondo Open Pit. 2. Extraction of about 70700 MT of Sorting Ore from the Mining Faces. 3. Projected Production of 10000 MT of high grade chromite lumps with final average grade of 46 Cr03. 4. Stockpiling of additional 60700 MT of Milling Ore to the existing millfeed stockpile. 5. Projected chromite concentrate production of 10000 MT with final average grade of 48 Cr203 Projected Milling Tonnage of 60700 MT of milling ore. Year Two 2 1. Continuation of Mine Development and Ore Extraction in the Redondo Open PitExtraction of about 70700 MT of Sorting Ore. Projected Production of 10000 MT of high grade chromite lumps with final average 46 Cr203. Stockpiling of additional 60700 MT of Milling Ore to the existing Millfeed stockpile. Projected chromite concentrate production of 10000 MT with final average grade of 48 Cr 03 Projected Milling Tonnage of 60700 MT of milling ore. Year Three 3 Continuation of Mine Development and Ore Extraction in the Redondo Open Pit Extraction of about 70700 MT of Sorting Ore. Projected Production of 10000 MT of high grade chromite lumps with final average 46 Cr203. Stockpiling of additional 60700 MT of Milling Ore to the existing Millfeed stockpile. Projected chromite concentrate production of 10000 MT with final average grade of 48 Cr203 Projected Milling Tonnage of 60700 MT of milling ore. 2.9. Production Program and Cost Estimate 2.9.1. Lumpy Production Direct Mining Cost YEAR WASTE SORTING ORE LUMPY ESTIMATED MT MT PRODUCED MT COST PhP 1 386400 70700 10000 32736300.00 2 367600 70700 10000 32736300.00 3 370000 70700 10000 32736300.00 TOTAL 1124000 212100 30000 98208900.00 a0. 2.9.2. Concentrate Production Direct Milling Cost YEAR MILL FEED CHROMITE COST ESTIMATE MT CONCENTRATE MT PhP 1 60700 10000 12140000.00 2 60700 10000 12140000.00 3 60700

10000 12140000.00 TOTAL 182100 30000 36420000.00 2.9.3. Total Projected Production 60000 MT Lumpy and Concentrate combined for 3 years. 2.9.4. Total Estimated Cost Of Production DMMC PhP 134628900.00 for three years. COMMUNITY DEVELOPMENT PROGRAM Krominco Incorporated is one of the eight companies in Caraga Region that has adopted the Mines and Geosciences Bureaus Information Communication Education ICE Community Development CD Program with the signing of the Memorandum of Agreement last 1998. As with all the other companies that signed the MOA Krominco has allotted an amount equal to 1 of its total Direct Mining and Milling Costs annually for Community Development. Ten 10 of it goes to Science Research Study. The remaining 90 will be distributed to the livelihood 70 infrastructure projects 30 of the companys two host barangays Esperanza and Santiago. The company has already formed its Technical Working Group Speakers Bureau headed by four Krominco representatives two MGB XIII staff one PENRODENR representative the Mayor of Loreto the two Barangay Captains of the concerned Barangays representatives of the Loreto Roman Catholic Church and the Philippine Independent Church and another two from the NonGovernment Organizations based in the Municipality the REACH Foundation. The multisectoral team is in charge of facilitating and monitoring the ICECD programs of Krominco most especially the livelihood projects that the community will choose to undertake. The TWGSB of Krominco believes that the communities are the companys partners in development and believes in the ProPeople Pro Environment and Responsible Mining philosophy. But before giving the amount in the form of livelihood projects to the community the Krominco TWGSB will ensure that the communities will have the proper social preparation. Thus Kromincos Community Development program starts off with the continuation of its Information Communication and Education ICE Projects which started in 1999 before subjecting the communities to a series of Value Formation seminars and Technical Capability and Financial Management trainings necessary for the success of their chosen livelihood projects. Year One 1 1. Continuation of the Information Communication Education ICE Community Development CD Program that was started in 1999. a. To continue sending out News Features and Articles for the

Quarterly Newsletter of the Caraga Region Mining Communities. b. Participation in the Quarterly Radio Program of the Caraga Region Mining Communities. c. Conduct regular meeting to members of Krominco Inc. Community Technical Working Speakers Bureau 2. Continue the immersion of the Community Relations Development Officers in the two Barangays. 3. Value Formation Seminars. 4. Continue extending assistance of Livelihood and Infrastructure Projects to the host mining communities and municipality. 5. Monitor the progress of Livelihood projects extended to the host mining communities. Estimated Cost Php448663.00 based on the estimated Direct Mining and Milling Costs for Year 1. Year Two 2 1. Continuation of the ICECD Program. a. Educational Talks and Minesite tour for Graduating High School students of Loreto National High School and Loreto Academy. b. To continue sending out News Features and Articles for the Quarterly Newsletter of the Caraga Region Mining Communities. c. Participation in the Quarterly Radio Program of the Caraga Region Mining Communities. d. Conduct regular meeting to members of Krominco Inc. Community Technical Working Speakers Bureau 2. Continue the immersion of the Community Relations Development Officers in the two Barangays. Value Formation Seminars. Continue extending assistance of Livelihood and Infrastructure Projects to the host mining communities and municipality. Monitor the progress of Livelihood projects extended to the host mining communities. Estimated Cost Php448663.00 based on the estimated Direct Mining and Milling Costs for Year 2. Year Three 3 1 Continuation of the ICECD Program. a. Educational Talks and Minesite tour for Graduating High School students of Loreto National High School and Loreto Academy. b. To continue sending out News Features and Articles for the Quarterly Newsletter of the Caraga Region Mining Communities. c. Participation in the Quarterly Radio Program of the Caraga Region Mining Communities. d. Conduct regular meeting to members of Krominco Inc. Community Technical Working Speakers Bureau. Continue the immersion of the Community Relations Development Officers in the two Barangays. Value Formation Seminars. Continue extending assistance of Livelihood and Infrastructure Projects to the host mining communities and municipality. Monitor the progress of Livelihood projects extended to the host mining communities. Estimated Cost Php448663.00 based

on the estimated Direct Mining and Milling Costs for Year 3. Total Information Communication EducationCommunity Development ICE CD Program Cost PhP1228260.00 based on the estimated Direct Mining and Milling Costs from Years 1 to 3.4.0 ENVIRONMENTAL MANAGEMENT AND PROTECTION COST ESTIMATE The following is from the summary Cost of Krominco Inc.s Environmental Protection and Enhancement Program though adjusted to show the cost estimates for three years .

wo CONFORME Mine Environmental Protection and Enhancement Office Construction and Maintenance0..0 ooo P 6000.00 Personnel Salariescccccece cee cesessesereetssseessttceeerersee08400000 CSCC SUN ES ce sncccas weacvammcmcne axaramueniiciomnmam aang tg o0O000 . Nursery Maintenance 2.2.2... cece eee e cece ce eeeeeeteeteeceeseetetttesesseseseeeees 3400.00 BOND UGS .binunnepas vee casmeirieetarewnudete eet re eck OU Personnel Salaries 2.0.00 0 ooo oo ccc cece eeeeeeeeeeeeeeeeeeseeeseeesee...180000.00 . Settling Ponds Maintenance Regular removal of Tailings sand from the settling ponds 600000.00 Hauling cost of disposing tailings sand for road surfacing construction and others from the stockpile.....1200000.00 . Siltation Ponds Maintenance Dredging and Hauling cost of silt from the silt ponds impoundment area 00... cee cee ee eee eee eeeeserseses s. 600000.00 . ReforestationVegetation Settling ponds waste dumps mined out areas and other disturbed areas00.. 00.0000 o cece ceeeeeeeeeeeeeeeeesse. 1500000.00 . Mine Safety and Health Program Personal Protective equipment seminarsconferences PTO a paren oS Soe nie rs dve vx ocgmendt porn tie wan egeencaresiace beeches 1524000.00 TOTAL P 6329700.00 Prepared by Engr. aldo M. Gaspe Mine Superintendent Mining Engineer PRC License No. 2021 PTR No. 0988444 Date of Issue Jan. 15 2008 Place of Issue Loreto Dinagat Is.

Uma met BIRO OANNEX D CERTIFICATE OF NONCOVERAGE 7 CERTIFICATE OF NONCOVERAGE a Ne The aesenmed of Environment and Natural Alneees DENR through the Environmental lanagement Bureau EMB hereby grants this Certificate of WNon Coverage CNC to Dinagat Island Chromite Project of iKXromineo lne docated in a 729hectare mining claim at Mt. Redondo Loreto Dinagat Island; Surigao del Norte bounded oy 102030 to 1023 aa and 125S72 J to.

a2638 ave Granted this thy hg 28 OR No. an Amount 69000 . VECEIVED FROM ES aiVIGION Date
this Certificate is being issued subject to the following. conditions The proponent shall. eubmilt its
Environmental t Bioteclion ; and Enhancement Program within one 1 month upon Issuance of this
Certificate provided that pending approval of said program the ptoponent shall establish an interim
Mine Rehabilitation Fund in such Bout to; be determind by the Mines and ecorsient. Bureau; erie of
the sraporiont to comply with any of the conditions. stipulated in. this Certificate shall be ground for
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management of Petroleum as defined in the Act in Guyana so as to ensure for the people of Guyana the maximum benefits therefrom and for doing such things in relation thereto; 3 With respect to prospecting for and producing Petroleum and for matters connected therewith the Act and Regulations subject to certain limitations and conditions contained therein authorize the Minister to grant Petroleum Prospecting Licences and Petroleum Production Licences; 4 Section 10 of the Act authorizes the Minister to enter into an agreement with any person with respect to inter alia the grant of a Licence the conditions to be included in a Licence the procedure to be followed by the Minister while exercising any discretion conferred Petroleum Agreement 1 Government of Guyana Orinduik PA Y 5 6 7 8 upon him by or under the Act and the manner in which the discretion shall be exercised and any matter incidental to or connected therewith; Contractor submitted to the delegatee a proposal the proposal for a Production Sharing Agreement in respect of a certain offshore area of Guyana on terms and conditions specified in the proposal; GGMC has been authorized by the Minister to negotiate this Agreement subject to the provisions of the Act and Regulations and to the final written approval of the Minister of its and execution thereof and to assist in the administration and implementation thereof; Contractor will have or will acquire the financial resources the managerial technical and industrial competence and the experience to carry out Petroleum Operations and will provide an affiliate company guarantee in accordance with section 13 of the Act; Pursuant to the aforesaid recitals Contractor made an application to the Minister for a Petroleum Prospecting Licence in accordance with regulation 13 of the Regulations as hereinafter defined over the area described in Annex A and shown on the map attached as Annex B subject to the terms and conditions herein set forth and subject to the provisions of the Act and Regulations and Contractor has agreed by execution of this Agreement to accept the said Licence on the said terms and conditions and provisions. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows Petroleum Agreement Government of Guyana Orinduik PA . Article 1 Definitions LI In this Agreement unless the context otherwise requires Accounting Procedure means the procedure set out in Annex C; Act

means the Petroleum Exploration and Production Act No. 3 of 1986; Affiliated Company in relation to each Party that is a Contractor means a company or corporation; i which is directly or indirectly controlled by the Party; or ii which directly or indirectly controls the Party; or iii which is directly or indirectly controlled by a company or corporation that also directly or indirectly controls the Party. For the purpose of this definition control means the right to exercise a vote of fifty per cent 50 or more of all the voting shares; Agreed Interest Rate means interest computed on a monthly basis at the rate per annum equal to the average London Interbank Offer Rate LIBOR for six 6 months United States dollar deposits as published by the Wall Street Journal on the first Business Day of such month being calculated plus three percentage points 3; Agreement means this Agreement and the Annexes hereto attached and made a part hereof; Appraisal Programme means a programme carried out following a discovery of Petroleum in the Contract Area for the purpose of delineating the Petroleum Reservoir as defined in the Act to which that discovery relates in terms of thickness and lateral extent and estimating the quantity of recoverable Petroleum therein prior to declaration of commerciality; Appraisal Well means a well drilled for the purpose of an Appraisal Programme; Article means an Article of this Agreement; Associated Gas means all Natural Gas produced from any Petroleum Reservoir of which the predominant production is Crude Oil and includes the gas cap which overlies and is in contact with Crude Oil; Barrel means a quantity consisting of fortytwo 42 United States gallons liquid measure measured at standard conditions of atmospheric pressure and temperature 14.7 3 Petroleum Agreement Government of Guyana Orinduik PA a Ree lbssq. inch absolute or 1 Kgsq. cm. absolute and corrected to a temperature of sixty 60 degrees Fahrenheit or fifteen 15 degrees Celsius; Business Day means a day on which the banks in Georgetown Guyana are customarily open for business. Calendar Month or Month means any of the twelve months of the Calendar Year; Calendar Quarter or Quarter means a period of three 3 consecutive months beginning on the first day of January April July or October; Calendar Year or Year means a period of twelve 12 consecutive Months commencing on January and ending on the succeeding December 31 provided however that a Year of a term of a Licence shall be the period specified in section 2 2 b

of the Act; Commercial Discovery means any discovery which the Contractor in its sole judgment considers economic to develop and produce pursuant to the terms of the Agreement; Contract Area means i on the Effective Date the area described in Annex A and shown on the map in Annex B and the subject of the Petroleum Prospecting Licence granted to the Contractor pursuant to Article 3; and ii thereafter any areas which at any particular time are subject to the Petroleum Prospecting Licence or Petroleum Production Licences granted to the Contractor under Article 8; Contract Costs means Exploration Costs Development Costs Operating Costs Service Costs General and Administrative Costs and Annual Overhead Charge; Contractor means Tullow and Eco and includes each of their successors and permitted assignees; Cost Gas has the meaning assigned in Article 11; Cost Oil has the meaning assigned in Article 11; Crude Oil or Oil means crude mineral oil asphalt ozokerite distillates condensates and all kinds of hydrocarbons and bitumens both in solid and liquid forms at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or 1 Kgsq. cm; Delivery Point means in the case of Crude Oil the inlet flange of the lifting tankship; in the case of Natural Gas shall be the sales point and the point at which custody transfers from seller to buyer. In the case of LNG sales the Delivery Point shall be the inlet loading 4 Petroleum Agreement Government of Guyana Orinduik PA B flange for the LNG tanker. In the case of pipeline deliveries the Delivery Point shall be the inlet flange to buyers pipeline or distribution system or the inlet to a third partys pipeline transporting buyers Natural Gas. The Delivery Point for LPGs shall be the sales point and the point at which custody transfers from seller to buyer. In the case of LPG exports the Delivery Point shall be the inlet loading flange for the LPG tanker or truck. In the case of pipeline deliveries of LPGs the Delivery Point shall be the inlet flange to buyers pipeline or distribution system or the inlet to a third partys pipeline transporting buyers LPGs; or in any case such other economically viable point for export of Petroleum in the Cooperative Republic Of Guyana which shall be agreed to by the Contractor and the Minister; Development Costs means the expenditure so categorized in Annex C; Development Plan means the plan referred to in Article 8.4; Development Well means any well drilled as part of a

Development Plan; Discovery Area means an area which is part of a Prospecting Area consisting of a Discovery Block or Blocks in respect of which the Minister has been informed under section 30 of the Act; Discovery Block means that as defined in the Act; Discovery of Petroleum means that as defined in the Act; Effective Date means the date on which this Agreement comes into force pursuant to Article 30; Expatriate Employee means any employee other than a Guyanese citizen not permanently resident in Guyana who is engaged under a contract of service for the purpose of Petroleum Operations; Exploration Costs means those expenditures so categorized in Annex C; Exploration Period means the initial period and/or the first renewal period and/or the second renewal period referred to in Article 4.1 as the case may be; Exploration Well means a well drilled which is not a Development Well with the objective of exploring for Petroleum on a geological entity be it of structural stratigraphic facies or pressure nature to a depth or stratigraphic level specified in the work programme for the exploration work programme; Field means an area within the Contract Area consisting of a Petroleum Reservoir or multiple Petroleum Reservoirs all grouped on or related to the same individual geological structural features or stratigraphic conditions from which Petroleum may be produced commercially; 5 Petroleum Agreement Government of Guyana Orinduik PA General and Administrative Costs and Annual Overhead Charge means the expenditures so categorised in Annex C; Geologic Basement means any igneous or metamorphic rock or any stratum in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected; Government means the Government of the Cooperative Republic of Guyana and its ministries and agencies; GGMC means the Guyana Geology and Mines Commission established under section 3 of the Guyana Geology and Mines Commission Act 1979; GGMC Act means the Guyana Geology and Mines Commission Act 1979; Licence means the Petroleum Prospecting Licence and/or the Petroleum Production Licences or both as the context requires; Lifting Entitlement means the quantity of Crude Oil to which a Party shall be entitled in any given period pursuant to

Article 11; Minister means the Minister assigned responsibility for Petroleum or where there is no such Minister the President; Natural Gas or Gas means all hydrocarbons which at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbsq. in or 1 Kgsq. cm is in a gaseous state including but not limited to wet mineral gas dry mineral gas and casing head gas all substances contained therein including helium which are produced from an oil or gas well in their natural state or residue gas remaining after extraction of NGLs from wet gas. For purposes of this Agreement Natural Gas shall also include liquefiable hydrocarbons obtained from Natural Gas by condensation or extraction including ethane propane butane pentanes and heaviers Natural Gas Liquids or NGLs. Liquefied methane shall not be considered an NGL but rather Natural Gas in the liquid state. NonAssociated Gas means Natural Gas or Gas other than Associated Gas; NonResident SubContractor shall mean a SubContractor the control and management of whose business are exercised outside Guyana. Operating Costs means those costs so categorized in Annex C; Operator shall have the meaning assigned to it in Article 2.2a; Petroleum Agreement Government of Guyana Orinduik PA WB ase Parties means the Government Tullow and Eco and includes Tullows and Ecos successors and permitted assignees and a Party shall mean any of the Parties; Petroleum Operations means Prospecting Operations andor Production Operations as defined in the Act; Petroleum Prospecting Licence means a Licence issued by the Government under the Act and the Regulations to Contractor for carrying out Prospecting Operations and set forth in Form C of the schedule as specified in the Regulations; Petroleum Production Licence means a Licence to be issued by the Government under the Act and the Regulations to Contractor for carrying out Production Operations and set forth in Form D of the schedule as specified in the Regulations; Profit Gas has the meaning assigned in Article 11; Profit Oil has the meaning assigned in Article 11; Recoverable Contract Costs has the meaning assigned in Article 11; Regulations means the Petroleum Exploration and Production Regulations 1986; Service Costs means the expenditures so categorized in Annex C; SubContractor means any company or entity which provides services to the Contractor in connection with Petroleum

Operations; Third Party Sales means third party arms length sales made by i Contractor or ii Affiliated Company of Contractor to a third party for an armslength price which is disclosed to the Minister. 1.2 The words and terms used in this Agreement but not defined herein shall if meanings have been assigned to them under section 2 of the Act have for the purposes of this Agreement the same meanings. 1.3. The provision of this Agreement relating to the Petroleum Prospecting Licence shall be read as part of the provisions of such Licence. 14 The provision of this Agreement relating to any Petroleum Production Licence shall be read as part of the provisions of such Licence. 1.5 The provisions in the Act and Regulations dealing with rights and obligations of the Contractor shall be read as part of but not nullify the provisions of this Agreement and any Licence issued to the Contractor. Petroleum Agreement Government of Guyana Orinduik PA oO IArticle 2 Agreement the Operator Liabilities and Indemnities Josh Dede Zed 2.4 Agreement This Agreement constitutes an agreement made under section 10 of the Act consistent with the Act and the Regulations and is a production sharing agreement the objective of which is the exploration for development and production of Petroleum in the Contract Area by the Contractor subject to the terms hereof and the provisions of the Act and Regulations under which the Contractor shall have an economic interest in the development of Petroleum from the Contract Area. The Operator a Tullow shall be the Operator charged with conducting the day to day activities of the Contractor under this Agreement. No transfer of operatorship to another Party not comprising the Contractor shall take effect unless it has been approved by the Minister which approval shall not be unreasonably withheld. The Minister shall be notified of any change of operatorship to another Party comprising the Contractor in writing. b The Contractor shall provide the Minister with a memorandum summarizing the operating arrangements between the Operator and the Contractor including any Party comprising the Contractor for the conduct of Petroleum Operations which will include inter alia a provision whereby the Operator agrees to conduct the Petroleum Operations in accordance with this Agreement the Licences and any applicable laws of Guyana. Liability The duties obligations and liabilities of the Parties comprising the Contractor under this Agreement and under any Licence issued pursuant

hereto shall be joint and several. Indemnity The Contractor shall at all times keep Government indemnified against all actions claims and the demands that may be brought or made against Government by a third party by reason of negligence any act or omission or reckless disregard of harmful consequences which results in damage to a third party by the Contractor or the Operator in the exercise or purported exercise of the rights of the Contractor under the Act or the Licence provided however that nothing in this Article shall require the Contractor to give the said indemnity for any claim or demand in respect of Petroleum taken by the Minister pursuant to Article 11 after title has passed to the Minister at the Delivery Point or in respect of assets acquired by the Minister pursuant to Article 20 from and after the date of acquisition. Liability by 8 Petroleum Agreement Government of Guyana Orinduik PA er JTcremated the Contractor to the Government for damages in respect of Petroleum Operations under this Agreement is limited to insurance required in accordance with Article 20.2 a provided however that the Contractor shall not be liable to the Government for indirect punitive or consequential damages including but not limited to production or loss of profits. 2 Petroleum Agreement Government of Guyana Orinduik PA er Article 3 Petroleum Prospecting Licence and Guarantee 3.1 3.2 Petroleum Prospecting Licence a On the date of this Agreement the Minister in accordance with the Act the Regulations and the terms of this Agreement shall grant to the Contractor the Petroleum Prospecting Licence for an initial period of four 4 years from the Effective Date over the area described in Annex A and shown on the map attached as Annex B hereto. b Subject to Article 4 and the other terms of this Agreement such Petroleum Prospecting Licence may be renewed but not more than twice at the election of the Contractor for consecutive periods of up to three 3 years each in accordance with the provisions of the Act and the Regulations. Guarantee The Contractor shall on or before the sixtieth 60th day from the Effective Date during year one 1 of the initial period in accordance with Article 4.1 hereunder and thereafter no later than ninety 90 days after the commencement of all subsequent work commitment periods as specified in Article 4.1 provide an Affiliate Company guarantee or other form of guarantee acceptable to the Minister in the amount of ten percent 10 of the budget submitted by the Contractor

pursuant to Article 7.1 for each specific work commitment period. Notwithstanding the foregoing if the Contractor exceeds its minimum work commitment in any phase specified in Article 4.1 the completion of such work commitment shall constitute a waiver of such proportion of the requirement of the guarantee by the Minister which is the equivalent of the excess work previously completed but which is applicable to the subsequent work commitment phase. If the guarantees are Affiliate Company guarantees they shall be in lieu of and satisfy any obligation to provide a guarantee and/or bond pursuant to the Act Regulations or this Agreement on the part or on behalf of the Contractor.

10 Petroleum Agreement Government of Guyana Orinduik PA Article 4 Obligation Exploration Programme and Expenditure 4.1 Exploration Programme Subject to the provisions of this Agreement in discharge of its obligations to carry out Prospecting Operations in the Contract Area the Contractor shall carry out the minimum work described herein during the periods into which Prospecting Operations are divided hereunder a The initial period of four 4 years shall be divided into two 2 phases. Each phase shall consist of two 2 years duration. i aa bb ii aa bb bo aa Petroleum Agreement Government of Guyana Orinduik PA Phase One Two 2 years During Phase One of the initial period. The Contractor shall complete a geological and geophysical evaluation report of the Contract Area based on the available geological information 2D seismic and 3D seismic data previously acquired and from reprocessed seismic data which may be determined necessary by Contractor. At the end of Phase One of the initial period the Contractor shall elect either to relinquish the entire Contract Area or to enter Phase Two 2 of the Initial Period. Phase Two Two 2 years Subject to Article 5 during Phase Two 2 of the Initial Period the Contractor shall in accordance with the conclusions and recommendations of the geological and geophysical evaluation report completed in Phase One 1 acquire a minimum of one thousand square kilometres 1000 sq. km of 3D seismic within the Contract Area during year one 1 of Phase Two 2. Contractor shall process and interpret same to identify drillable targets within the Contract Area. At the end of Phase Two 2 of the Initial Period Contractor shall elect either to relinquish the entire Contract Area or to renew the Petroleum Prospecting Licence for a three 3 year period. The First Renewal Period of three 3 years

duration. Subject to Article 5. During the first two years of the first Renewal Period the Contractor shall drill one 1 Exploration Well to the Cretaceous Formation in accordance with Article 4.2 11 Be SAAAt the end of the First Renewal Period the Contractor shall elect either to relinquish the Contract Area except for any Discovery Areas in respect of which the Minister is informed under Section 30 of the Act and the area contained in any Petroleum Production License or subject to Article 5 relinquish twenty 20 of the Contract Area and renew the Petroleum Prospecting License for a second period of three 3 years c i The Second Renewal Period of three 3 years aa Subject to Article 5 during the Second Renewal Period the Contractor shall drill one 1 Exploration Well to the Cretaceous Formation in accordance with Article 4.2 At the end of the Second Renewal Period the Contractor shall relinquish the entire Contract Area except for i any Discovery Area in respect of which the Minister is informed under Section 30 of the Act ii for the area contained in any Petroleum Production License and any other portion of the Contract Area on which the Minister agrees to permit the Contractor to conduct further exploration activities d The minimum work commitment for a given phase or period referred to in Article 4.1a b and c may be undertaken in an earlier phase or period in whole or in part and in such a case the work commitment with respect to the subsequent period shall be deemed to be satisfied accordingly in whole or in part as the case may be. Contractor may conduct additional work beyond the minimum work commitment in accordance with the terms and conditions of this Agreement which shall be subject to Cost Recovery. Subject to Article 24 herein and section 43 of the Act the Minister may extend any Exploration Period pursuant to a showing of good cause by the Contractor. 42 No Exploration Well drilled by the Contractor shall be treated as discharging any obligation of the Contractor to drill such Exploration Well unless either it has been drilled to the depth or formation agreed with the Minister and specified in the annual work programme or before reaching such depth or formation a the Contractor has expended on such well and any substitute well drilled pursuant to Article 4.2 d below the amount for such work commitment in the budget submitted by the Contractor and approved by the Minister as specified in Article 7.1; or b the Geologic Basement is encountered or such Exploration Well has drilled at least

3000m whichever is encountered first; or c a Discovery is made and the Minister is informed thereof

or 12 Petroleum Agreement Government of Guyana Orinduik PA d insurmountable technical problems are encountered which in accordance with good oilfield practice make further drilling impractical provided that if the said Well is abandoned owing to the said problems before reaching the Geologic Basement the Contractor shall drill a substitute well in the Contract Area to the same minimum depth as aforesaid unless otherwise agreed with the Minister or until the amount in Article 4.2 a less any amounts actually expended on the abandoned well is reached or one of the criteria listed at Articles 4.2 b to d is satisfied.

4.3. Expenditure Obligation The sum actually spent in fulfillment of the work obligation in a specific phase or period shall be deemed to have satisfied the Contractors minimum expenditure obligation for that phase or period. For the avoidance of doubt in the event the Contractor has performed its work obligations for an amount less than the amount specified in an annual work programme and budget submitted under Article 7 Contractor shall be deemed to have fulfilled its expenditure obligation for that phase or period.

13 Petroleum Agreement Government of Guyana Orinduik PA QD Article 5 Relinquishment of Areas Sd a2 ml 5.4 3.3 If prior to the end of the initial period of the Petroleum Prospecting Licence issued to the Contractor under Article 3.1 an application is made by the Contractor for renewal of the Licence under section 24 1 of the Act the Contractor shall not be required to relinquish at the end of the initial period any area of the original Contract. If prior to the end of the first renewal period of the Petroleum Prospecting Licence an application is made by the Contractor for a second renewal of the Licence under section 241 of the Act the Contractor shall then relinquish at the end of this first renewal period an area equal to at least twenty percent 20 of the original Contract Area less the exclusions provided for in Articles 5.3. The areas to be relinquished pursuant to Articles 5.1 and 5.2 shall a comprise Blocks as defined in the Act; b exclude any Discovery Area together with a reasonable area of protective acreage surrounding the Discovery Area; c exclude any area under an Appraisal programme any Production Area and any Natural Gas Discovery; d be selected by Contractor so that i the area relinquished shall comprise one 1 discrete area having regard to any representations made by the

Minister with respect to location shape and size; ii the Blocks to be retained for and during the first renewal period pursuant to Articles 5.1 and 5.2 shall constitute one 1 discrete area unless otherwise agreed to by the Minister. In the event that an area or areas cannot be identified for relinquishment in accordance with this Article without including in such area or areas in whole or in part a subsisting Discovery Area or Production Area or the Minister is of the opinion that the areas to be relinquished will not enable licensing separately or jointly with contiguous unlicensed areas then the Minister and Contractor shall consult together with a view to agreeing on the areas to be relinquished in the light of the circumstances then prevailing. If after sixty 60 days from receiving notice of the Contractors proposed relinquishments the Parties cannot agree on a proposed relinquishment the Parties shall refer the matter to a sole expert pursuant to Article 26. F or the purpose of this Article a Discovery Area shall not include any Discovery Block which relates to a Discovery in respect of which the Contractor has notified the Minister 14 Petroleum Agreement Government of Guyana Orinduik PA Y 5.6 Saf that the Discovery is not of potential commercial interest pursuant to section 31 1 of the Act unless such Discovery Block forms a part and only to that extent of another subsisting Discovery Area. If a Petroleum Prospecting Licence ceases to have effect with respect to Discovery Blocks pursuant to section 32 1 of the Act such reduction in size of the Contract Area shall be treated as an advance relinquishment under this Article and shall reduce the area next required to be relinquished accordingly. Without prejudice to the obligations undertaken in Article 4 the Contractor may at any time during the period of the Petroleum Prospecting Licence on giving the Minister no less than three 3 months notice in writing of its intention to do so relinquish any Block or Blocks in the Contract Area pursuant to section 28 of the Act and in accordance with Articles 5.4 and 5.5. Any such relinquishment shall count towards any subsequent mandatory relinquishments required under Articles 5.1 5.2 or 5.3 above as the case may be. 15 Petroleum Agreement Government of Guyana Orinduik PAped Article 6 Delegation; Cooperation between Contractor and GGMC 6.1 6.2 6.3 6.4 The Minister may subject to the provisions of the Act or any other law delegate any person to exercise and perform any of his functions under this Agreement and anything done by the delegate

in pursuance of the delegation shall have the same validity and effect as it would have if done by the Minister. The Minister also hereby authorizes GGMC to perform inter alia the following functions a to monitor the Petroleum Operations carried out by the Contractor; b to review any proposed exploration work programme and budgets presented by Contractor under Article 7 and any Appraisal Programme presented by the Contractor under Article 8; c to review any Development Plan submitted by the Contractor in connection with an application for a Petroleum Production Licence pursuant to section 34 of the Act; d to ensure the maintenance and availability for inspection of operating records and reports for Petroleum Operations in accordance with this Agreement; e to ensure the accounting procedures specified in Annex C of this Agreement are followed; f to ensure compliance with the provisions of this Agreement Petroleum Act and . Regulations. The Contractor and the delegate shall cooperate in good faith in the exercise of the Ministers functions delegated pursuant to this Article and the Contractor shall keep the delegate advised of all activities taking place during the course of Petroleum Operations and shall provide the delegate with all available information relating to Petroleum Operations as the Minister or the delegate may reasonably require. Towards this end the delegate and the Contractor shall meet at regular intervals but at least once every six 6 months to review the progress and results of the Petroleum Operations and to discuss the work programme and other activities to be undertaken in the ensuing months. With respect to the matters to be reviewed pursuant to Article 6.2 should the delegate wish to make any specific proposals or revisions thereto the delegate shall so notify the Contractor specifying its reasons therefor; within reasonable time thereafter the Contractor and the delegate shall meet and endeavour to agree on the proposals or revisions. The Contractor shall consider and take into account the proposals of the delegate and shall attempt in good faith to reach agreement on such proposals. If the Contractor and the delegate fail to agree within sixty 60 days of submission by the Contractor the 16 Petroleum Agreement Government of Guyana Orinduik PA 46.5 6.6 6.7 exploration work programme and budget including as appropriate any minimum work programme to be undertaken pursuant to Article 4 submitted pursuant to Article 7 and the Appraisal Programme

except in the case of Gas to which the provision of Article 12 shall apply submitted pursuant to Article 8 revised in accordance with any amendments or additions thereto agreed by the delegate and the Contractor shall be deemed adopted. Nothing herein above provided shall preclude the right of the Minister to delegate any additional function to the delegate or subject to Article 6.1 to delegate from time to time any functions including those herein contained to any other agency of Government. A delegation shall not increase the obligations or liabilities of the Contractor and notice of any delegation shall be given promptly to the Contractor. Any approvals required by the Minister or delegates of the Minister shall not be unreasonably withheld. If the Contractor requests required approval from the Minister or delegates of the Minister such approval shall be deemed as granted if no response is provided within sixty 60 days of the request. The Minister and the delegate shall upon request either provide to the Contractor or assist the Contractor in obtaining the assistance required for Contractor to fulfill requirements of the contract including but not limited to the following a approvals issued by Government agencies or local government institutions which are required to conduct hydrocarbon operations including approvals necessary to import goods and services free from duties and taxes; b approvals for easements and rightofway to enable Contractors to conduct operations; c approvals for security for field operations and personnel; d permission for entry and exit visas and working permits for Contractors employees subcontractors and their dependents; e supply reports analyses samples geological geophysical and production data necessary to Contractor from areas inside and outside the Contract Area; f approvals to export hydrocarbons and use essential infrastructure necessary for the economic export of hydrocarbons at normal commercial terms. 17 Petroleum Agreement Government of Guyana Orinduik PAvet Article 7 Annual Work Programme and Budget del Tol Within sixty 60 days after the Effective Date the Contractor shall prepare and submit to the Minister in detail a work programme and budget setting forth the Prospecting Operations which the Contractor proposes to carry out including as appropriate any minimum work obligations to be undertaken pursuant to Article 4 during the remaining portion of the Calendar Year. In subsequent years no less than one 1 month before the beginning of the

Calendar Year the Contractor shall prepare and submit to the Minister a work programme and budget setting forth Petroleum Operations which the Contractor proposes to conduct during the upcoming Calendar Year. The Contractor may for good cause amend the details of any work programme or budget submitted to the Minister pursuant to Article 7.1 provided that a notice of the details of the reasons for the amendments is given to the Minister; b such amendments shall not have the effect of reducing the minimum work obligations undertaken under Article 4 without the prior consent in writing of the Minister; c any proposed amendment shall be subject to review pursuant to Article 6.

18 Petroleum Agreement Government of Guyana Orinduik PA 3 4 ed Article 8

Discovery and Development 8.1 8.2 8.3 8.4 8.5 8.6 Petroleum Agreement Government of Guyana Orinduik PA

Where pursuant to section 30 of the Act notice has been given to the Minister of a Discovery in the Contract Area the Contractor shall forthwith inform the Minister of the steps it proposes to take to satisfy the requirements of section 30 1 a iii of the Act. Where the Contractor pursuant to section 31 1 of the Act has informed the Minister that in its opinion the Discovery is of potential commercial interest the Contractor shall as soon as practicable thereafter submit for the consideration of the Minister its proposals for an Appraisal Programme to meet the requirements of section 30 1 b of the Act. Where an Appraisal Programme has been adopted by the Contractor pursuant to Article 8.2 the Minister may on application by the Contractor pursuant to section 31 2 of the Act stating reasons therefor extend the period within which application may be made by the Contractor for a Petroleum Production License. Where the Contractor has made an application to the Minister for a Petroleum Production Licence in respect of any part of the Contract Area in accordance with section 34 1 of the Act such application shall be accompanied by the proposals required under section 34 3 of the Act hereinafter referred to as the Development Plan and shall satisfy the provisions of section 36 of the Act and the Regulations. The Development Plan shall provide that not later than six 6 months after the grant of the first Petroleum Production Licence the Contractor shall in consultation with GGMC prepare and implement a programme for training and employment of Guyanese nationals in each phase and level of Petroleum Operations and for the

development of management and technical skills for the safe and efficient conduct of Petroleum Operations. Where the Minister considers that the application has not met the requirements of Article 8.4 he shall so notify the Contractor within sixty 60 days of receipt of the application and GGMC and Contractor shall meet to discuss the application with a view to ensuring that the requirements of Article 8.4 are met. In the event that the Parties are unable to agree on amendments to the application to meet such requirements within sixty 60 days from the date of aforesaid application or such longer period as the Parties shall agree or where the Minister fails to respond to or act on the aforesaid application within sixty 60 days the Contractor may refer the matter to a sole expert pursuant to Article 26 for determination within sixty 60 days of appointment of such expert or such other time period as may be agreed between the Contractor and the Minister. Where the Minister considers that the aforesaid application has met the requirements of Article 8.4 he shall within sixty 60 days of receipt thereof so notify the Contractor. In such event or where in the event of a dispute it is determined by the sole expert pursuant to Article 26 that the Contractor has made an application which meets the requirements of Article 8.4 provided the Contractor is not in default under this Agreement the Minister shall grant within sixty 60 days of such notification or determination as the case may be 19 to Contractor a Petroleum Production Licence in the Form D of the schedule as specified in the Regulations over the area for which the application has been made on terms and conditions consistent with this Agreement and the Act and Regulations which will enable the Contractor to carry on Petroleum Operations in the Production Area in accordance with the Development Plan wherein the level of production set shall be consistent with the maximum efficient rate of production which conforms to sound reservoir engineering principles in accordance with good international petroleum industry practice. The initial term of a Petroleum Production Licence shall be twenty 20 years commencing from the date of the grant of the licence under the said Act. The Minister may impose policybased production limits on production below those consistent with maximum efficiency rates for the field or fields; any such production limits will be imposed countrywide and shall be allocated proportionately based upon demonstrable verifiable

field production capacities. 8.7 While the Contractor holds a Petroleum Prospecting Licence or has made an application pursuant to Article 8.4 and in accordance with section 34 1 of the Act the Minister shall not grant a Petroleum Production Licence in respect of all or part of the Contract Area or area covered by such application whether on a geographical or geological basis to any third party. 8.8 Where the Contractor pursuant to section 31 1 of the Act has served notice on the Minister that in its opinion a Discovery made in the Contract Area is not of potential commercial interest the provisions of section 32 1 of the Act shall apply. 8.9 The Contractor may apply for a renewal of a Petroleum Production Licence for a maximum ten 10 years. The application for renewal of ten 10 years shall be granted as long as the Contractor is in good standing under the Licence. a Natural Gas. In the event of any NonAssociated Gas discovery within the Contract Area in recognition of the fact that Natural Gas projects generally have much longer lead times from discovery to first commercial production than is the case for Crude Oil projects the Minister shall grant Contractors request for the maximum ten 10 year Petroleum Production License renewal so long as Contractor is in good standing under the Licence. b The Minister shall not refuse to grant the renewal of a Petroleum Production Licence under section 401 of the Act without first providing the Contractor; i Notice stating the grounds of the intended refusal; and ii Ninety 90 calendar days following the date of the notice referenced in Article 8.9bi to respond to or remedy the stated grounds for refusal. 8.10 If it was determined that the Field as to which the Commercial Discovery applies extends beyond the boundaries of the Contract Area or if such is subsequently determined in the course of development or producing operations in the Field then Contractor may apply for an extension of the Contract Area to include the additional acreage encompassing the Field as determined by the analysis of all the relevant information. The Minister may grant the 20 Petroleum Agreement Government of Guyana Orinduik PA P ase extension to the Contractor for such additional acreage to enable the entire Field to be developed and produced with optimal efficiency in accordance with good oil Field practice. The said acreage shall not be available to Contractor if it is held under Licence to a third party. In such instances the provision of Section 44 of the Act shall

apply. 21 Petroleum Agreement Government of Guyana Orinduik PA Article 9 Records Reports and Information; Confidentiality O41 Records Reports and Information a b c d e f Petroleum Agreement Government of Guyana Orinduik PA The Contractor shall at all times while this Agreement is in force maintain and submit to the Minister in accordance with the provisions of the Act and the Regulations the Petroleum Production Licence and this Agreement full and accurate reports records returns and accounts of Petroleum Operations in the Contract Area. All data well logs maps magnetic tapes cuts of cores and cutting samples and all other geological and geophysical information obtained by the Contractor in the course of carrying out Petroleum Operations hereunder and all geological technical financial and economic reports studies and analyses generated in relation thereto hereinafter referred to as Petroleum Data shall be submitted to the Minister in accordance with the Regulations. The Contractor may freely export for processing or laboratory examination or analysis samples or other original materials constituting Petroleum Data provided that samples equivalent in size and quality or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Minister. Petroleum Data shall be the joint property of the Minister and the Contractor but shall become the sole property of the Minister with respect to any area which ceases to be part of the Contract Area whether as result of relinquishment or expiry surrender or termination of a Licence or otherwise in accordance with the Act from the date on which such area ceases to be part of the Contract Area. The Minister through duly appointed representatives upon providing the Contractor with at least seven 7 days notice shall be entitled to observe the Petroleum Operations conducted by the Contractor at his sole cost and expense and at all reasonable times to inspect all assets records and data kept by the Contractor relating to such Petroleum Operations. In the exercise of such rights under this paragraph the Minister shall not unduly interfere with the Contractors Petroleum Operations under this Agreement. Nothing in this Article shall be construed as requiring the Contractor or any of the Parties comprising the Contractor to disclose any of its proprietary technology or that of its Affiliated Companies which is not acquired in the course of Petroleum Operations under this Agreement. 22 9.2 Confidentiality a

All Petroleum Data information and reports obtained or prepared by the Contractor hereunder shall so long as they relate to any part of the Contract Area be treated as confidential and each of the Parties undertakes not to publish reproduce or otherwise deal with such Petroleum Data or to disclose the same or the thereof to any other person without the consent in writing of the other Parties such consent not to be unreasonably withheld provided however that subject to Article 9.2 b this Article shall not i prevent disclosure by the Contractor aa to an Affiliated Company or employees of an Affiliated Company; bb to consultants professional advisers data processing centres laboratories and SubContractors where disclosure is for the conduct of Petroleum Operations; cc to a bank or other financial institution in connection with financing for Petroleum Operations or general financing requirements established by Contractor or an Affiliated Company of Contractor; dd to the extent required by any applicable law or the regulations of any stock exchange upon which the shares of the Contractor or an Affiliated Company are quoted or by governmental order decree regulation or rule or to the extent required under any legal proceeding or any court order binding on Contractor or Affiliated Company of Contractor; ee to bona fide prospective assignees or transferees of an interest hereunder of the Contractor or in connection with merger consolidation or a sale of stock of the Contractor or an Affiliated Company thereof; ff in connection with data trades; gg of data information and reports already known to the Contractor or Affiliated Company prior to the Effective Date; or hh of data information and reports acquired independently from a third party that represents that it has the right to disseminate such data at the time it is acquired by the Contractor or Affiliated Company; ii Save as provided in Article 9.2 a i prevent disclosure pursuant to section 4 of the Act provided however that neither the Minister nor Contractor shall disclose Petroleum Data relating to any area subject to a Licence to a Petroleum Agreement Government of Guyana Orinduik PA 3.0

20 80 For the avoidance of doubt it is hereby stated that once the Contractors Investment Multiple has increased so as to trigger in any Year a higher percentage of Profit Petroleum sharing for the Government and a lower percentage for the Contractor than that existing before the date of such increase the Parties Shall be entitled to share in the total volume of Profit Petroleum in the

proportions specified in the relevant Articles above in respect of the higher levels of or Investment Multiple and shall not be entitled to receive any Profit Petroleum shares in respect of the lower levels of profitability. The value of the Contractors Investment Multiple at the end of any Year in respect of each Field shall be calculated in the manner provided for and on the basis of the net cash flows specified in Appendix D to this Contract. However the volume of Profit Petroleum to be shared between the Government and the Contractor. shall be determined i 7 ry 8 go 15.5 for each Quarter on an. accumulative basis. Pending finalization of accounts delivery of Profit Petroleum shall be taken by the. Government and the Contractor on the basis of . provisional estimated figures of Contract Costs production prices receipts income and any other income or allowable deductions and on the basis of the value of the Investment . Multiple achieved at the end of the preceding Year. All such provisional estimates shall be approved by the Management Committee When it is necessary fo convert monetary units into physical units of production equivalents or vice versa the price or prices determined pursuant to Articles 19 and 21 for Crude Oil Condensate and Natural Gas respectively shall be used. Within sixty 60 days of the end of each Year a final calculation of Profit Petroleum based on actual costs quantities prices arid income for the entire Year shall be undertaken and any necessary adjustments to the sharing of Petroleum shall be agreed upon between the Government and the Contractor and made as soon as is practicable thereafter. The Profit Petroleum due to the Contractor in any Year from any Field shall. be divided between the Parties constituting the Contractor in proportion to their respective Participating Interests . ow dL a oO

ARTICLE 16 TAXES ROYALTIES RENTALS ot CUSTOMS DUTIES ETC .

16.1 All Parties and the operations under the Contract shall be subject to all fiscal legislation in India except where pursuant to any authority granted under any applicable law they are exempted wholly or partly from the application of the provisions of a particular law or as otherwise provided herein.

16.2 Pursuant to the provisions of section 42 of the IncomeTax Act 1961 the allowances specified herein shall apply in computing income tax payable by a Company on its profits and gains from the business of Petroleum Operations in lieu of and not in addition to corresponding allowances provided for under

the heading Profits and Gains of Business or Profession in the IncomeTax Act 1961. . 16.2.1 Subject to the provisions herein below deductions at the rate of one hundred percent 100 per annum shall be allowed for all expenditures incurred in respect of Exploration Operations and drilling operations. The expenditure incurred in respect of Development Operations other than drilling operations and Production Operations will be allowable as per the provisions of the Income Tax Act 1961. The expenses so incurred are subject to the following a where any expenditure is not solely incurred on Petroleum Operations or is incurred as part of or in conjunction with any other business only that proportion of the total expenditure which can be proved to the assessing officer to represent a fair proportionate part thereof having regard to all relevant facts and circumstances shall be allowed; b Sections 40A and 44C of the IncomeTax Act 1961 shall apply. 16.2.2 Companies shall be entitled for income tax purposes only to deduct at the rate of one hundred percent 100 of all of its unsuccessful exploration costs incurred in contract areas covered by other contracts from the aggregate value of Petroleum allocable to the Contractor from the Contract Area oo a Unsuccessfiil Exploration Costs incurred in contract areas other than the Contract Area where Commercial Discovery has been made up to the date of commencement of Commercial Production shall be aggregated and the Companies shall be entitled to deduct such costs at the rate of one hundred per cent 100 per annum; J G aN le oS7. Za ve i aa i Pye ; ; ARTICLE 17 ot os cr CUSTOMS DUTIES 17.1 Machinery plant equipment materials and supplies imported by Contractor or its oe Subcontractors solely and exclusively for use in Petroleum Operations shall be exempted . from customs duties subject to compliance with procedures and conditions as may be determined. pursuant to applicable customs duty legislation Article 23 and the terms herein specified. 17.2 Contractor shall submit to the Government a list of Subcontractors who are engaged by it . . for the purpose of obtaining the various categories of items specified herein pursuant to the conduct of Petroleum Operations and who may claim exemptions hereunder. 17.3 In order to qualify for the exemption from customs duties as provided for in Article 17.1 oO .all imported items for which duty exemption is being claimed shall be certified by a a responsible representative of the Contractor to

be imported in terms of this Contract solely and exclusively for use in carrying out Petroleum Operations and shall be approved by a representative of the Government to be eligible for such exemption pursuant to the terms of the Contract. 17.4 The Government shall have the right to inspect the records and documents of the physical item or items for which an exemption is or has been provided under Article 17.1 to determine that such item or items are being or have been imported solely and exclusively for the purpose for which the exemption was granted. The Government shall also be entitled to inspect such physical items wherever located to ensure that such items are being used for the purpose herein specified and any item not being so used shall immediately ; become liable to payment of the applicable customs duties. 17.5 Subject to Article 27 the Contractor and its Subcontractors may sell or otherwise transfer in India all imported items which are no longer required for Petroleum Operations subject to applicable megovernins customs duties and sale or disposal of such items. Og SOW LLDAL ee om. ve ARTICLE 18 DOMESTIC SUPPLY SALE DISPOSAL AND EXPORT 18.1 18.2 18.3 18.4 OF CRUDE OIL CONDENSATE Until such time as the total availability to the Government and government Companies of Crude Oil and Condensate from all Petroleum production activities in India meets the total national demand as determined by the Government each constituent of the Contractor shall be required to sell to the Government or its nominee all of their entitlement to Crude Oil and Condensate from each Field in order to assist in satisfying the national demand. Pursuant to Article 18.1 and subject to Article 18.4 each constituent of the Contractor shall offer to sell to the Government or its nomince its total Participating Interest share of Crude Oil and Condensate to which it is entitled under Articles 14 and 15 at the price determined in accordance with Article 19 for salesto Government and the Government shall have the option to purchase the whole of the crude at the said price. The aforementioned offer shall be made by a constituent of the Contract in writing at least six 6 months preceding the Year in which the sale is to be made specifying the estimated quantities and grade of Crude Oil and Condensate being offered based upon estimates which shall be adjusted within ninety 90 days of the end of each Year on the basis of actual quantities produced and saved. The

Government shall exercise its said option to purchase in writing not later than ninety days 90 prior to the commencement of the Year in respect of which the sale is to be made specifying the quantity and grade of . Crude Oil and Condensate which it elects to take in the ensuing Year. Failure by the Government to give such notice within the period specified shall be conclusively deemed an election to take all of the Crude Oil and Condensate offered adjusted as provided herein in the ensuing Year. If during any Year India attains Selfsufficiency the Government. shall promptly thereafter but in no event later than the end of the first Calendar Quarter of the following Year so advise the each constituent of the Contractor by written notice. In such event as from the end of the second Calendar Quarter of the following Year or such earlier date as the Parties may mutually agree Government shall have the option but not obliged to purchase and the each constituent of the Contractor shall have the right to lift and export its Participating Interest share of Crude Oil and Condensate until such time if any as Self sufficiency shall have ceased to exist. If Selfsufficiency ceases to exist during a Year the Government shall recover its option to purchase under Article 18.2 in respect of the following Year by giving notice thereof to the each constituent of the Contractor. 4 .

Jo CORN Af Rey ee Og ON UBS 18.5 18.6 All payments in respect of sales to the Government pursuant to provisions of this Article shall be made by the Government within the period for credit applicable in the calculation of the price pursuant to Article 19. If no time frame for credit is applicable in such calculation payment shall be made within forty five 45 days from the date of delivery of Crude Oil or Condensate to the Government at the Delivery Point. In the case of sales by a Foreign Company payment shall be made in United States Dollars or any other convertible currency acceptable to the Government and the Foreign Company by wire transfer to the credit of the Foreign Companys designated account with a bank within or outside India designated by the Foreign Company. Subject to any change in the relevant laws in the case of sales by a domestic company payment shall be made in equivalent Indian rupees to the credit of the domestic companys designated account with a bank in India designated by the domestic company. Notwithstanding the above each constituent of the Contract shall submit an invoice to the Government within fifteen 15

days from the date of delivery of Crude Oil. All amounts unpaid by the Government by the due date shall from the due date bear interest calculated on a day to day basis at the LIBOR plus two percent 2 will be paid. If full payment is not received by a constituent of the Contractor when due as provided in Article 18.4 it shall at any time thereafter notify the Government of the default and unless such default is remedied within fifteen 15 days from the date of the said notice such constituent shall have the right unless otherwise agreed upon written notice to the Government; a to suspend the sale to the Government purchase under Article 18.2; b to freely lift sell and export all its Participating Interest share of Crude Oil subject to destination restrictions in accordance with Government policy until the Government has paid the due amount plus interest as provided herein c if the payment plus interest is not received by each constituent of the Contractor within one hundred and twenty 120 days from the date the said payment was due to receive and export the Governments share of Profit Oil until such time as either Government has paid all amounts due plus interest or the value based on the price as determined in accordance with Article 19 of Governments share of Profit Oil so exported is equal to all amounts due plus interest whichever first occurs; provided however that if the Government makes a payment to such constituent after it has commenced export of Governments share of Profit Oil and such payment together with the value of Governments share of Profit Oil exported based on the price determined in accordance with Article 19 exceeds the amount due plus interest necessary adjustment shall be carried out to refund to the Government forthwith the excess the amount received by the constituent; . f tele EE18.7 18.8 18.9 18.10 18.11 The Company shall be entitled to freely lift and sell export any Crude Oil and Condensate which the Government has elected not to purchase pursuant to this Article 18 subject to Governments generally applicable destination restrictions to countries with which the Government for policy reasons has severed or restricted trade. No later than sixty 60 days prior to the commencement of production in a Field and thereafter no less than sixty 60 days before the commencement of each Year the Contractor shall cause to be prepared and submitted to the Parties a production forecast setting out the total quantity of Crude Oil that it estimates can be produced from a Field during the succeeding Year based on a

maximum efficient rate of recovery of Crude Oil from that Contract Area or those Contract Areas in accordance with good petroleum industry practice. no later than thirty 30 days prior to the commencement of each Quarter the Contractor shall advise its estimate of production for the succeeding Quarter and shall endeavor to produce the forecast quantity for each Quarter. Each Party comprising the Contractor shall throughout the term of this Contract have the right to separately take in kind and dispose of all its share of Cost Petroleum and Profit Petroleum and shall have the obligation to lift the said Cost Petroleum and Profit Petroleum on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Parties. The Government shall throughout the term of this Contract have the right to separately take in kind and dispose of its share of Profit Petroleum and of such portion of the share of the constituents of the Contractor of Crude Oil as is purchased by the Government pursuant to Article 18 and shall have the obligation to lift all of the said Petroleum on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Parties. For the purpose of implementing the provisions of Articles 18.9 and 8.10 a Crude Oil lifting procedure shall be agreed upon by the Parties no later than six 6 months prior to the commencement of production in a Field. Such lifting procedure shall include but not necessarily be limited to a a procedure for notification by the Operator to the Government and to each Party comprising the Contractor of projected Crude Oil production ; b a procedure for notification by the Government and by each constituent of the Contractor to the Operator of its expected offtake and the consequences of inability or failure to offtake. Kon Id5 a At 19.1 19.2 19.3 19.3.1 ARTICLE 19 VALUATION OF PETROLEUM For the purpose of this Contract the value of Crude Oil Condensate and Natural Gas shall be based on the price determined as provided herein. A price for Crude Oil shall be determined for each Month or such other period as the Parties may agree hereinafter referred to as the Delivery Period in terms of United States Dollars per Barrel FOB Delivery Point for Crude Oil produced and sold or otherwise disposed of from each Contract Area for each Delivery Period in accordance with the appropriate basis for that type of sale or disposal specified below. In the event that some or all of total sales of

constituents of Contractor of Crude Oil during a Delivery Period are made to third parties at Arms Length Sales all sales so made shall be valued at the weighted average of the prices actually received by the said constituents calculated by dividing the total receipts from all such sales FOB the Delivery Point by the total number of Barrels of the Crude Oil sold in such sales. In the event that a portion of such third party Arms Length Sales are made on a basis other than an FOB basis as herein specified the said portion shall be valued at prices equivalent to the prices FOB the Delivery Point for such sales determined by deducting all costs such as transportation demurrage loss of Crude Oil in transit and similar costs incurred downstream of the Delivery Point and the prices so determined shall be deemed to be the actual prices received for the purpose of calculation of the weighted average of the prices for all third party Arms Length Sales for the Delivery Period.

19.3.2 Each Company constituting the Contractor shall separately submit to the designated 19.4 nominee of the Government within fifteen 15 days of the end of each Delivery Period a report containing the actual prices obtained in their respective Arms Length Sales to third parties of any Crude Oil. Such reports shall distinguish between term sales and spot sales and itemize volumes customers prices received and credit terms and each constituent of the contractor shall allow the designated nominee of the Government to examine the relevant sales contracts. In the event that some or all of the Parties comprising Contractor Companys total sales of Crude Oil during a Delivery Period are made to the Government or its nominee the price of all sales so made shall unless otherwise agreed between the Parties be determined on the basis of either the FOB selling price per Barrel of one or more crude Oils which at the time of calculation are being freely and actively traded in the international market and 19.5 are similar in characteristics and quality to the Crude Oil in respect of which the price is being determined such FOB selli price to be ascertained from Platts Crude Oil Market Wire daily publication Platts or the spot market for the same crude oils ascertained in the same manner whichever price in the opinion of the Parties more truly reflects the current value of such crude oils For any Delivery Period in which sales take place the price shall be the arithmetic average price per Barrel determined by calculating the average for such Delivery Period of the mean

of the high and low FOB or spot prices for each day of the Crude Oils selected for comparison adjusted for differences in the Crude Oil and the crude oils being compared for quality transportation costs delivery time quantity payment terms the market area into which the crude oil is being sold other contract terms to the extent known and other relevant factors. In the event that Platts cases to be published or is not published for a period of thirty 39 consecutive days the Parties shall agree on an alternative daily publication. In the event of changing market conditions the Parties may review and mutually agree on changes to the period over which the average price of comparable crude oils may be calculated.

19.4.1 At least six 6 months prior to commencement of production from the first Field and from each Field thereafter in the Contract Area the Parties shall meet in order to establish a provisional list of the crude oils to be selected for comparison with the Crude Oil to be sold and an appropriate mechanism for the purpose of giving effect to Article 19.4 and definitively establishing the price of Crude Oil to be sold pursuant to Article 19.4. [In determining the quality of a Crude Oil account shall be taken of all relevant characteristics including but not limited to gravity sulphur and metal pour point and product yield.

19.4.2 In the event that at the relevant time no crude oils of similar quality to the Crude Oil to be sold are being actively traded in the international markets where prices can be ascertained by international publication or the official FOB selling prices and the international spot market price vary widely between producers the Parties shall meet in good faith to determine an appropriate pricing basis.

19.4.3 The Parties shall meet annually or sooner upon notice served by any Party on the others to review the list of selected crude oils or the mechanism established pursuant to article 19.4.1 in light of any new facts since the date of selection of such crude oils or establishment of such mechanism and to determine what adjustment if any should be made to the said selection or mechanism by mutual agreement of the Parties. In the event that in any Delivery Period some but not all of a Party's each constituent of the Contractor sales of Crude Oil from a Field are made to the Government or a Government company and some but not all are made to third parties in Arms Length Sales and the price as established in accordance with Article 19.4 differs by more than two per cent 2 from the price as determined

in accordance with Article 19.3 for the same Delivery Period the Parties shall meet upon notice from any Party to determine if the prices established for the relevant Delivery Period should be adjusted taking into account third party Arms Length Sales made by each constituent of the Contractor of the same or similar Crude Oil from the relevant Field or other Fields and published information in respect of other genuine third party Arms Length Sales of the same or similar Crude Oil for that Delivery Period. Until the matter of an adjustment for the relevant Delivery Period is finally determined the price as established in accordance with this Article will apply for that Delivery Period. Any adjustment if necessary will be made within thirty 60 days from the date the adjustment for that Delivery Period is finally determined. A Company constituting the Contractor shall determine the relevant prices in accordance with this Article and the calculation basis of calculation and the price determined shall be supplied to the Government or its nominee and shall be subject to agreement by the Government or its nominee before it is finally determined. Pending final determination the last established price if any for the Crude Oil shall be used. In the event that the Parties fail to reach an agreement on any matter concerning selection of the crude oils for comparison the calculation the basis of or mechanism for the calculation of the prices the prices arrived at the adjustment of any price or generally about the manner in which the prices are determined according to the provisions of this Article within thirty 30 days or such longer period as may be mutually agreed between the Parties from the date of commencement of Commercial Production or the end of each Delivery Period thereafter any Party may refer the matter or matters in issue for final determination by a sole expert appointed as provided in Article 33. 19.7.1 Within ten 10 days of the said appointment the Parties shall provide the expert with all information they deem necessary or as the expert may reasonably require. 19.7.2 Within fifteen 15 days from the date of his appointment the expert shall report to the Parties on the issues referred to him for determination applying the criteria or mechanism set forth herein and indicate his decision thereon to be applicable for the relevant Delivery Period for Crude Oil and such decision shall be accepted as final and binding by the Parties. 19.7.3 Except for the adjustments referred to in Article 19.5 any price or pricing mechanism

agreed by the Parties pursuant to the provisions of this Article shall not be changed retroactively ap
gy Wo et eat Perea ey w 6 [meron L19.8 Any sale or disposal to Affiliates or other sale or disposal of
Crude Oil produced from a Field other than to the Government or Government companies or to third
parties in Arms Length Sales in any Delivery Period shall be valued on the same basis as sales. to
the Government or a Government company. In the event of such a sale or disposal by a Company
such Company shall submit to the Government within fifteen 15 days of the end of each Delivery
Period all relevant information concerning such sales or disposals. 19.9 In the event that in any
Delivery Period there is more than one type of sales referred to in Articles 19.3 19.4 and 19.8 then
for the purpose of calculating Cost Petroleum and Profit Petroleum entitlement pursuant to Articles
14 and 15 a single price per Barrel of Crude Oil for all the sales for the relevant Delivery Period shall
be used. Such single price shall be the weighted average of the prices determined for each type of
sale weighted by the respective volumes of Crude Oil sold in each type of sale in the relevant
Delivery Period. 19.10 In this Article the term nominee means a company wholly or partially owned
by the Government directly or indirectly and shall include any other agency of the Government.
19.11 The provisions specified above for the determination of the price of sales of Crude Oil shall
apply mutatis mutandis to Condensate 19.12 The price of Natural Gas shall be determined as
provided in Article 21. ad ON US ee 20.1 20.2 20.3 seaies ARTICLE 20 CURRENCY AND
EXCHANGE CONTROL PROVISIONS Subject to the provisions herein and to compliance with the
relevant provisions of the laws of general application in India governing currency and foreign
exchange and related administrative instructions and procedures issued thereunder on a
nondiscriminatory basis each Foreign Company comprising the Contractor shall during the term of
this Contract have the right to a repatriate abroad in United States Dollars or any other freely
convertible currency acceptable to the Government and the Foreign Company the net proceeds of
sales of Petroleum in India; receive retain and use abroad the proceeds of any export sales of
Petroleum under b the Contract; c open maintain and operate bank accounts with reputable banks
both inside and outside India for the purpose of this Contract; d freely import through normal

banking channels funds necessary for carrying out the Petroleum Operations; . ; e convert into foreign exchange and repatriate sums imported pursuant to d above in excess if any of its requirements and f make payments outside of India for purchases services and loans obtained abroad . without the requirement that funds used in making such payments must come from or originate in India. The rates of exchange for the purchase and sale of currency by the Companies shall be the rates in accordance with prevailing currency and exchange regulations and for accounting purposes under this Contract these rates shall apply as provided in Section 1.6 of Appendix C. Foreign Companies shall have full rights of control over movement of funds out of bank accounts established for the purpose of Petroleum Operations but shall provide to the Government or any body designated by it monthly bank statements with an explanation of each deposit or payment from the account and shall supply each quarter in a form acceptable to the Government or such designated body full particulars of foreign exchange. transactions pursuant to this Contract in order to facilitate monitoring of such socounts Such particulars shall include 7 O 20.4 a by c d goods required for the purpose of Petroleum Operations ; e g tome details of deposits of proceeds of sales of Petroleum such as quantity of Petroleum sold date of sale and unitprice; the repaytient of principal of loans made to the Contractor in foreign currency for purposes of Petroleum Operations; payments of interest charges fees and expenses in respect of loans referred to in paragraph b above ; . payments in foreign currency to persons not resident in India for the supply of capital payments in foreign currency to persons not resident iri India for the supply of goods and services other than capital goods required for Petroleum Operations including services of foreign employees and consultants ; amounts remitted to India or paid elsewhere at the request of the Government to meet obligations under the Contract; and retention or disbursements to Affiliates in foreign currency representing the excess of net profits depreciation and amortization over the payments made under paragraphs b through f above. The Government shall have the right to verify any statements and reports submitted by the Contractor pursuant to this Article and the Contractor shall promptly respond to any query made by the Government or the designated financial body to the reasonable

satisfaction of the Government or such designated body. Domestic Companies shall be subjected to the relevant provisions of the applicable laws in India governing currency and foreign exchange and related administrative instructions and . procedures issued thereunder from time to time. Coy LCD.

ae 211 21.2 21.3 21.4 ARTICLE 21 NATURAL GAS Subject to Article 21.2 the Indian domestic market shall have the first call on the utilization of Natural Gas discovered and produced from any Field within the Contract Area. Accordingly any proposal by the Contractor relating to Discovery and production of Natural Gas from a Field shall be made in the context of the Governments guidelines issued from. time to time for the utilization of Natural Gas shall take into account the objectives of the Government to develop its resources in the most efficient manner and to promote conservation measures. Contractor shall have the right to use Natural Gas produced from a Field for the purpose of Petroleum Operations including but not limited to reinjection for pressure maintenance gas lifting and power generation etc. For the purpose of sales to the domestic market pursuant to this Article 21 the Contractor shall have freedom to market the gas. Associated Natural Gas ANG 21.4.1 In the event that a Discovery of Crude Oil contains ANG Contractor shall declare in the proposal for the declaration of the said Discovery as a Commercial Discovery as specified in Article 10 whether and by what amount the estimated production of ANG is anticipated to exceed the quantities of ANG which will be used in accordance with Article 21.2 such excess being hereinafter referred to as the Excess ANG. In such an event the Contractor shall indicate whether on the basis of the available data and information it has reasonable grounds for believing that the Excess ANG could be commercially exploited in accordance with the terms of this Contract alongwith the Commercial Production of the Crude Oil from the Oil Field and whether the Contractor intends to so exploit the Excess ANG. Based on the principle of full utilization and minimum flaring of ANG a proposed Development Plan for an Oil Field shall to the extent practicable include a plan for utilization of the ANG including estimated quantities to be flared reinjected and to be used for Petroleum Operations; and if the Contractor proposes to commercially exploit the Excess ANG for sale in the domestic market in accordance with Governments guidelines or elsewhere the proposed plans for USS S a

21.4.2 such exploitation. Im . 21.4.3 If the Contractor wishes to exploit the Excess ANG subject to Article 21.1 the Contractor shall be free to explore markets for the commercial exploitation of the said Excess ANG and submit its proposals for such exploitation to the Government in accordance with Article 21.4.2. 21.4.4 Where the Contractor is of the view that Excess ANG cannot be commercially exploited and chooses not to exploit the said Excess ANG or is unable to find a market for the Excess ANG pursuant to Article 21.4.3 the Government shall be entitled to take and utilize such Excess ANG. 21.4.5 If the Government elects to take the Excess ANG as provided in Article 21.4.4 a the Contractor shall deliver such Excess ANG to the Government or its nominee free of cost at the downstream flange of the gasoil separation facilities; b the Contractor shall based on sound petroleum engineering practices install such facilities as would facilitate in so far as practicable uninterrupted delivery of such Excess ANG to the Government or its nominee; c the cost of all facilities installed pursuant to paragraph b above shall be recoverable as Contract Costs; d the Government or its nominee shall bear all costs including gathering treating processing and transporting costs beyond the downstream flange of the gasoil separation facilities; and e the delivery of such Excess ANG shall be subject to procedures to be agreed between the Government or its nominee and the Contractor prior to such delivery such procedures to include matters relating to timing of offtake of such Excess ANG. 21.4.6 Excess ANG which is not commercially exploited by the Contractor or taken by the Government or its nominee pursuant to this Article 21 shall be returned to the subsurface structure or flared or otherwise disposed of as approved by the Government in the context of the Development Plan provided that flaring will be resorted to only for small quantities and as a last resort provided that Contractor shall at all times be entitled to flare the Excess ANG which is not taken by any consumer private or Government Agency with whom there is a valid contract of upliftment of ANG produced from the Contract Area. 21.4.7 As soon as practicable after the Discovery referred to in Article 21.4.1 or the 21.4.8 submission to Government of the proposal for the declaration of the said Discovery as a Commercial Discovery as therein specified or the submission of the proposed Development Plan referred to in

Article the Contractor and the Government or its nominee shall meet to discuss the sale and/or disposal of any ANG discovered with a view to giving effect to the provisions of this Article 21 in a timely manner. All costs incurred in complying with this Article shall be treated as Contract Cost.

Non Associated Natural Gas NANG 21.5.1 21.5.2 21.5.3 In the event of a Discovery of NANG in the Contract Area the Contractor shall promptly report such Discovery to the Management Committee and the Government and the provisions of Articles 9.1 and 9.2 shall apply. The remaining provisions of Article 9 would apply to the Discovery and development of NANG only insofar as they are not inconsistent with the provisions of this Articles. Notwithstanding the provisions of Article 3 the Contractor shall be entitled to retain the Discovery Area subject to the provisions of the Article 21. If pursuant to Article 9.1 the Contractor gives notification that the Discovery is of potential commercial interest the Contractor shall submit to the Management Committee and the Government within one 1 Calendar Year from the date of notification of the above said Discovery the proposed Appraisal Program including a Work Program and budget to carry out an adequate and effective appraisal of such Discovery to determine i without delay whether such discovery is a Commercial Discovery and ii with reasonable precision the boundaries of the area to be delineated as the Development Area. Such proposed Appraisal Program shall be supported by all relevant data such as Well data Contractors best estimate of reserve range and production potential and shall indicate the date of commencement of the proposed Appraisal Program. The proposed Appraisal Program referred to in Article 21.5.2 shall be considered by the Management Committee within one hundred and twenty 120 days of its submission by the Contractor and the said program together with the Work Program and budget submitted by the Contractor revised in accordance with any agreed amendments or additions thereto approved by the Management Committee. shall be adopted as the Appraisal Program and the Contractor shall promptly proceed with implementation of the said program. 4 24

S. 4 Where the Contractor has submitted a proposal for the declaration of the discovery as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilization or commercial development of the NANG in the domestic

market or elsewhere and in the context of Governments guidelines on gas utilization and the chain of activities required to bring the NANG from the Delivery Point to potential and consumers in the domestic market or elsewhere. The Management Committee may within ninety 90 days request the Contractor to submit any additional information on the Discovery and the related Appraisal Program that it may reasonably. required to facilitate a decision on whether or not to declare the Discovery as a Commercial Discovery. 21.5.5 Lf on the basis of the results of the Appraisal Program the Contractor is of the 21.5.6 21.5.7 opinion that NANG has been discovered in commercial quantities it shall submit to the Management Committee as soon as practicable but not later than three 3 years from the date of notification of the aforementioned Discovery a proposal for the declaration of the Discovery as a Commercial Discovery. Such proposal shall take into account the Governments guidelines on gas utilization and propose alternative options if any for use or consumption of the NANG and be accompanied by a report on the Discovery supported by inter alia technical and economic data evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or on behalf of the Contractor and other relevant information. If no proposal is submitted to the Management Committee by the Contractor within three 3 years from the said Discovery the Contractor shall relinquish its rights to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area. Where the Contractor has submitted a proposal for the declaration of a Discovery . as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilization or commercial development of the NANG in the domestic market or elsewhere and in the context of Governments policy on gas utilization and the chain of activities required to bring the NANG from the Delivery Point to potential consumers in the domestic market or elsewhere. The Management Committee or the Government may within ninety 90 days of the submission of the said proposal request the Contractor to submit any additional information on the Discovery the anticipated markets or an other related matter that may reasonably be required to facilitate a decision on whether or not to declare the Discovery as a Commercial Discovery. The Management

Committee shall submit its recommendations on the Contractor's proposal to the Government within one hundred and twenty (120) days of the date of receipt thereof accompanied by an indication of the probable dates by which the markets would be ready to receive the Gas and an estimate of the quantities available for use of Gas that could be so utilized. The Government shall respond within one hundred and twenty (120) days of receipt of the said recommendation from the Management Committee provided that the Government shall not be bound by the decision or recommendation of the Management Committee. If the Management Committee with the approval of the Government declares the Discovery a Commercial Discovery, the contractor shall within one (1) Calendar Year of the declaration of the Discovery as a Commercial Discovery submit a Development Plan for the development of the Discovery to the Management Committee and the Government for approval. Such Plan shall be supported by all relevant information including inter alia the information required in Article 9.7. The Management Committee shall consider the proposed Development Plan and submit its recommendations to Government within one hundred and eighty (180) days of submission thereof by the Contractor. The Government shall respond to the proposed Development Plan within ninety (90) days of receipt of the recommendations from the Management Committee provided that the Government shall not be bound by the recommendation or decision of the Management Committee. If the Management Committee fails to submit its recommendations to Government within the said ninety (90) days period, the Government shall in any event respond to the Contractor within 270 days from the date of submission of the proposed Development Plan. 21.5.10 If the Government has failed to approve or disapproves the Contractor's proposed Development Plan, the Government shall advise the Contractor in writing of the reasons for such failure or disapproval and the Government and the Contractor shall meet to discuss the said Development Plan and the reasons for the said failure to approve or disapprove and use their best efforts to agree on appropriate modifications thereto to meet the Government's concerns or objections. Thereafter, the Contractor shall have the right to resubmit within ninety (90) days of communication from the Government the proposed Development Plan duly amended to meet the

Governments concerns. Such right of resubmission of the proposed Development Plan shall be exercisable by the Contractor only once. If no such Plan is submitted to the Government within the above specified period the Contractor shall relinquish its rights to develop such Gas. Discovery and such Discovery shall be excluded from the Contract Area. 21.5.1 In the event that the Government approves the Contractors proposal for declaration of the Discovery as a Commercial Discovery and the comprehensive plan or plans for development of such Discovery with such modifications and amendments as the Government may approve the said Gas Discovery shall be promptly developed by the Contractor in accordance with the approved plan which shall be the Development Plan. If OM USL agrees to ensure 21.5.12 In the event that the Contractor does not commence development of such Discovery within ten 10 years from the date of completion of the first discovery Well the Contractor shall relinquish its right to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area. 21.5.13 Notwithstanding above Companies may declare the Discovery as a Commercial Discovery and subject to approval of the Government which approval shall not be unreasonably withheld the Companies can proceed to develop the Discovery at their sole risk and cost. Licensee will not have any claim on the produce from the said Discovery if any out of the sale of the Gas from the said Discovery. If such development turn out to be noncommercial such expenditure shall be reckoned as expenditure on unsuccessful exploration but shall not count as Investment in the Contract Area nor be recoverable as Cost Petroleum from any other Field or Contract Area but shall be recoverable from Petroleum Produced from such Field. 21.5.14 Notwithstanding above Licensee may declare the Discovery as a Commercial Discovery and subject to approval of the Government which approval shall not be unreasonably withheld the Licensee can proceed to develop the Discovery at their sole risk and cost. The Companies will not have any claim on the produce from the said Discovery if any out of the sale of the Gas from the said Discovery. If such development turn out to be noncommercial such expenditure shall be reckoned as expenditure on unsuccessful exploration but shall not count as Investment in the Contract Area nor be recoverable as Cost Petroleum from any other Field or Contract Area but

shall be recoverable from Petroleum produced from such Field. 21.6 Valuation of Natural Gas 21.6.1 The Contractor shall endeavor to sell all Natural Gas produced and saved from the Field at competitive fair market armslength prices. 21.6.2 Notwithstanding Article 21.6.1 Natural Gas produced from the Contract Area shall be valued for the purposes of this Contract as follows a Gas which is flared with the approval of the Government or reinjected shall be ascribed a zero value; b Gas which is sold to the Government or any other Government nominee shall be valued at the prices actually obtained; and Gas which is sold or disposed of otherwise than in accordance with paragraph a or b shall be valued on the basis of competitive Arms Length Sales in the region for similar sales under similar conditions. 21.6.3 The formula on which the prices shall be based and determined pursuant to Articles 21.6.2 b or c shall be approved by the Government prior to approval of the Development Plan. oof OM. LO eee 7 a 22.1 22.2 223 ARTICLE 22 EMPLOYMENT TRAINING TRANSFER OF TECHNOLOGY. Without prejudice to the right of the Contractor to select and employ such number of personnel as in the opinion of the Contractor are required for carrying out Petroleum Operations in a safe cost effective and efficient manner the Contractor shall to the maximum extent possible employ and require the Operator and Subcontractors to employ citizens of India having appropriate qualifications and experience taking into account experience required in the level and nature of the Petroleum Operations. Companies shall offer a mutually agreed number of Indian nationals the opportunity for onthejob training and practical experience in Petroleum Operations during the Exploration Period. Not later than six 6 months after approval of the Development Plan the Contractor shall in consultation with the Licensee establish and implement training programs for staff positions in each phase and level of Petroleum Operations including skilled technical executive and management positions with a view to ensuring employment of nationals of India and. gradual and progressive reduction of foreign personnel. Pursuant to Article 22.2 Companies shall associate and involve mutually agreed numbers of the Licensees personnel in the technologicalaspects of the then ongoing Petroleum Operations without charge of a fee for such association or involvement. Such aspects shall include a seismic data acquisition processing and

interpretation; b computerized formation evaluation using Well logs; c computerized analysis of geological data for basin analysis; d laboratory core analysis; e reservoir simulation and modeling; f geochemistry including analytical methods generation modeling; g measurement while drilling techniques; h stimulation of Wells; i production engineering including optimization methods for surface and subsurface facilities e.g. NODAL analysis and implementation; J. reservoir engineering and management including gas and water injection; k enhanced Petroleum techniques like OWI, 2D/3D seismic source rock studies hydrocarbon generation modeling; m pipeline technology; n Well design and drilling technology. Neither Party shall be obliged to disclose by virtue of this Article 22 any data process or information whether owned by itself any of its Affiliates or a third party of a proprietary nature. At the request of the Government or a government company the Foreign Companies shall separately endeavor to negotiate in good faith technical assistance agreements with the Government or a government company setting forth the terms by which each Foreign Company constituting the Contractor may render technical assistance and make available commercially proven technical information of a proprietary nature for use in India by the Government or a government company. The issues to be addressed in negotiating such technical assistance agreements shall include but not be limited to licensing issues royalty conditions confidentiality restrictions liabilities costs and method of payment.

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LOCAL GOODS AND SERVICES In the conduct of Petroleum Operations the Contractor shall give preference to the purchase and use of goods manufactured produced or supplied in India provided that such goods are available on terms equal to or better than imported goods with respect to timing of delivery quality and quantity required price and other terms; oo b employ Indian Subcontractors having the required skills or expertise to the maximum extent possible insofar as their services are available on comparable standards with those obtained elsewhere and at competitive prices and on competitive terms; provided that where no such Subcontractors are available preference shall be given to non-Indian Subcontractors who utilize Indian goods to the maximum extent possible subject however to the proviso in paragraph a above; cooperate with

domestic companies in India to enable them to develop skills and technology to service the petroleum industry; d ensure that provisions in terms of paragraphs a to c above are contained in contracts between the Operators and its Subcontractors. The Contractor shall establish appropriate procedures including tender procedures for the acquisition of goods and services which shall ensure that suppliers and Subcontractors in India are given adequate opportunity to compete for the supply of goods and services. The tender procedures shall include inter alia the financial amounts or value of contracts which will be awarded on the basis of selective bidding or open competitive bidding the procedures for such bidding and the exceptions to bidding in cases of emergency and shall be subject to the approval of the Management Committee. The tender procedure i is attached as Appendix F which shall form part of this Contract. Within one hundred and twenty 120 days after the end of each Calendar Year the Contractor shall provide the Government with a report outlining its achievements in utilizing Indian resources during that Calendar Year. In this Article goods means equipment material and supplies. 49 SIN. US RE a ae ;

ARTICLE 24 INSURANCE AND INDEMNIFICATION

24.1 Insurance

24.1.1 The Contractor shall during the term of this Contract obtain and renew as and when necessary insurance coverage for and in relation to Petroleum Operations for such amounts and against such risks as are customarily or prudently insured in the international petroleum industry in accordance with good petroleum industry practices and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government and the Licensee as additional insured and shall waive subrogation against the Government and the Licensee. The said insurance shall without prejudice to the generality of the foregoing cover a Loss or damage to all installations equipment and other assets for so long as they are used in or in connection with Petroleum Operations ; ; provided however that if for any reason the Contractor fails to insure any such installation equipment or assets it shall replace any loss thereof or repair any damage caused thereto; b Loss damage or injury caused by pollution in the course of or as a result of Petroleum Operations; c Loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum

Operations for which the Company may be liable; ; a Any claim for which the Government may be liable relating to the loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor is liable to indemnify the Government the Licensee or the State Government e The Contractors and or the Operators liability to its employees engaged in Petroleum Operations. 24.1.2 The Contractor shall require its Subcontractors to obtain and maintain insurance against the risks referred to in Article 24.1.1 relating mutatis mutandis to such Subcontractors. 24.2 Indemnity The Contractor shall indemnify defend and hold the Government the Licensee and the State Government harmless against all claims losses and damages of any nature whatsoever including without limitation claims for loss of damage to property or injury or death to persons caused by or resulting from any Petroleum Operations conducted by or on behalf of the Contractor. ous 7 yoo Gee o . Sade 25.1 25.2 25.4 25.5 25.6 25.7 ARTICLE 25 RECORDS REPORTS ACCOUNTS AND AUDIT The Contractor shall prepare and maintain at an office in India accurate and current books records reports and accounts of its activities for and in connection with Petroleum Operations so as to present a fair clear and accurate record of all its activities expenditures and receipts. The Contractor shall also keep representative samples of cores and cuttings. Based on generally accepted and recognized accounting principles and modern Petroleum industry practices record books accounts and accounting procedures in respect of Petroleum Operations shall be maintained on behalf of the Contractor by one of the Parties comprising Contractor specifically designated for this purpose at its business office in India in accordance with the Accounting Procedure. The Operator will maintain the records on behalf of Contractor. The annual audit of accounts shall be carried out on behalf of the Contractor by a qualified independent firm of recognized chartered accountants registered in India and selected by the Contractor with the approval of the Management Committee. Accounts together with the auditors report thereon shall be submitted to the Parties for approval not later than the thirtieth 30th September following the Financial Year. Any party comprising the Contractor may by giving notice to that effect to the Operator not later than twenty four 24 months following the end of a

Year undertake a separate audit of the accounts and the cost of such audit shall be borne by the Party requiring such audit. Unless a Party comprising the Contractor notifies the other Party or Parties in writing before thirty first 31st. December following Year in which the separate audit was conducted that it has an objection to the accounts for which the separate audit was conducted such accounts shall be deemed to have been approved as on that date. Any objection to the accounts raised by a Party comprising the Contractor shall unless settled by agreement between the Parties be submitted for determination by a sole expert in accordance with the provisions of Article 33. If the matter is not submitted to a sole expert within thirty six 36 months following the year to which such objection relates the objection shall lapse. *Sow AUS]. ae* 25.8 The Government shall have the right to audit the accounting records of the Contractor in respect of Petroleum Operations as provided in the Accounting Procedure. 25.9 The accounting and auditing provisions and procedures specified in this Contract are without prejudice to any other requirements imposed by any statute in India including without limitation any specific requirements of the statutes relating to taxation of Companies. 25.10 For the purpose of any audit referred to in Articles 25.5 and 25.8 the Operator or the Companies shall] make available to the auditor all such books records accounts and other documents and information as may be reasonably required by the auditor. *oN ALY. a* 26.1 26.2 26.3 26.4 *Appencc v. .* ARTICLE 26 INFORMATION DATA CONFIDENTIALITY INSPECTION AND SECURITY The Contractor shall promptly after they become available provide the Licensee with all data obtained as a result of Petroleum Operations under the Contract including but not limited to geological geophysical geochemical petrophysical engineering well logs maps magnetic tapes cores and production data as well as all interpretative and derivative data including reports analyses interpretations and evaluation prepared in respect of Petroleum Operations hereinafter referred to as Data. Data shall be the property of the Licensee provided however that the Companies shall have the right to make use of such Data free of cost for the purpose of Petroleum Operations under this Contract as provided herein. for use in Petroleum Operations retain copies or samples of material or the Data and with the approval of the Licensee original material rial is capable of

reproduction and copies have been supplied to subject to the right of inspection by the Licensee export samples Contractor may information constituting except that where such mate the Licensee Contractor may or other original Data for representative samples equivalent in quality capable of reproduction copies of equivalent quality size and quantity or where such material is have first been delivered to the Licensee. Contractor shall keep the Licensee currently advised of all developments taking place during the course of Petro accurate information and progress reports relating to Petroleum Operations on a daily monthly yearly or other periodic basis as the Licensee or the Government may reasonably require provided that this o technology. Without prejudice to the generality o submit regular statements and reports relating to Petroleum Operations as provided in Annendix C. Contractor shall meet with the Licensee and the Government at a mutually the results of all geological and geophysical work carried neering and drilling operations as soon as such Data f the foregoing the Contractor shall convenient location to present out as well as the results of all engi becomes available to the Contractor. All Data information and reports obtained or prepare by for or on behalf of the d as confidential and subject to the Contractor pursuant to this Contract shall be treat provisions hereinbelow the Parties shall not disclose the thereof to any third party without the consent in wyiting of the other Parties. cessing or laboratory examination or analysis provided that . eum Operations and shall furnish the Licensee with full and . pligation shall not extend to proprietary ah 26.5 The obligation specified in Article 26.4 shall not operate so as to prevent disclosure a to Affiliates contractors or Subcontractors for the purpose of Petroleum Operations . b to employees professional consultants advisers data processing centers. laboratories where required for the performance of functions in connection with Petroleum Operations for any Party comprising the Contractor c to banks or other financial institutions in connection with Petroleum Operations d to bonafide intending assignees or transferees of an interest hereunder of a Party comprising the Contractor . or in connection with a sale of stock of a Party comprising the Contractor. e to the extent. required by any applicable. law or in connection with any legal proceedings or by the regulations of any stock exchange upon which the shares of a Party comprising Contractor are

quoted ; f to Government departments for or in connection with the preparation by or on behalf of the Government of statistical reports with respect to Petroleum Operations or in connection with the administration of this Contract or any relevant law or for any purpose connected with Petroleum Operations; g by a Party with respect to any Data or information which without disclosure by such Party is generally known to the public. 26.6 Any Data information or reports disclosed by the Parties comprising the Contractor to 7 any other person pursuant to Article 26.5 a to d shall be disclosed on the terms that a such Data information or reports shall be treated as confidential by the recipient. Prompt notice of disclosures made by Companies pursuant to Article 26.5 shall be given to the GovernmentLicensee. 26.7 Any Data information and reports relating to the Contract Area which; in the opinion of the Government might have significance in connection with offers by the Government of open acreage OF an exploration program to be conducted by a third party in another area may be disclosed by the Government for such purposes on conditions to be agreed upon between the Government and the Contractor. 26.8 Where an area ceases to be part of the Contract Area the Contractor shall continue to . treat Data and information with respect to respect to the said area as confidential and shall deliver to the Licensee copies or originals of all Data and information in its possession with respect to the said area. The Government shall however have the right to freely use the said Data and information thereafter. ee Spy ILD . ae26.9 26.10 26.11 The Government and the Licensee shall at all reasonable times through duly authorized representatives be entitled to observe Petroleum Operations and to inspect all assets books records reports accounts contracts samples and Data kept by the Contractor or the Operator in respect of Petroleum Operations under the Contract provided however that the Companies shall not be required to disclose any proprietary technology. The duly authorized representatives shall be given reasonable assistance by the Contractor for such functions and the Contractor shall afford such representatives all facilities and privileges afforded to its own personnel in the Contract Area including the use of office space and housing free of charge. The said representatives shall be entitled to make a reasonable use of the equipment and instruments of the Contractor provided that such functions shall not unduly interfere

with the Contractors Petroleum Operations. Contractor shall give reasonable advance notice to the Government or to any other authority designated by the Government for such purpose of its program of conducting surveys by aircraft or by ships indicating inter alia the name of the survey to be conducted approximate extent of the area to be covered the duration of the survey the commencement date and the name of the airport or port from which the survey aircraft or ship will commence its voyage. The Government or the authority designated by the Government for such purpose shall have the right to inspect any aircraft or ship used by the Contractor or a Subcontractor carrying out any survey or other operations in the Contract Area and shall have the right to put on board such aircraft or ship Government officers in such manner as may reasonably be necessary to ensure compliance by the Contractor or the Subcontractor with the security requirements of India.

27.1 27.2 27.3 27.4 27.5 27.6 ARTICLE 27 TITLE TO PETROLEUM DATA AND ASSETS The Government is the sole owner of Petroleum underlying the Contract Area and shall remain the sole owner of Petroleum produced pursuant to the provisions of this Contract except as regards that part of Crude Oil or Gas the title whereof has passed to the Contractor or any other person in accordance with the provisions of this Contract. Title to Crude Oil and or Gas to which Contractor is entitled under this Contract and title to Crude Oil and or Gas sold to Government or its nominee by the Companies shall pass to the relevant Party or as the case may be to Government or its nominee at the Delivery Point. Contractor shall be responsible for all costs and risks prior to the Delivery Point and each Party shall be responsible for all costs and risks associated with such Party's share after the Delivery Point and where the Government or its nominee purchases all or some of the Companies share of Crude Oil or Condensate in accordance with Article 18 Government or its nominee shall be responsible for all costs and risks in respect of the amount purchased after the Delivery Point. . Title to all Data specified in Article 26 shall be vested in the Licensee and the Contractor shall have the right to use thereof as therein provided. Assets purchased by the Contractor for use in Petroleum Operations shall be owned by the Parties comprising Contractor in proportion to their Participating Interest provided that the Licensee shall have the right to require

vesting of full title and ownership in it free of charge and encumbrances of any or all assets whether fixed or movable acquired and owned by the Contractor for use in Petroleum Operations inside or outside the Contract Area such right to be exercisable at the Licensees option either on recovery of the costs of the assets or upon expiry or earlier termination of the Contract. Contractor shall be responsible for proper maintenance insurance and safety of all assets acquired for Petroleum Operations whether before or after the Effective Date and for keeping them in good repair order and working condition at all times and the costs thereof shall be recoverable as Contract Costs in accordance with Appendix C. So long as this Contract remains in force the Contractor shall free of any charge for the purpose of carrying out Petroleum Operations hereunder have the exclusive use and custody of the assets which have become the property of the Licensee subject however to Article 27.7 Equipment and assets no longer required for Petroleum Operations shall first be offered to the Licensee and if not required by the Licensee shall be sold or exchanged by the Contractor provided however that prior consent of the Management Committee shall be obtained for each transaction in excess of US 5000 or such other amounts as may be agreed from time to time such consent not to be unreasonably withheld and provided further that the proceeds of sale shall be credited to Petroleum Operations as provided in Appendix C. 27.8 Assets not required by the Licensee pursuant to the terms of this Article may be sold or otherwise disposed of subject to the terms of this Contract.

oh Ya 28.1 nN os iv ARTICLE 28 ASSIGNMENT OF INTEREST Subject to the terms of this. Article and other terms of this Contract any Party comprising the Contractor may assign or transfer a part or all of its Participating Interest with the prior written consent of the Government which consent shall not be unreasonably withheld provided that the Government is satisfied that a the prospective assignee or transferee is comparable to the assignor in terms of financial standing and technical competence and its capacity and ability to meet its obligations hereunder and is willing to provide an unconditional undertaking to assume its Participating Interest. share of obligations and to provide a guarantee in respect thereof as provided in the Contract; b the prospective assignee or transferee is not a company incorporated in a country with which the

Government for policy reasons has restricted trade or business; c the prospective assignor or transferor and assignee or transferee respectively are willing to comply with any reasonable conditions of the Government as may be necessary in the circumstances with a view to ensuring performance under the Contract; and d the assignment or transfer will not adversely affect the performance or obligations under this Contract or be contrary to the interests of India; ce Government shall not withhold its consent where the assignment or transfer to another party comprising Contractor is as a result or withdrawal provisions of the agreement between the Parties comprising Contractor; Requirement of Operating Agreement have been satisfied. An application by a Company for consent to assign or transfer shall be accompanied by all relevant information concerning the proposed assignment or transfer including detailed information on the proposed assignee or transferee and its shareholding and corporate structure as was earlier required from the Companies constituting the Contractor the terms of the proposed assignment or transfer and the unconditional undertaking referred to in a above. The applicant shall also submit such information relating to the prospective assignee or transferee of the assignment or transfer as the Government may reasonably require to enable proper consideration and disposal of the application. oo. . Of oo 28.3 28.4 28.5 28.6 No assignment or transfer shall be effective until the approval of the Government is received which approval may be given by the Government on such terms as it may deem fit. Upon assignment or transfer of its interest in this Contract the assignor or transferor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee or transferee with the approval of the Government. . Upon prior notice to the Companies a Government company may assign or transfer all or any part of its rights and interest under this Contract to any other Government company authorized by the Government to explore for and exploit petroleum in the Contract Area. An assignment or transfer shall not be made so as to reduce the Participating Interest of a constituent of the Contractor at any time to less than ten percent 10 of the total Participating Interest of all the constituents of the Contractor except where the Government on the recommendations of the Management Committee may in special

circumstances so permit. Nothing contained in this Article 28 shall prevent a party comprising Contractor from mortgaging pledging charging or otherwise encumbering all or part of its Participating Interest for the purposes of security relating to finance required for performing the Contract provided that i such Party shall remain liable for all obligations relating to its Participating Interest; ii the encumbrance shall be expressly subordinated to the rights of the other Parties under this Contract; iii such Party has given reasonable notice of such encumbrance. and furnishes to all other Parties including for the avoidance of doubt the Government a certified copy of the executed instrument or instruments evidencing the encumbrance; and iv prior consent of the Government shall be required which consent shall not be unreasonably withheld in connection with the hypothecation to any lender with international sensitivities for the Government a . 29.1 29.2 29.3

29.4 ARTICLE 29 GUARANTEES Each of the Companies constituting the Contractor shall procure and deliver to the Government on the Effective Date of this Contract a an irrevocable unconditional bank guarantee from a reputable bank of good standing in India acceptable to the Government in favour of the Government. and the Licensee for the amount specified in Article 29.2 in a form and substance acceptable to the Government; b a financial and performance guarantee from a parent company of good financial standing acceptable to the Government in favour of the Government and the Licensee in the form and substance set out in Appendix E; c a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the aforesaid guarantees have been duly signed and delivered on behalf of the guarantors with due authority and is legally valid and enforceable and binding upon them. The amount of the guarantee referred to in Article 29.1 a above shall be an amount equal to a Companys Participating Interest share of thirty five percent 35 of the total estimated expenditure in respect of the. Work Program undertaken by the Contractor in the Contract Area during each phase of the Exploration Period. The guarantee shall provide a that the amount referred to in Article 29.2 shall be proportionately reduced at the end of each Contract Year by the percentage which the actual expenditure bears to the total estimated expenditure for each phase of the Exploration Period on presentation to the bank of a certificate signed by the

Licensee that the said amount has been expended and that the said Guarantee may be reduced in accordance with its terms; and b that at the end of the phase the guarantee will be released in favour of the Company on presentation to the bank of a certificate from the Licensee that the obligation of the Contractor has been fulfilled and the guarantee may be released. If the Contractor elects to proceed to the second and third phases respectively of the Exploration Period a bank guarantee for the succeeding phase in terms of Articles 29.1 a 29.2 and 29.3 shall be delivered to the Government with the notice of such election and if such guarantee is not so delivered the provisions of Article 29.5 shall apply. x 29.5 29.6 If any of the documents referred to in Article 29.1 is not delivered within the period specified herein this Contract may be cancelled by the Government upon ninety 90 days written notice of its intention to do so. Notwithstanding any change in the composition or share holding of the parent company furnishing the guarantees herein it shall under no circumstances be absolved of its obligations contained in the guarantees provided pursuant to this Article. CN WY 30.1 30.2 ARTICLE 30 TERMINATION OF CONTRACT Without prejudice to the provisions of Article 30.6 or any other provisions of this Contract Companies have the right to terminate this Contract b with respect to any part of the Contract Area other than a Development Area then producing or that prior thereto had produced Petroleum upon giving ninety 90 days written notice of its intention to do so; and with respect to any Development Area in which Petroleum is being produced or that prior thereto had produced Petroleum upon giving at least one hundred and eighty 180 days written notice of its intention to do so. This Contract may subject to the provisions hereinbelow and Article 31 be terminated by the Government upon giving ninety 90 days written notice of its intention to do so in the following circumstances namely that a Company a b d e D. has knowingly submitted any false statement to the Government in any manner which was a material consideration i in the execution of this Contract; or has intentionally and knowingly extracted or authorized the extraction of any mineral not authorized to be extracted by the Contract or without the authority of the Government except such extractions as may be unavoidable as a result of operations conducted hereunder in accordance with generally accepted international petroleum

industry practice which when so extracted were immediately notified to the Government and to the Licensee; or is adjudged bankrupt by a competent court or enters into any agreement or scheme of composition with its creditors or takes advantage of any law for the benefit of debtors; or has passed a resolution to apply to a competent court for liquidation of the Company unless the liquidation is for the purpose of amalgamation or reconstruction of which the Government has been given notice and the Government is satisfied that the Companys DAGGER PAYOR BLAS performance under this Contract would not be adversely affected thereby and has given its approval thereto; or has assigned any interest in the Contract without the prior consent of the Government as provided in Article 28; or fails to make any monetary payment required by law or under this Contract by the due date or within the specified period after the due date; or CN A980. ee 30.3 30.4 30.5 30.6 30.7 g fails to comply with or contravenes the provisions of this Contract in a material particular; or i fails to comply with any final determination or award made by a sole expert or arbitrators pursuant to Article 33; or i on notice of cancellation as provided in Article 29.5. PROVIDED THAT Where the Contractor comprises two or more Companies the Government shall not exercise its rights of termination pursuant to Article 30.2 on the occurrence in relation to one or more but not all of the Companies of an event entitling the Government to terminate the Contract if any other Company or Companies constituting the Contractor satisfies the Government that it or they is/are willing and would be able to carry out the obligations of the Contractor. This Contract may also be terminated by the Government on giving the requisite notice specified above if the events specified in Article 30.2 c and d occur with respect to a Company which has given a guarantee pursuant to Article 29 subject however to Article 30.4. If the circumstance or circumstances that give rise to the right of termination under Article 30.2 f or g or Article 30.3 are remedied by the Contractor within the ninety 90 day period or such extended period as may be granted by the government following the notice of the Governments intention to terminate the Contract as aforesaid such termination shall not become effective. If the circumstance or circumstances that would otherwise result in termination are the subject matter of proceedings under Article 33 then termination shall not take place so long as such

proceedings continue and thereafter may only take place when and if consistent with the arbitral award. On termination of this Contract for any reason whatsoever the rights and obligations of the Contractor shall cease but such termination shall not affect any rights of any Party which may have accrued or any obligations undertaken or incurred pursuant to this Contract by the Contractor or any Party comprising the Contractor and not discharged by the Contractor or the Party prior to the date of termination. . In the event of termination pursuant to Article 30.1 30.2 or 30.3 a the Government may require the Contractor for a period not exceeding one hundred and eighty 180 days from the date of termination to continue for the account and at the cost of the Government Crude Oil or Natural Gas production activities until the right to continue such production has been transferred to another entity BN 15S 30.8 b in case of a Foreign Company which is constituent of the Contractor shall sub j ect to thg provisions hereof have the right to remove and export all its property which . has riot vested in the Licensee provided that in the event that ownership. of any property is in doubt or disputed such property shall.not be exported unless and until the doubt or dispute has been settled in favour of the Foreign Company. Within ninety 90 days after the termination of this Contract pursuant to Article 30.1 or 30.2 or 30.3 or such longer period as the Government may agree the Contractor shall comply with Article 12.9 and any reasonably necessary action as directed by the Government to avoid Environmental Damage or hazards to human life or to the property F ad Co 4387. ae 311 31.2 31.3 31.4 31.5 that such Party has exercised reasonable diligence and efforts to remedy t ARTICLE 31 FORCE MAJEURE Any nonperformance or delay in performance by any Party hereto of any of its obligations under this Contract or in fulfilling any condition of any license or lease granted to stich Party or in meeting any requirement of the Act the Rules or. any license or lease issued thereunder shali except for the payment of monies due under this Contract or under the Act and the Rules or any law be excused if and to the extent that such nonperformance or delay in performance is caused by Force Majeure as defined in this Article. For the purpose of this Contract the term Force Majeure means any cause or event other than the unavailability of funds whether similar to or different from those enumerated herein lying beyond the reasonable control of

and unanticipated or unforeseeable by and not brought about at the instance of the Party claiming to be affected by such event or which if anticipated or foreseeable could not be avoided or provided for and which has caused the nonperformance or delay in performance. Without limitation to the generality of the foregoing the term Force Majeure shall include natural phenomena or calamities earthquakes typhoons fires wars declared or undeclared hostilities invasions blockades riots insurrection and civil disturbances. Where a Party is claiming suspension of its obligations on account of Force Majeure it shall promptly but in no case later than seven (7) days after the occurrence of the event of Force Majeure notify the other Parties in writing giving full particulars of the Force Majeure the estimated duration thereof the obligations affected and the reasons for its suspension. A Party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the effects thereof on the performance of its obligations under this Contract provided however that the settlement of strikes or differences with employees shall be within the discretion of the Party having the difficulty. The Party affected shall promptly notify the other Parties as soon as the Force Majeure event has been removed and no longer prevents it from complying with the obligations which have been suspended and shall thereafter resume compliance with such obligations as soon as possible. The Party asserting the claim of Force Majeure shall have the burden of proving that the circumstances constitute valid grounds of Force Majeure under this Article and the cause of any alleged Force Majeure.

31.6 31.7 o. Where a Party is prevented from exercising any rights or performing any obligations under this Contract due to Force Majeure the time for the performance of the obligations affected thereby and for performance of any obligation or the exercise of any right dependent thereon and the term of any phase of the Exploration Period or this Contract may be extended by such additional period as may be agreed between the Parties or failing agreeing by a sole expert in accordance with Article 33. Notwithstanding anything contained hereinabove if an event of Force Majeure occurs and is likely to continue for a period in excess of thirty days the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be taken to mitigate the effects

thereof or to be adopted in the circumstances. i on Way ARTICLE 32 APPLICABLE LAW AND LANGUAGE OF THE CONTRACT 32.1 This Contract shall be governed and interpreted in accordance with the laws of India. 32.2 32.3 Nothing in this Contract shall entitle the Contractor to exercise the rights privileges and powers conferred upon it by this Contract in a manner which will contravene the laws of India. The English language shall be the language of this Contract and shall be used in arbitral proceedings. All communications hearing or visual materials or documents relating to this . Contract shall be written or prepared in English. xe Sgn WY SL ARTICLE 33 SOLE EXPERT CONCILIATION AND ARBITRATION 33.1 33.2 33.3 33.4 The Parties shall use their best efforts to settle amicably all disputes differences or claims arising out of or in connection with any of the terms and conditions of this Contract or concerning the interpretation or performance thereof. Except for matters which by the terms of this Contract the Parties have agreed to refer to a sole expert and any other matters which the Parties may agree to so refer any dispute difference or claim arising between the Parties hereunder which cannot be . settled amicably may subject to Article 33.11 be submitted. by any Party to arbitration pursuant to Article 33.3. Such sole expert shall be an independent and impartial person of international standing with relevant qualifications and experience appointed by agreement between the Parties. Any sole expert appointed shall be acting as an expert and not as an arbitrator and the decision of the sole expert on matters referred to him shall be final and binding on the Parties and not subject to arbitration. If the Parties are unable to agree on a sole expert and/or there is no specific agreement with regard to matters to be referred to the sole expert the matter may be referred to arbitration. The parties further agree that the appointment of sole expert would be primarily for the purpose of dealing matters which are technical in nature and require immediate decision more particular for the reasons that such decision not only have direct bearing on day to day operation of the project but failure to resolve within a time bound period may result in the project implementation being delayed prejudicially effected. Subject to the provisions herein the Parties hereby agree that any unresolved dispute difference or claim which cannot be settled amicably within a reasonable time may except for those referred to in Article 33.2;

be submitted to an arbitral tribunal for final decision as hereinafter provided. The arbitral tribunal shall consist of three arbitrators. The Party or Parties instituting the arbitration shall appoint one arbitrator and the Party or Parties responding shall appoint another arbitrator and both Parties shall so advise the other Parties. The two arbitrators appointed by the Parties shall appoint the third arbitrator who shall act as presiding Arbitrator.

33.5 33.6 33.7 33.8 33.9 33.10 33.41 Any Party may after appointing an arbitrator request the other Parties in writing to appoint the second arbitrator. If such other Party fails to appoint an arbitrator within thirty30 days of receipt of the written request to do so such arbitrator may at the request of the first Party be appointed by the Chief Justice of India or any person or institution designated by him within sixty60 days of the receipt of such request in case of an international commercial arbitration as defined in the Arbitration and Conciliation Act 1996 and where Parties to the arbitration comprised of only the domestic companiesbodies the appointment of the arbitrator referred in this sub article shall be done by the Chief Justice of the High Court having jurisdiction or any person or institution designated by him within sixty60 days of the receipt of such request. If the two arbitrators appointed by the Parties fail to agree on appointment of the third arbitrator within thirty30 days of the appointment of the second arbitrator and if the Parties do not otherwise agree the Chief Justice of India or any person or institution designated by him in case of an international commercial arbitration and Chief Justice of the High Court having jurisdiction or any person or institution designated by him in case of an arbitration involving only domestic companies at the request of either Party and in consultation with both appoint the third arbitrator keeping in view that he is not a national of the country of any of the Parties to the arbitration proceedings where the Parties to the dispute belong to different nationalities. If any of the arbitrators fails or is unable to act his successor shall be appointed in the manner set out in this Article as if he was the first appointment. The decision of the arbitral tribunal and in the case of difference among the arbitrators the decision of the majority shall be final and binding upon the Parties. Arbitration proceedings shall be conducted in accordance with the Arbitration and Conciliation Act 1996 except that in the event of any conflict between this Act and

the provisions of this Article 33 the provisions of the Act shall apply. The right to arbitrate disputes and claims under this Contract shall survive the termination of this Contract. . Prior to submitting a dispute to arbitration a party may submit the matter for conciliation under the Indian Arbitration and Conciliation Act 1996 as amended or re enacted from time to time by a sole conciliator to be appointed by mutual agreement of the Parties. If the Parties fail to agree on a conciliator in accordance with the said rules the matter may be submitted for arbitration. No arbitration proceedings shall be instituted while conciliation proceedings are pending. Ao Bs. US reorient33.12 33.13 The venue of conciliation or arbitration proceedings pursuant to this Article unless the Parties otherwise agree shall be in New Delhi and shall be conducted in the English language. Insofar as practicable the Parties shall continue to implement the terms of this Contract notwithstanding the initiation of arbitral proceedings and any. pending claim or dispute. The fees and expenses of a sole expert or conciliator appointed by the Parties shall be borne equally by the Parties. Unless otherwise agreed to by the parties assessment of the costs of arbitration including inental expenses and liability for the payment thereof shall be at the discretion of the arbitrators. 34.1 34.2 34.3 34.4 34.5 34.6 ARTICLE 34 ENTIRE AGREEMENT AMENDMENTS WAIVER MISCELLANEOUS This Contract supersedes and replaces any previous agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the Effective Date of this Contract. This Contract shall not be amended modified varied or supplemented in any respect except by an instrument in writing signed by all the Parties which shall state the date upon which the amendment or modification shall become effective. No waiver by any Party of any one or more obligations or defaults by any other Party in the performance of this Contract shall operate or be construed as a waiver of any. other obligations or defaults whether of a like or of a different character. The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest. . In the event of any conflict between any provisions in the main body of this Contract and any provision in the Appendices the provision in the main body shall prevail. The headings of this Contract are for convenience of reference only and shall not be

taken into account in interpreting the terms of this Contract. . Coy WHSL ARTICLE 35

CERTIFICATES 35.1 Each Company shall furnish to the Government prior to execution of this Contract a duly authorized copy of a resolution properly and legally passed by Board of Directors of the Company authorizing its President or any VicePresident or duly appointed attorney to execute this Contract along with a certificate duly signed by the Secretary or an Assistant Secretary or a duly authorized Director of the Company under its seal in this regard and to the effect that the Company has the power and authority to enter into this Contract and to perform its obligations thereunder and has taken all necessary actions to authorize the execution delivery and performance of the Contract.

ON U.S. ARTICLE 36 NOTICES 36.1 All notices statements and other communications to be given submitted or made hereunder by any Party to another shall be sufficiently given if given in writing in the English language and sent by registered post postage paid or by telegram telex facsimile radio or cable to the 36.2 address or addresses of the other Party or Parties as follows a To the President of India through the Joint Secretary E to the Government of India Ministry of Petroleum Natural Gas Government of India Shastri Bhavan Dr. Rajendra Prasad Marg Tel No. New Delhi 110001 INDIA .Fax No. b The Company Secretary Oil Natural Gas Corporation Limited 8th Floor Jeevan Bhacati Building Tower If Connaught Circus Tel. No. New Delhi 110 001 INDIA Fax No. c The Assam Company Limited 52 Chowringhee Road Tel. No. Calcutta 700 071 INDIA Fax No. d Canoro Resources Ltd. Suite 1450 . 840 7 Avenue S.W. Calgary Tel. No. Alberta Canada T2P 3G2 Fax No. e Centurion Energy International Inc. 800 Bow Valley Square IT 2055 Avenue S.W.; Calgary Tel. No. Alberta Canada T2P 3T6 Fax No. 9111338 6935 2 9111338 3585 9111331 0156 5758 9111331 6413 9133282 7778282 7837 9133282 2616 7838 14035435747. 14035435740 14032636002 14032635998 Notices when given in terms of Article 36.1 shall be effective when delivered if offered at the address of the other Parties as under Article 36.1 during business hours on working days and if received outside business hours on the next following working day. ef os. UPL T ey EN omen 36.3 Any Party may by reasonable notice as provided hereunder to the other Parties change its address and other particulars for notice purpose. . IN WITNESS WHEREOF the

representatives of the Parties to this Contract being duly authorized have hereunto set their hands and have executed these presents this 19 day of February 1999 Signed for and on behalf of the President of India. By A RSIHAG 3 RE EOD MDE COS SKecema Signed for and on behalf of 4 . Oil Natural Gas Corporation Ltd. By CT heen. Gveacassne In the presence of d Signed for and on behalf of Sag 5 The Assam Company Limited By ee eee In the presence of In the presence of ane Signed for and on behalf of Canoro Resources Ltd. . By ee In the presence of Kishent Se Signed for and on behalf of Centurion Energy International Inc. By In the presence of ; cai Kise me Sev

APPENDIX A DESCRIPTION OF CONTRACT AREA The area comprising approximately 1934 Sq.km. onshore India identified as Block AA ON7 described herein and shown under map attached as Appendix B. . Longitude and Latitude measurements commencing at Point ABCDE and F are respectively as follows Points Longitude Latitude A 94 39 24 26 43 44 B 93 56 20 ; 26 41 27 Cc 93 56 20 26 29 27 D 94 16. 48 26 32 09 E 94 26 24 26 20 11 F 94 44 52 26 39 50 og SN WSL reer eo ae i AAON7 MARIANI S S A TITABAR SOL AGHAT art OF CONTRACT AREA APPENDIX B .

MOKOKCHUNG SCALE 1 24000 ts ets ey 6 atta Hogue 136 pie So eile 22 rope vanes APPENDIX

C ACCOUNTING PROCEDURE TO PRODUCTION SHARING CONTRACT BETWEEN THE GOVERNMENT OF INDIA AND OIL NATURAL GAS CORPORATION LIMITED AND a THE ASSAM COMPANY LIMITED AND CANORO RESOURCES LTD. AND CENTURION ENERGY INTERNATIONAL INC. Sections Section I General Provisions 1.1 Purpose 1.2 Definitions 13 Inconsistency mo 1.4 Documentation and Statements to be submitted by the Contractor 1.5 Language and units of account 1.6 Currency exchange rates 1.7 . Payments 1.8 Arms length transactions 1.9 Audit and inspection rights of the Government 1.10 Revision of Accounting Procedure 8 eK ema preemie pennetinee fr u u . Section 2 Section 3 Scction 4 Classification Definition and Allocation of Costs and Expenditures 2.1 Segregation of Costs 2.2 Exploration Costs 2.3. Development Costs 2.4 Production Costs 2.5 Service Costs 2.6 General and Administrative Costs Costs Expenses Expenditures and Inental Income of the Contractor 3.1 Costs recoverable and allowable without further approval of the Government 3.L1 Surface Rights 3.1.2 Labour and

Associated Costs 3.1.3 Transportation 3.1.4 Charges for Services i Third Party Contracts . ii
 Affiliated CompanyContracts 3.1.5 Communications 3.1.6 Office Bases and Miscellaneous facilities
 3.1.7 Environmental studies 3.1.8 Materials Gi General i Warranty iii Value of Materials 3.1.9 Duties
 Fees and other charges 3.1.10 Insurance and Losses 3.1.11 Legal expenses 3.1.12 Training costs
 3.1.13 General and Administrative costs 3.2 Costs not recoverable and not allowable under the
 Contract 3.3 Other Casis recoverable and allowable only with Government approval. 3.4 Inental
 income 3.5 Nonduplication of charges and credits Records and Valuation of Assets AL Records 4.2
 Inventories OK 7 Sp WSL jr ee 3.2 3.1.10 3.1.11 3.1.12 3.1.13 General and Administrative Costs i
 those charges and assessments for which the government company is solely liable under the terms
 of the Contract; and ii corporate income tax payable by the constituents of the Contractor.
 Tusurance and Losses ; Insurance premium and costs incurred for insurance pursuant to Article 24
 of the Contract provided that such insurance is customary affords prudent protection against risk
 and is at a premium no higher than that charged on a competitive basis by insurance Companies
 which are not Affiliates. Except as provided in Sections 3.2 ix Section 3.2x and Section 3.2xi actual
 costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs
 may include but are not limited to repair and replacement of property in the Contract Area resulting
 from damages or losses incurred by fire flood storm theft acent or such other cause. Legal
 Expenses . All reasonable costs and expenses resulting from the handling investigation asserting
 defending or settling of any claim or legal action necessary or expedient for the procuring perfecting
 retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the
 Contract Area or any third party claim arising out of Petroleum Operations under the Contract or
 sums paid in respect of legal services necessary for the protection of the joint interest of
 Government and the Contractor shall be allowable. Such expenditures shall include attorneys fee
 court costs of investigation and procurement of evidence and amounts paid in settlement or
 satisfaction of any such litigation and claims providing such costs are not covered elsewhere in the
 Accounting Procedure. Where legal services are rendered in such matters by Contractor or an

Affiliate such compensation shall be included instead under Section 3.1.2. or 3.1.4 ii above .as . applicable. Training costs All costs and expense incurred by the Contractor in training as is required under Article 22 of the Contract. The costs described in Section 2.6.1 and the charge described in Section 2.6.2 of this Accounting Procedure. Costs Not Recoverable And Not Allowable Under The Contract The following costs and expenses shall not be recoverable or allowable whether directly as such .or indirectly as part of any other charges or expense for cost recovery and production sharing purposes under the Contract and neither shall the Licensee be required to bear any proportion of them in the event that Government elects to exercise its option to participate Pipocoriance with the terms of the Contract Cr Ay S87 de LEE aN it A og i . 3.3 iii vi vit viii ix 9 xi xii costs and charges incurred before the Effective Date including costs in respct of preparation signature or ratification of this Contract; expenditures in respect of any financial transaction to negotiate float or otherwise obtain or secure funds for Petroleum Operations including but not limited to interest commission brokerage and fees related to such transactions as well as exchange losses on loans or other financing whether between Affiliates or otherwise; costs of marketing or transportation of Petroleum beyond the Delivery Point; expenditures incurred in obtaining furnishing and maintaining the guarantees required under the Contract and any other amounts spent on indemnities with regard to nonfulfilment of contractual obligations; attorneys fees and other costs and charges in connection with arbitration proceedings and sole expert determination pursuant to the Contract; fines and penalties imposed by Courts of Law of the Republic of India; donations and contributions; creation of any partnership or joint venture arrangement; amounts paid with respect to nonfulfilment of contractual obligations; Costs incurred as a result of failure to insure where i insurance is required pursuant.to the Contract or where Contractor has elected to self insure or has underinsured. costs and expenditures incurred as a result of willful misconduct or negligence of the Contractor; any costs and expenditures which by reference to general Petroleum industry practices can be shown to be excessive. Cther costs recoverable and allowable only with Government approval Any other costs and expenditures not included in Section 3.1 or 3.2 of this Accounting Procedure but which have

been incurred by the Contractor for the necessary and proper . conduct of Petroleum Operations shall be allowed to be recovered only with the express prior approval i in writing of the Government.

Intental Income and Credits All inental income and proceeds received from Petroleum Operations under the Contract including but not limited to the items listed below shall be credited to the accounts under the Contract and shall be taken into account for cost recovery production sharing and participation purposes in the manner described in Articles 13 14 and 15 of the Contract ee Ad.

CIN Id S27 3.5 ii iii iv v wi vii The proceeds of any insurance or cldim or judicial awards in connection with . Petroleum Operations under the Conwact or any assets charged to the accounts under the Contract where such operations or assets have been insured and the premia charged to the accounts under the Contract. Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Contract; Any adjustment received by the Contractor from the suppliersmanufacturers or their agents in connection with defective material the cost of which was previously charged by the Contractor to the accounts under the Contract. Rentals refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Contract; . Prices originally charged to the accounts under the Contract for materials subsequently exported from the Republic of India without being used in Petrofeum Operations under the Contract; Proceeds from the sale or exchange by the Contractor of plant or facilities from a Field the acquisition costs of which have been charged to the accounts under the Contract for the relevant Field; Proceeds from the sale or exchange by the Contractor of any Petroleum nights being an interest in the Contract Area; viii Legal costs charged to the accounts under Section 3.1.11 of this Accounting Procedure and subsequently recovered by the Contractor.

NonDuplication of Charges and Credits Notwithstanding any provision to the contrary in this Accounting Procedure it is the that there shall be no duplication of charges or credits to the accounts under the intention that there shall be no Cont Tract. ; d ome ey ae ey 4.1 4.2

SECTION 4

RECORDS AND INVENTORIES OF ASSETS

Records 4.1.1

The Contcactor shall keep and maintain detailed records of property and assets in 4.1.2 use for or in connection with Petroleum

Operations under the Contract in accordance with normal practices in exploration and production activities of the international petroleum industry. Such records shall include information on quantities location and condition of such property and assets and whether such property. or assets are leased or owned. The Contractor shall furnish particulars to the Government by notice in writing as provided in the Contract at six monthly intervals of all assets acquired by the Contractor to be used or in connection with Petroleum Operations during the. period immediately preceding the delivery of such notice. Inventories 4.2.1 4.2.2 4.2.3 4.2.4 The Contractor shall a not less than once every twelve 12 Months with respect to moveable assets; and b not less than once every three 3 Years with respect to immovable assets take an inventory of the assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Government together with a written statement of the principles upon which valuation of the assets mentioned in such inventory has been based. The Contractor shall give the Government at least thirty 30 days notice in wnting in the manner provided for in the Contract of its mtention to take the inventory referred to in Section 4.2.1 and the Government shalf have the right to be represented when such inventory is taken. When an assignment of rights under the Contract takes place a special inventory shall be taken by the Contractor at the request of the assignee provided that the cost of such inventory is borne by the assignee and paid to the Contractor. In order io give effect to Article 27 of the Contract the Contractor shall provide the Government with a comprehensive list of all relevant assets when requested by the Government to do so. ef USSD ae o 5.1 5.2 i

SECTION 5

PRODUCTION STATEMENT From the date of first production after the Effective Date of Petroleum from the Contract Area the Contractor shall submit a monthly Production Statement to Government showing the following information separately for each producing Field and in aggregate for the Contract Area. S.L1 5.L2 .1.3 5.1.4 S.L5 The quantity of Crude Oil and Condensate produced and saved. The quality and characteristics of such Crude Oil and Condensate produced and saved The quantity of Associated Natural Gas Non Associated Natural Gas produced and saved. The quality characteristics and composition of such Natural Gas produced and saved. The quantities of Crude

Oil Condensate and Natural Gas used for the purpose of carrying on drilling and production operations and pumping to Field storage as well as quantities reinjected. 5.1.6 The quantities of Crude Oil Condensate and Natural Gas unavoidably lost. 5.1.7 The quantities of Natural Gas flared and vented. 5.1.8 The size of Oil stocks held on the first day of the Month in question. 5.1.9 5.1.10 The quantities of Natural Gas reinjected into the Petroleum Reservoir. 5.1.11 The number of days in the Month during which Petroleum was produced from Field. 5.1.12 The Gas/Oil Ratio for each Field in the Contract Area for the relevant Month. All quantities shown in this Statement shall be expressed in volumetric terms Barrels of Petroleum and cubic metres of gas, and in weight metric tonnes for Crude Oil and Condensate. ; ; USS ee 7 ag 5.3 5.4 a 5 The Government may direct in writing that the Contractor include other particulars relating to the production of Petroleum in its monthly Production Statement and the Contractor shall comply with such direction. The Production Statement for each Month shall be submitted to Government no later than ten 10 days after the end of such Month. . pf Soh WL aaa 6.1 6.2 SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT The Contractor shall for the purposes of Article 19 of the contract prepare a Statement providing calculations of the value of Crude Oil and Condensate produced and saved during each Month. This Statement shall contain the following information 6.1.1 6.1.2 6.1.3 6.1.6 The quantities prices and receipts realized therefor by the Contractor as a result of sales of Crude Oil and Condensate to third parties with any sales to Government being separately identified made during the Month in question. The quantities prices and receipts realized therefore by the Contractor as a result of sales of Crude Oil and Condensate made during the Month in question other than to third parties The quantities of Crude Oil and Condensate appropriated by the Contractor to refining or other processing without otherwise being disposed of in the form of Crude Oil or . natural Condensate. The value of stocks of Crude Oil and Condensate on the first day of the Month in question. The value of stocks of Crude Oil and Condensate on the last day of the Month i in question. . The percentage volume of total sales of Crude Oil and Condensate made by the

Contractor during the Month that the Arms Length Sales to third parties. Information available to the Contractor insofar as required for the purposes of Article 19 of the Contract concerning the prices of competitive Crude Oils . produced by the main Petroleum producing and exporting countries including contract prices discounts and premia and prices obtained on the spot markets The Contractor shall for the purpose of Article 21 of the Contract prepare a Statement . providing calculations of the value of Associated Natural Gas and Non Associated Natural Gas produced and sold during each Month. This Statement shall contain all information of the type specified in section 6.1 for Crude Oil as is applicable to Gas and such other relevant information as may be required.

LOOSE aa eng 6.3 6.4 The Statement required pursuant to Section 6. and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil Condensate Associated Natural Gas and Non Associated Natural Gas pursuant to the provisions of Articles 19 and 21. The Value of Production and Pricing Statement for each Month Shall be submitted to Gove nt not later than twentyone 21 days after the end of such Month. 71 7.2 SECTION 7 STATEMENT OF COSTS EXPENDITURES AND RECEIPTS The Contractor shall prepare with respect to each Quarter a Statement of Costs Expenditures and Receipts under the Contract. The statement shall distinguish between Exploration Costs Development Costs and Production.Costs and shall separately identify all significant items of costs and expenditure as itemized in Section 3 of this Accounting Procedure within these categories. The Statement of receipts shall distinguish between income from the Sale of Petroleum and inental income of the sort itemized in Section 3.4 of this Accounting Procedure. If the Government is not satisfied with the degree of desegregation within the categories it shall be entitled to request a more detailed breakdown. The Statement shall show the following 7A1 Actual costs expenditures and receipts for the Quarter in question. 7.1.2 Cumulative costs expenditures and receipts for the Year in question. 7.1.3 Latest forecast of cumulativecosts expenditures and receipts at the Year end. 7.1.4 Variations between budget forecast and latest forecast and explanations thereof The Statement of Costs Expenditures and Receipts of each Quarter shall be submitted to Government no later than twentyone 21 days after the end of such quarter. . 8.1 8.2 8.3 8.4

SECTION 8 COST RECOVERY STATEMENT The Contractor shall prepare with respect to each Calendar Quarter a Cost Recovery Statement containing the following information

8.1.1 Unrecovered Contract Costs carried forward from the previous Quarter if any.

8.1.2 Contract costs for the Quarter in question.

8.1.3 Total Contract Costs for the quarter in question Section 8.1.1 plus Section 8.1.2.

8.1.4 Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Quarter in question.

8.1.5 Contract Costs recovered during the Quarter in question.

8.1.6 Total cumulative amount of Contract Costs recovered up to the end of the Quarter in question.

8.1.7 Amount of Contract Costs to be carried forward into the next quarter. Where necessary the information to be provided under Section 8.1 shall be identified separately Field by Field and also separately for Crude Oil Condensate Associated natural Gas and Non Associated Natural Gas. The Cost Recovery information required pursuant to subsection 8.1 above shall be presented in sufficient detail so as to enable Government to identify how the cost of assets are being recovered for the purposes of Article 27 of the Contract. The Cost Recovery Statement for each Quarter shall be submitted to Government not later than twentyone 21 days after the end of such Quarter.

Ad BN SC ae OL 9.2 9.3

SECTION 9 PRODUCTION SHARING STATEMENT The Contractor shall prepare with respect to each Quarter a Production Sharing Statement containing the following information

9.1.1 9.1.2 9.1.3 9.1.4 9.1.5 9.1.6 9.1.7 The calculation of the applicable net cash flows as defined in a D for the Quarter in question. The value of the Investment Multiple applicable in the Quarter in question. Based on Section 9.1.2 and Article 15 the appropriate percentages of Profit Petroleum for the Government and Contractor in the Quarter in question. The total amount of Profit Petroleum to be shared between the Government and Contractor in the Quarter in question. Based on Sections 9.1.3 and 9.1.4 the amount of Profit Petroleum due to the Government and Contractor as well as to each constituent of the Contractor in the Quarter in question. The actual amounts of Petroleum taken by the Government and Contractor as well as by each constituent of the Contractor during the Quarter in question to satisfy their entitlements pursuant to Section 9.1.5. . Adjustments to be made if any in future Quarters in the respective amounts of Profit Petroleum due to the

Government and Contractor as well as to each constituent of the Contractor on account of any differences between the amounts specified in Sections 9.1.5 and 9.1.6 as well as any cumulative adjustments outstanding from previous Quarters. Where necessary the information to be provided under Section 9.1 shall be identified separately for each Field and also separately for Crude Oil and Condensate as distinct from Natural Gas. The Production Sharing Statement shall be submitted to Government not later than twenty one 21 days after the end of such Quarter.

SECTION 10 END OF YEAR STATEMENT 10.1 The Contractor shall prepare a definitive End of Year Statement. The Statement shall contain aggregated information in the same format as required in the Production Statement Royalty and Cess Statement Value of Production and Pricing Statement Statement of Costs Expenditures and Receipts Cost Recovery Statement and Production Sharing Statement but shall be based on actual quantities of Petroleum produced income received and costs and expenditures incurred. Based upon this Statement any adjustments that are necessary shall be made to the transactions concerned under the Contract. 10.2 The End of Year Statement for each Year shall be submitted to Government within sixty 60 days of the end of such Year.

SECTION 11 BUDGET STATEMENT 11. The Contractor shall prepare a Budget Statement for each Year. This Statement shall 11.2 distinguish between budgeted Exploration Costs Development Costs and Production Costs and shall show the following 11.1.1 Forecast costs expenditures and receipts for the Year in question. 11.1.2 A schedule showing the most important individual items of total costs expenditures and receipts for the said Year. The Budget Statement shall be submitted to Government with respect to each Year not less than ninety 90 days before the start of the said Year provided that in the case of the Year in which the Effective Date falls the Budget Statement shall be submitted within ninety 90 days of the Effective Date.

APPENDIX D CALCULATION OF THE INVESTMENT MULTIPLE FOR PRODUCTION SHARING PURPOSES 1. In accordance with the provisions of Article 15 the share of the Government and the Contractor respectively of Profit Petroleum from any Field in any Year shall be determined by the Investment Multiple earned by the Companies from the Field at the end of the preceding Year. These measures of profitability shall be

calculated on the basis of the appropriate net cash flows as specified in this Appendix D.

Investment Multiple 2. The Net Cash Income of the Companies from the Field in any particular Year is the aggregate value for the Year of the following:

- i Cost Petroleum entitlement of the Companies as provided in Article 14;
- ii Profit Petroleum entitlement of the Companies as provided in Article 15;
- iii the Companies' share of all incidental income of the type specified in section 3.4 of the Accounting Procedure arising from Petroleum Operations;
- less . iv the Companies' share of all Production Costs incurred on or in the Field;
- less v the notional income tax determined in accordance with paragraph 7 of this Appendix payable by the Companies on profits and gains from the Field.

3. The Investment made by the Companies in the Field in any particular Year is the aggregate value for the Year of:

- i the Companies' share of Exploration Costs incurred in the Contract Area and apportioned to the Field in the same proportion that such Costs were recovered pursuant to Article 14.4.
- plus ii The Companies' share of Development Costs incurred in the Field.

4. For the purpose of the calculation of the Investment Multiple costs or expenditures which are not allowable as provided in the Accounting Procedure shall be excluded from Contract Costs and be disregarded.

5. The Investment Multiple ratio earned by the Companies as at the end of any Year from the Field shall be calculated by dividing the aggregate value of the addition of each of the annual Net Cash Incomes accumulated without interest up to and including that Year starting from the Year in which Production Costs were first incurred or Production first arose on or in the Field by the aggregate value of the addition of each of the annual Investments accumulated without interest up to and including that Year starting from the Year in which Exploration and Development Costs were first incurred.

Profit Petroleum from the Field in any Year shall be shared between the Government and the Contractor in accordance with the value of the Investment Multiple earned by the Companies as at the end of the previous Year pursuant to Articles 15.2 15.7. .

General 7.

8. The applicable cash flows set out in paragraphs 2 and 3 of this Appendix shall be separately identified and calculated in respect of each Field. In determining the amount of notional income tax to be deducted in the applicable cash flows specified in paragraph 2

of this Appendix a notional income tax liability in respect of the Field shall be determined for each Company comprising the Contractor as if the conduct of Petroleum Operations by the Company in the Field constituted the sole business of the Company and as if the provisions of the Income Tax Act 1961 with respect to the computation of income tax on the basis of the income and deductions provided for in Article 16 of this Contract were accordingly applicable separately to the Field disregarding any income allowances deductions losses or ; . setoff of losses from any other contract Area or business of the Company

ON MUAY LAE APPENDIX E FORM OF PARENT FINANCIAL AND PERFORMANCE GUARANTEE to be furnished pursuant to Article 29 of the Contract

WHEREAS a company duly organized and existing under the laws of having its registered office at hereinafter referred to as the Guarantor which expression shall include its successors and assigns is [the indirect owner of 100 of the capital stock of XYZ Company and direct owner of its parent company;] and. WHEREAS XYZ Company is signatory to a Production Sharing Contract of even date of this guarantee in respect of an onshore area identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as KYZ which expression shall include its successors and permitted assigns; and WHEREAS the Guarantor wishes to guarantee the performance of XYZ Company or its Affiliate Assignee under the Contract as required by the terms of the Contract NOW THEREFORE this Deed hereby provides as follows

1. The Guarantor hereby unconditionally and irrevocably guarantees to the Government and the Licensee that it will make available or cause to be made available to XYZ Company or any other directly or indirectly owned Affiliate of XYZ Company to which any part or all of XYZ Company's rights or interest under the Contract may subsequently be assigned Affiliate Assignee financial technical and other resources required to ensure that XYZ Company or any Affiliate Assignee can carry out its obligations as set forth in the Contract.
2. The Guarantor further unconditionally and irrevocably guarantees to the Government and the Licensee the due and punctual compliance by XYZ Company or any Affiliate Assignee of any obligations of XYZ Company or any Affiliate Assignee under the Contract. . .
3. The Guarantor

hereby undertakes to the Government and the Licensee that if XYZ Company or any Affiliate Assignee shall in any respect fail to perform its obligations under the Contract or commit any breach of such obligations then the Guarantor shall fulfill or cause to be fulfilled the said obligations in place of XYZ Company or any Affiliate Assignee and will indemnify the Government against all losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on the part of XYZ Company. eg nl USSU eE This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company or its Affiliate Assignee under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder. This guarantee shall not be affected by any change in the Articles of Association and byelaws of XYZ Company or the Guarantor or in any instrument establishing the Licensee. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or othr guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity; or d the dissolution amalgamation reconstruction or reorganization of XYZ Company. This guarantee shall be governed by and construed in accordance with the laws of India. OF IN WITNESS WHEREOF the Guarantor through its duly authorized representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of . 199. The seal of was hereto duly affixed by this day of 199 in accordance with its byelaws and this guarantee was duly signed by and as required by the said byelaws. Secretary President Director Witness

APPENDIX F PROCEDURE FOR ACQUISITION OF GOODS AND SERVICES OBJECTIVES The objectives of these procedures are to a ensure the goods and services acquired by the Operator for the carrying out of the Petroleum Operations are acquired at the optimum cost taking into consideration all relevant factors including price quality delivery times and the reliability of potential . suppliers . b ensure that goods and services are delivered in a timely manner taking into consideration the consequences of delays in the acquisition of these goods and

services on the project as a whole. c ensure that the provisions of Article 23 of the Contract are implemented.

PRINCIPLES The principles upon which these procedures are based are a The parties must be satisfied that the Operator is working to an agreed procedure for acquiring goods and services which is auditable and in accordance with the provisions of the Contract. b The Operator must have the ability to acquire goods and services expeditiously so that the project schedules in respect of Approved Work Programmes are maintained.

PROCEDURES The procedures to be adopted. by the Operator for the acquisition of goods and services shall be as follows

Procedure A Procedure B Procedure C

Applicable to Exploration 25000 to 100001 to more than Appraisal Development and 100000 300000 300000

Production Operations 7

Ao Cow dl SE ee

For Contracts valued at less than US 25000 The Operator will be at liberty to determine the preferred method of acquiring goods and services valued at less than US 25000 with the understanding that at least three (3) quotations from selected suppliers including at least one (1) Indian supplier will be obtained. For items valued at greater than US 10000 Operator is required to report to the Operating Committee if the quote accepted exceeds the lowest quote by more than 20 percent. Operator will promptly report to the Operating Committee the Operator's reasons for not selecting the lowest quote.

Procedure A Operator shall ;

- 1 Provide the Parties with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the Contract along with other entities if any from whom the Operator proposes to invite tender; Add to such list the entities whom a Party requests for adding within five (5) Business Days on receipt of such lists;
- 2 G3 If and when any Party so requests. Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix FIV to perform under the contract;
- 4 Complete the tendering process within a reasonable period of time;
- 5 Circulate to all Parties a comparative bid analysis stating Operator's choice of the entity for award of contract. Provide also reasons for such choice in case entity chosen is not the lowest bidder
- 6 Inform all the Parties of the entities to whom the contract has been awarded; and
- 7 Upon the request of a Party provide such Party with a copy of the final version of the contract awarded.

Procedure 3 t Provide the Party with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender; Add to such list the entities whom a Party requests for adding within five 5 Business Days on receipt of such list; ; Os 2 If and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix FIV to perform under the contract; 4 Complete the tendering procedure within a reasonable period of time; 5 Circulate to all Parties a comparative bid analysis stating Operators choice of the entity for award of contract Provide also reasons for such choice in case the entity chosen is not the lowest bidder. If the bid selected is not the lowest bid obtain prior approval of the Operating Committee for award of contract 6 Award the contract accordingly and inform all the Parties of the entities to whom the contract has been awarded; and . 7 Upon the request of a Party provide such Party with a copy of the final version of the contract awarded. Procedure C Operator shall . 1 Publish invitations for parties to prequalify for the proposed contract in at least one 1 daily national Indian newspaper. Provide to NonOperating Companies a list of responding parties and an analysis of their qualifications for the contract being contemplated to be awarded. Include those who qualify as per the prequalification criteria approved as per Appendix F[V in the list of entities from whom Operator proposes to invite tender for the said contract. . 2 Provide the Parties with a total list of all the entities selected as 1 above and all the entities 3 4 approved by the Operating Committee as per Appendix FV for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender; Add to such entities whom a Party requests for adding within five 5 Business Days on receipt of such list; If and when any Party so requests. Operator shall evaluate any entity listed in 2 and 3 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix FIV to perform under the Contract; Gs. US SZ.. ee ie Prepare and despatch the tender documents to the entities as finally listed and to the NonOperating 5 Parties; tek 6 After the expiration of the period allowed for tendering consider and analyse the details of all bids received; Prepare and

circulate to the Parties a comparative bid analysis stating Operators recommendation as to the entity to whom the contract should be awarded the reasons therefor and the technical commercial and contractual terms to be agreed upon; Obtain the approval of the Operating Committee to the recommended bid. However failing Operating Committee approval any Company may refer the issue to the Management Committee for decision; and 8 Award the contract accordingly and upon the request of a Party provide such Party with a. 9 . copy of the final version of the contract; A set of vendor qualification criteria for each major category contractsupply shall be proposed by the Operator and approved by the Operating Committee within thirty 30 days of its submission. In the event the Operating Committee fails to approve vendor qualification criteria within 30 days of the date the same is first submitted by the Operator the matter shall be referred to the Management Committee for decision. The Operating Committee may revise the qualification criteria. IV It is anticipated that in order to expedite Joint Operations contracts will be awarded to qualified vendorscontractors who are identified as approved vendors for the specified activities. A list of such approved vendors shall first be established as follows Ts Operator shall . 1 Provide the Parties with a list of the entities from whom Operator proposes to invite tender for contracts; and 2 Add to such list entities whom a Party requests for adding within fourteen 14 days on receipt of such list; and obtain approval of the Operating Committee by the Operator. Such [list shall thereafter be maintained by the person The Operating Committee may add to or delete vendors from such list. a b Operator to contract a Agent Audit Rights and Assignability The Operator shall act as an agent to the Parties in dealings with contractors and suppliers. Unless otherwise determined by the Management Committee in negotiating contracts with third parties in excess of US D 10000 Operator shallprocure the right to audit clause. Unless otherwise approved by the Management Committee the Operator shall ensure that any contract awarded may be freely assigned to any successor of the Operator in the event of resignation. or removal of the Operator. In cases of emergency Operator may award subcontracts or acquire goods and services without following the procedure set out above provided such transactions are reported to the Operating Committee at its

first meeting following such award. ON Lp. cK PETROLEUM PROSPECTING LICENSE This Deed made the day of . 2013 between the Government of the Republic of Guyana represented herein by the Minister hereinafter referred to as the Minister or the Government as the case may be of the One Part; And Repsol Exploración S.A. hereinafter referred to as Repsol; a Company incorporated under the Law of Spain with its registered office at Mendez Alvaro No 44 28045 Madrid Spain and registered in Guyana under the Companies Act 1991 with its registered address in Guyana situated at 157 C Waterloo Street North Cummingsburg Georgetown Guyana; hereinafter referred to as the Licensee of the Other Part; WHEREAS in accordance with the Petroleum Exploration and Production Act 1986 Act No. 3 of 1986 and the Regulations made thereunder hereinafter referred to as the Act and Regulations respectively the Licensee have by application dated 6th day of December 2012 applied to the Minister for the grant of a Petroleum Prospecting License in respect of the area constituted by blocks described and identified in the First Schedule hereto and shown on a map thereto attached; WHEREAS under authority conferred by section 10 of the Act the Minister has entered into an agreement of even date herewith hereinafter referred to as the Petroleum Agreement with the Licensee for the grant to the Licensee of a Petroleum Prospecting License subject to the terms of the Petroleum Agreement. NOW THEREFORE in exercise of the powers conferred upon the Minister by section 10 and 21 of the Act 1. I the Minister do hereby grant to the Licensee for a period of four (4) Years commencing on the Effective Date of the Petroleum Agreement with two (2) optional renewal periods of three (3) Years each this Petroleum Prospecting License in respect of the area constituted by the blocks described in the First Schedule hereto and identified and shown on the map attached thereto hereinafter referred to as the prospecting area conferring on the Licensee by subject to the Act and the Regulations made thereunder and to the conditions specified hereunder or to which the Licensee is otherwise subject under the Petroleum Agreement the exclusive right to explore in the prospecting area for petroleum and the right to carry on such operations and execute such works therein as are necessary for that purpose. 2. This Petroleum Prospecting License is granted subject to the following conditions A In accordance with

Article 4.1 of the Petroleum Agreement during the term of this Petroleum Prospecting License the Licensee shall in or in relation to the prospecting area carry out the work in Article 4.1a and 4.1b and 4.1c of the Petroleum Agreement. Government Of Guyana Repsol Exploración S.A. Petroleum Prospecting License Page 1

The initial period of four 4 Years shall be divided into two 2 phases phase 1 shall be for two and a half 2.5 Years and phase 2 shall be for one and a half 1.5 Years. Phase 1 of the initial period two and a half 2.5 Years a During phase 1 the Contractor shall Acquire process and interpret 500 km of 2D seismic within the Contract Area and Acquire process and interpret 2000 sq. km of 3D seismic within the Contract Area b At the end of phase 1 the Contractor shall elect either to relinquish the entire Contract Area or enter phase 2. Phase 2 of the initial period one and a half 1.5 Years a During phase 2 Contractor shall commence to drill an Exploration Well to the Cretaceous Formation in accordance to Article 4.2. b At the end of the initial period of four 4 Years the Contractor shall elect either to relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market development which is to assist Contractor with whether to declare commerciality and iii for the area contained in any Petroleum Production Licence or subject to Article 5 relinquish twenty percent 20 of the Contract Area and renew the Petroleum Prospecting Licence for a further period of up to three 3 Years. First renewal period of three 3 Years The first renewal period of three 3 Years shall be divided into two 2 phases each phase consisting of eighteen 18 months. Contractor shall submit a proposal with the work commitment to be performed during the two phases of the first renewal period along with the relevant application. At the end of the first renewal period of three 3 Years the Contractor shall elect either to relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market development which is to assist Contractor with whether to declare commerciality and iii for the area contained in any Petroleum Production Licence or subject to Article 5 relinquish twenty percent 20 of the Contract Area and renew the Petroleum Prospecting Licence

for a second period of three 3 Years. Government Of Guyana Repsol Exploraci6n S.A. Petroleum Prospecting License Page2 Second renewal period of three 3 Years The second renewal period of three 3 Years shall be divided into two 2 phases each phase consisting of eighteen 18 months. Contractor shall submit a proposal with the work commitment to be performed during the two phases of the second renewal period along with the relevant application. At the end of the second renewal period of three 3 Years the Contractor shall relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market development pursuant to section 331 of the Act and as set out in Article 8.4 which is to assist Contractor with whether to declare commerciality and iii for in any Petroleum Production Licence and any other portion of the Contract Area on which the Minister agrees to permit the Contractor to conduct further exploration activities.

the area contained B Within sixty 60 days after the Effective Date of the Petroleum Agreement the licensee shall submit to the Minister details of the work programme and budget on the basis of the minimum work programme specified in A above to be undertaken during the remaining portion of the calendar year. Thereafter for so long as this Petroleum Prospecting License remains in force the Licensee shall submit an annual work programme and budget on the basis of the minimum work program1e specific i A above not later than c1e 0 onth prior to the beginning of the calendar year.

C D Subject to the provisions of the Act and the Petroleum Agreement and other conditions of the Petroleum Prospecting License the Licensee shall conduct prospecting operations hereunder in accordance with the annual work programme and budget submitted pursuant to clause 2B herein. The Licensee shall before commencing any prospecting operations in the prospecting area furnish to the Minister the name and address of the manager who at the time of commencement of such prospecting operations shall have supervision over the prospecting operations to be carried out. Thereafter any change in name and/or address of the manager shall be forthwith notified to the Minister. Any notice which the Minister or any person authorized by the Minister is required or entitled to serve upon the Licensee shall be sufficiently served if the same shall be delivered or sent

by post to such manager at such address and served in accordance with Article 33 of the Petroleum Agreement. E The Licensee shall observe and give effect to the terms of the Petroleum Agreement.

3. Where during any period covered by this Petroleum Prospecting License the obligations of the Licensee under this petroleum prospecting license have been suspended by reason of force majeure pursuant to the Petroleum Agreement the period for which this petroleum prospecting license has been granted shall be extended as specified in Article 24 of the Petroleum Agreement. 4.

The Licensee shall pay to the Government during the term hereby granted an annual Government Of Guyana Repsol Exploración S.A. Petroleum Prospecting License Page 3 LJ IJ u LI u LI u u LI LJ LJ charge in respect of the prospecting area as specified in Article 10 of the Petroleum Agreement.

5. 6. The Licensee shall be entitled to renew this petroleum prospecting license as set forth in Article 3.1b of the Petroleum Agreement. Unless the context otherwise requires terms and expressions used in this Petroleum Prospecting License shall have the same meaning as in the Act or the Petroleum Agreement.

IN WITNESS WHEREOF I Donald Ramotar the Minister do hereby grant this Petroleum Prospecting License and set my hand and affixed the seal of the Government of the Republic of Guyana and the Licensee has set his seal the day month and year first herein above written.

Witness Signed By The Minister Responsible For Petroleum Representing the Government of the Republic of Guyana I His Excellency Donald Ramotar President of the Republic of Guyana Minister Responsible for Petroleum Signed By Repsol Exploración S.A. v Authorized Company Officer/Director

JDA . JL Utf REPJOL Repsol Exploración S.A. Guyana Government Of Guyana Repsol Exploración S.A. Petroleum Prospecting License Page 4 FIRST SCHEDULE DESCRIPTION OF PROSPECTING

AREA Description of area to be granted under Petroleum Prospecting License pursuant to Article 3 of the Petroleum Agreement. The area comprises approximately 6525 square kilometres described herein consisting of graticular blocks identified herein and shown on the Block Reference Map attached Latitude and Longitude Measurements are West and North respectively POINT No. 1 2 3 4

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 LATITUDE 8 00 .00 N 8 00 .00 N 8 00.00 N r 50.00 N r 50.00 N r 40.00 N y 35.00 N y 35.00 N y 30 .00 N y

30.00 N yo15.00N yo15.00N yo10.00N r1o.ooN 6 55.00 N 6 55.00 N 6 45.00 N 6 45.00 N 6 40.00 N
6 40.00 N r 2o.oo N yo 20.00 N yo 30.00 N yo 30 00 N yo 35.00 N yo 40 .00 N yo 40.00 N yo 45.00
N LONGITUDE sr 2s.oo w sr 2o.oo w sr 1s.oo w sr 15.oo w 5r 1o.oo w sr 1o.oo w 56 55.00 w 56 55
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5r 2o.oo w 5r 2o.oo w 5r 2o.oo w sr 2s.oo w 5r 25.oo w FIRST SCHEDULE contd Description of
Contract Area The following five 5 minute by five 5 minute square graticu lar blocks describe the
area . The blocks as described are shown on the Block Reference Map attached Block Q 8 92021
32344446 57606972 8284 9496 107108119120131 132 143144 Block R 49 6163 7377 858997101
1 09112 121123133135 Block X 11 12232435 364748 BlockY 1313 14252637 denotes part block
85K 96K 87K 88K 89K IOK 11K IIK 931 94K 96K 9SK 96L 9SL 87L 91L i2L 17K 98K 99K 100K
101K 102K 103K 1001 1051 105K 107K 108K 97L 98L illl. 100L 101L 102L 103L 1CML 105L 105L
1dh 108L 101K 110K 111K 112K 113K 114K 115K 11eK 117K 118K 119K 120K 109L 110L 111L
112L 113L 114L 115L 11L 117L 118L 9L 12CL 121K 1221 12SK 12CK 125K 128K 127K 128K
129K 130K 131K 132K 121L 122L 123L 124L 125L 12SL 121l 128L 12il 130L 131L 132L l 1331
14K 135K 13iK 137K 1J8K 1J8K 1 1 141K 3 142K 143K 1 .. K 133L 1L 135L 136L 137L 1J8L 1J8L
140L 141L 112LJ 143L 1 .. L rtr. rr1oo 0 1Q 2Q 3Q 4Q 5Q SQ 7Q 9Q gg 100 110 12Q 1R 2R 3R 4R
5R 6R 7R 8R 9R 10 11R 12R 13Q 14Q 15Q 16Q 17Q 18Q 19Q 20Q 21Q 22Q 23Q 5 13R UR 15R
16R 17R 18R 19R 20R 21R 23R 24R 25Q 28Q 27Q 28Q 29Q 30Q 31Q 32Q 33Q Q 3tiQ 25R 25R
27R 28R 29R 30R 31R 32R 33R 37Q J8Q 39Q 40Q 41Q 42Q 43Q UQ 45Q 45Q 41Q 6 560 GQ
500 510 1520 53Q 540 670 SSQ 690 60Q .t9R. SOR 51R 52R 53R S4R 56R 515R 68R 59R SOR
tt116lQH9 Jttlftlftwil .. l11.t1r1tl 9R ; 72R 56R 70Q 52Q 58Q 69Q 70R 64R 57R 52R 57Q 51Q 5SR
T1R T1Q 51R 53R 64Q 53Q 6eR 56Q 55Q 72Q 13Q 74Q 75Q 75Q 77Q 78Q 79Q 80Q 82Q 83Q
84Q 13R 74R 15R 75R 71R 18R 79R SORJ SIR 82R 84R 25 81Q .rrr11t244 850 aGO 870 880 99Q
goo i1 0 i2Q iJQ NO a60 8SQ 85R 8CSR 87R 88R UR tOR 81 R 91. i3R e.R MR MR.
tf23enlalREPS0.1t.4r.tt 970 98Q 99Q 100Q 1010 1020 1030 1040 106Q t06Q 1070 1080 97R 98R

99R 100R 101R 102R 103I 104R 105R 106R 107R 108R . Brllrrr.... 1 r.r 1200 10M . r;rrr 1 rri	
112I 3R 114R if.. 115R 1130 nco 11so 1110 1170 118Q 119R 120R 1000 110Q 1110 1120 1180	
111R 111R 118R 110R 121Q 122Q 123Q 1240 125Q 126Q 127Q 128Q 129Q 130Q 131Q 132Q	
121R 122R 123R 7I 157R 15 124R 125R 126R 137R L 127R 128R 129R 130R 131R 132R 1JSIR	
140R 141R 143R 1 .. R 1330 1340 1360 1360 1370 1380 1310 1400 1.c1o 1.a20 1430 14CO 133R	
134R 135R 136R 1X 2X 3X 5X 5X 7X 8X 9X 10X 11X 12X 1Y 2Y 5YJ ISY 7Y 8Y 9Y 10Y 11Y 12Y	
13X 14X 15X 16X 17I 19X 1iX 20X 21X 22X 23X 24X 13Y v 17 16Y 16Y 18Y 18Y 20Y 21Y 22Y	
23Y 2CY 51J 75Y 87Y 99Y 111Y QY 45Y 46Y 41Y Guyana GeoloiY and Mines Commission el	
IOOO..OOO o.te lloWf 2013 I I Kilometers Petroleum Agreement Government of Guyana	
Repsol Exploraci6n S.A. PETROLEUM AGREEMENT BETWEEN THE MINISTER RESPONSIBLE	
FOR PETROLEUM REPRESENTING THE GOVERNMENT OF THE REPUBLIC OF GUYANA AND	
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PreApproved and Certified Petroleum Operations Items Petroleum Prospecting License
PETROLEUM AGREEMENT This Agreement is made on the Vi day of Vi t.t Republic of Guyana the
Govenunent rted herein by the Minister Responsible for Petroleum hereinafter referred to as the
Minister of the One Part 2013 between the Government of the And of the Other Pari Repsol
Exploraci6n S.A. hereinafter referred to as Repsol; a Company incorporated under the law of Spain
with its registered office at Mendez Alvaro No 44 28045 Madrid Spain and registered in Guyana

under the Companies Act 1991 with its registered address in Guyana situated at 157 C Waterloo Street North Cummingsburg Georgetown Guyana; Repsol Exploraci6n S.A. shall be referred to as Licensee andor Contractor. The Licensee and the Minister shall individually be referred to as Party and collectively as Parties. WHEREAS 1 2 By virtue of the Petroleum PJduc Act Cap. 6505 Petroleum est1g in its natural condition in strata in Guyana is vested in the State; the Petroleum Exploration and P1oduction Act No. 3 of 1986 hereinafter referred to as the Act and the Petroleum Exploration and Production Regulations 1986 the Regulations make provision with respect to prospecting for and production of Petroleum and for matters connected therewith; hereinafter referred to as The Guyana Geology and Mines Commission hereinafter referred to as GGMC a body corporate established under the Guyana Geology and Mines Commission Act No. 9 of 1979 has been seized with the responsibility inter alia of planning and securing the development exploitation and management of Petroleum as defined in the Act in Guyana so as to ensure for the people of Guyana the maximum benefits therefrom and for doing such things in relation thereto ; 3 With respect to prospecting for and producing Petroleum and for matters connected therewith the Act and Regulations subject to certain limitations and conditions contained therein authorize the Minister to grant Petroleum Prospecting Licences and Petroleum Production Licences; 4 Section 10 of the Act authorizes the Minister to enter into an agreement with any person with respect to inter alia the grant of a Licence the conditions to be included in a Licence the procedure to be followed by the Minister while exercising any discretion conferred upon him by or under the Act and the manner in which the discretion shall be exercised and any matter inental to or connected therewith; Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A . Page | 5 6 7 8 Licensee has submitted to the Minister a proposal the proposal for a production sharing agreement in respect of a certain offshore area of Guyana on terms and conditions specified in the proposal; GGMC has been authorized by the Minister to negotiate this Agreement subject to the provisions of the Act and Regulations and to the final written approval of the Minister of its and execution thereof and to assist in the administration and implementation thereof; Licensee will have or will acquire the financial

resources the managerial technical and industrial competence and the experience to carry out Petroleum Operations and will provide a bond in accordance with section 13 of the Act; or a parent company guarantee pursuant to Article 3.2 hereof; Pursuant to the aforesaid recitals Licensee made an application to the Minister for a Petroleum Prospecting Licence in accordance with regulation 13 of the Regulations as hereinafter defined. over the area described in Annex A and shown on the map attached as Annex B subject to the terms and conditions herein set forth and subject to the provisions of the Act and Regulations and Licensee has agreed by execution of this Agreement to accept the said Licence on the said terms and conditions and provisions. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follow; Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 2 Article 1 Definitions 1. 1 In this Agreement unless the context otherwise requires Accounting Procedure means the procedure set out in Annex C; Act means the Petroleum Exploration and Production Act No.3 of 1986; Affiliated Company in relation to each party comprising the Contractor means a company or corporation; i which is directly or indirectly controlled by each party comprising the Contractor; or ii which directly or indirectly controls each party comprising the Contractor; or iii which is directly or indirectly controlled by a company or corporation that also directly or indirectly controls each party comprising the Contractor. For the purpose of this definition control means the right to exercise a vote of fifty per cent 50 or more of all the 01111g shares; Agreed Interest Rate means interest compounded on a monthly basis at the rate per annum equal to the average London Interbank Offer Rate LIBOR for six 6 months United States dollar deposits as published by the Wall Street Journal on the first Business Day of such month being calculated plus three 3 percentage points; Agreement means this Petroleum Agreement and the Annexes hereto attached and made a part hereof; Appraisal Programme means a programme carried out following a discovery of Petroleum in the Contract Area for the purpose of delineating the Petroleum Reservoir as defined in the Act to which that discovery relates in terms of thickness and lateral extent and estimating the quantity of recoverable Petroleum therein prior to declaration of

commerciality; Appraisal Well means a well drilled for the purpose of an Appraisal Programme; Article means an Article of this Agreement; Associated Gas means all Natural Gas produced from any Field of which the production of Crude Oil is more than fifty percent 50 of the total barrels of oil equivalents BOES expected to be produced in said Field as determined in a Development Plan and includes the gascap which overlies and is in contact with Crude Oil. For purpose of BOES calculation a conversion factor of 5658 standard cubic feet per barrel scfbbl shall be used; Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A . Page 3 Barrel means a quantity cons1stmg of fortytwo 42 United States gallons liquid measure measured at standard conditions of atmospheric pressure and temperature 14.7 lbssq. inch absolute or 1 Kgsq. em. absolute and corrected to a temperature of sixty 60 degrees Fahrenheit or fifteen 15 degrees Celsius; Business Day means a day on which the banks in Georgetown Guyana are customarily open for business. Calendar Month or Month means any of the twelve months of the Calendar Year; Calendar Qumier or Quarter means a period of three 3 consecutive months beginning on the first day of January April July or October; Calendar Year or Year means a period of twelve 12 consecutive Months commencing on January 1 and ending on the succeeding December 31 provided however that a Year of a te1m of a Licence shall be the period specified in section 2 2 b of the Act; Commercial Discovery means any discovery which the Contractor in its sole judgment considers economic to develop and produce pursuant to the terms of the Agreement; Contract Area means i on the Effective lJate the area described in Annex A and shown on the map in Annex B and the subject of the Petroleum Prospecting Licence granted to the Contractor pursuant to Article 3; and ii thereafter any areas which at any particular time are subject to the Petroleum Prospecting Licence or Petroleum Production Licences granted to the Contractor under Article 8; Contract Costs means Exploration Costs Development Costs Operating Costs Service Costs General and Administrative Costs A1mual Overhead Charge and PreContract Costs; Contractor means Repsol Exploraci6n S.A. and includes its successors and pennitted ass1gnees; Cost Petroleum has the meaning assigned in Article 1 1; Crude Oil or Oil means crude mineral oil asphalt ozokerite

distillates condensates and all kinds of hydrocarbons and bitumens both in solid and liquid forms at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbsq. in or 1 Kgsq. cm; Delivery Point means in the case of Crude Oil the inlet flange of the lifting tankship; in Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 4 the case of Natural Gas shall be the sales point and the point at which custody transfers from seller to buyer; or such other economically viable point which shall be agreed to by the Contractor and the Minister; Development Costs means the expenditure so categorized in Annex C; Development Plan .. means the plan referred to in Article 8.4; Development Well means any well drilled as part of a Development Plan; Discovery Area means an area which is part of a Prospecting Area consisting of a Discovery Block or Blocks in respect of which the Minister has been informed under section 30 of the Act; Discovery Block means that as defined in the Act; Discovery of Petroleum means that as defined in the Act Effective Date means the date on which this Agreement comes into force pursuant to Article 30; Expatriate Employee means any employee other than a Guyanese citizen of any party comprising the Contractor the Operator any Affiliated Company and/or SubContractors not permanently resident in Guyana who is engaged under a contract of service for the purpose of Petroleum Operations; Exploration Costs means those expenditures so categorized in Annex C; Exploration Period means the initial period and/or the first renewal period and/or the second renewal period referred to in Article 4. 1 as the case may be; Exploration Well means a well drilled which is not a Development Well with the objective of exploring for Petroleum on a geological entity be it of structural stratigraphic facies or pressure nature to a depth or stratigraphic level specified in the work programme for the exploration work programme; Field means an area within the Contract Area consisting of a Petroleum Reservoir or multiple Petroleum Reservoirs all grouped on or related to the same individual geological structural features or stratigraphic conditions from which Petroleum may be produced commercially; Gas Field means a Field producing predominantly NonAssociated Gas; General and Administrative Costs and Annual Overhead Charge means expenditures so categorised in Annex C; the Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A.

Page 5 Geologic Basement means any igneous or metamorphic rock or any stratum in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected; Government means the Government of the Republic of Guyana and its ministries and agencies; GGMC means the Guyana Geology and Mines Commission established under section 3 of the Guyana Geology and Mines Commission Act 1979; GGMC Act means the Guyana Geology and Mines Commission Act 1979; Licence means the Petroleum Prospecting Licence and/or the Petroleum Production Licences or both as the context requires; Lifting Entitlement means the quantity of Crude Oil to which a Party shall be entitled in any given period pursuant to Article 11; Minister means the Minister assigned responsibility for Petroleum or where there is no such Minister the President; Natural Gas or Gas means all hydrocarbons which at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or 1 Kgsq. cm is in a gaseous state including but not limited to wet mineral gas dry mineral gas and casing head gas all substances contained therein including helium which are produced from an oil or gas well in their natural state or residue gas remaining after extraction of NGLs as defined herein from wet gas. For purposes of this Agreement Natural Gas shall also include liquefiable hydrocarbons obtained from Natural Gas by condensation or extraction including ethane propane butane pentanes and heaviers Natural Gas Liquids or NGLs. Liquefied methane shall not be considered an NGL but rather Natural Gas in the liquid state; NonAssociated Gas means Natural Gas or Gas other than Associated Gas; NonResident SubContractor shall mean a SubContractor the control and management of whose business are exercised outside Guyana; Oil Field means a Field producing predominantly Crude Oil; Operating Costs means those costs so categorized in Annex C; Operator shall have the meaning assigned to it in Article 2.2a; Parties means the Government and Licensee and includes their successors and permitted Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 6 assignees and a Party shall mean any of the Parties; Petroleum shall have the meaning

assigned in the Act Petroleum Operations means Prospecting Operations and/or Production Operations. as defined in the Act; Petroleum Prospecting Licence means a Licence issued by the Government under the Act and the Regulations to Licensee for carrying out Prospecting Operations and set forth in Form C of the schedule as specified in the Regulations; Petroleum Production Licence means a Licence to be issued by the Government under the Act and the Regulations to Licensee for carrying out Production Operations and set forth in Form D of the schedule as specified in the Regulations; Petroleum Reservoir shall have the meaning assigned in the Act; PreContract Cost means the costs stated in Section 3.1.k of the Accounting Procedure; Profit Petroleum has the meaning assigned in Article 11 ; Prospecting Area has the meaning assigned in the Act; Recoverable Contract Costs has the meaning assigned in Article 11 ; Regulations means the Petroleum Exploration and Production Regulations 1986; Service Costs means the expenditures so categorized in Annex C; SubContractor means any company or entity which provides services to the Contractor in connection with Petroleum Operations; Third Party Sales means third party arms length sales made by i Contractor or ii each party comprising Contractor or iii Affiliated Company of each party comprising Contractor to a third party for an armslength price which is disclosed to the Minister; The words and terms used in this Agreement but not defined herein shall if meanings have been assigned to them under section 2 of the Act have for the purposes of this Agreement the same meanings. The provision of this Agreement relating to the Petroleum Prospecting Licence shall be read as part of the provisions of such Licence. The provision of this Agreement relating to any Petroleum Production Licence shall be read as part of the provisions of such Licence.

1.2 1.3 1.4
Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 7 1.5 The provisions in the Act and Regulations dealing with rights and obligations of the Contractor shall be read as part of but not nullify the provisions of this Agreement and any Licence issued to the Contractor.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 8 Article 2 Agreement the Operator Liabilities and Indemnities 2.1 Agreement This Agreement constitutes an agreement made under section 10 of the Act consistent with the Act and the Regulations and is a production

sharing agreement the objective of which is the exploration for development and production of Petroleum in the Contract Area by the Contractor subject to the terms hereof and the provisions of the Act and Regulations under which the Contractor shall have an economic interest in the development of Petroleum from the Contract Area. 2.2 The Operator a b Repsol shall be the Operator charged with conducting the day to day activities of the Contractor under this Agreement. No transfer of operatorship to another party not comprising the Contractor shall take effect unless it has been approved by the Minister which approval shall not be unreasonably withheld. The Minister shall be notified of any change of operatorship to another party comprising the Contractor in writing. The Contractor shall provide the Minister with a memorandum summarizing the operating arrangements between the Operator and the Contractor including any party comprising the Contractor for the conduct of Petroleum Operations which will include inter alia a provision whereby the Operator agrees to conduct the Petroleum Operations in accordance with this Agreement the Licence and any applicable laws of Guyana. 2.3 Liability The duties obligations and liabilities of the parties comprising the Contractor under this Agreement and under any Licence issued pursuant hereto shall be joint and several. 2.4 Indemnity The Contractor shall at all times keep Government indemnified against all actions claims and the demands that may be brought or made against Government by a third party by reason of negligence any act or omission or reckless disregard of harmful consequences which results in damage to a third party by the Contractor or the Operator in the exercise or purported exercise of the rights of the Contractor under the Act or the Licence provided however that nothing in this Article shall require the Contractor to give the said indemnity for any claim or demand in respect of Petroleum taken by the Minister pursuant to Article 11 after title has passed to the Minister at the Delivery Point or in respect of assets acquired by the Minister pursuant to Article 20 from and after the date of acquisition. Liability by the Contractor to the Government for damages in respect of Petroleum Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 9 Operations under this Agreement is limited to insurance required in accordance with Article 20.2 a provided however that the Contractor shall not be liable to the

Government for indirect punitive or consequential damages including but not limited to production or loss of profits. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 10

Article 3 Petroleum Prospecting Licence and Guarantee 3.1 Petroleum Prospecting Licence a b On the Effective Date of this Agreement the Minister in accordance with the Act the Regulations and the terms of this Agreement shall grant to the Contractor the Petroleum Prospecting Licence for an initial period of four 4 Years from the Effective Date over the area described in Annex A and shown on the map attached as Annex B hereto. Subject to Article 4 and the other terms of this Agreement such Petroleum Prospecting Licence may be renewed but not more than twice at the election of the Contractor for consecutive periods of up to three 3 Years each in accordance with the provisions of the Act and the Regulations. 3.2 Guarantee Each party compnsmg Contractor shall on or before the sixtieth 60th day from the Effective Date during year one 1 of phase one 1 of the initial period in accordance with Article 1.1 .U ereunder and thereafter no later than ninety 90 days afer e commencement of all subsequent work commitment periods as specified in Article 4.1 provide a bond parent company guarantee or other brm of guarantee acceptable to the Minister in proportion to each participating interest up to the amount of ten 1 0 of the budget submitted by the Contractor pursuant to Article 7.1 for each specific work commitment period. Notwithstanding the foregoing if the Contractor exceeds its minimum work commitment in any phase specified in Article 4.1 the completion of such work commitment shall constitute a waiver of such proportion of the requirement of the guarantee by the Minister which is the equivalent of the excess work previously completed but which is applicable to the subsequent work commitment phase. If the guarantees are parent company guarantees they shall be in lieu of and satisfy any obligation to provide a guarantee andor bond pursuant to the Act Regulations or this Agreement on the part or on behalf of the Contractor.

Petroleum Agreement Govemment of Guyana Repsol Exploraci6n S.A. Page 11 Article 4 Exploration Programme and Expenditure Obligation 4.1 Exploration Programme Subject to the provisions of this Agreement in discharge of its obligations to carry out Prospecting Operations in the Contract Area the Contractor shall carry out the minimum work described herein during the

periods into which Prospecting Operations are divided hereunder a The initial period of four 4 Years shall be divided into two 2 phases phase 1 shall be for two and a half 2.5 Years and phase 2 shall be for one and a half 1.5 Years. i Phase 1 of the initial period two and a half 2.5 Years aa During phase 1 the Contractor shall Acquire process and interpret 500 km of 2D seismic within the Contract Area and Acquire process and interpret 2000 sq. km of 3D seismic within the Contract Area bb At the end of phase 1 the Contractor shall elect either to relinquish the entire Contract Area or enter phase 2. ii Phase 2 of the initial period one and a half 1.5 Years aa During phase 2 Contractor shall commence to drill an Exploration Well to the Cretaceous Formation in accordance to Article 4.2. bb At the end of the initial period of four 4 Years the Contractor shall elect either to relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market development which is to assist Contractor with whether to declare commerciality and iii for the area contained in any Petroleum Production Licence or subject to Article 5 relinquish twenty percent 20 of the Contract Area and renew the Petroleum Prospecting Licence for a further period of up to three 3 Years. b First renewal period of three 3 Years The first renewal period of three 3 Years shall be divided into two 2 phases each phase consisting of eighteen 18 months. Contractor shall submit a proposal Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 12 with the work commitment to be performed during the two phases of the first renewal period along with the relevant application. At the end of the first renewal period of three 3 Years the Contractor shall elect either. to relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market development which is to assist Contractor with whether to declare commerciality and iii for the area contained in any Petroleum Production Licence or subject to Article 5 relinquish twenty percent 20 of the Contract Area and renew the Petroleum Prospecting Licence for a second period of three 3 Years. c Second renewal period of three 3 Years The second renewal period of three 3 Years shall be divided into two 2 phases each phase consisting of eighteen 18

months. Contractor shall submit a proposal with the work commitment to be performed during the two phases of the second renewal period along with the relevant application. At the end of the second renewal period of three 3 Years the Contractor shall relinquish the entire Contract Area except i for any Discovery Area in respect of which the Minister is informed under section 30 of the Act ii for any Natural Gas Discovery Area pending the outcome from market developer pursuant to section 331 of the Act and as set out in Article 8.4 which is to assist Contractor with whether to declare commerciality and iii for the area contained in any Petroleum Production Licence and any other portion of the Contract Area on which the Minister agrees to permit the Contractor to conduct further exploration activities. d The minimum work commitment for a given phase or period referred to in Article 4.1a b and c may be undertaken in an earlier phase or period in whole or in part and in such a case the work commitment with respect to the subsequent period shall be deemed to be satisfied accordingly in whole or in part as the case may be. Contractor may conduct additional work beyond the minimum work commitment in accordance with the terms and conditions of this Agreement which shall be subject to Cost Recovery. e Subject to Article 24 herein and section 43 of the Act the Minister may extend any Exploration Period pursuant to a showing of good cause by the Contractor.

4.2 No Exploration Well drilled by the Contractor shall be treated as discharging any obligation of the Contractor to drill such Exploration Well unless either it has been drilled to the depth or formation agreed with the Minister and specified in the annual work programme or before reaching such depth or formation one or more of the following occur a the Contractor has expended on such Exploration Well and any substitute well drilled pursuant to Article 4.2 d below the amount for such work commitment in Petroleum Agreement Government of Guyana a Repsol Exploración S.A. Page 13 the budget submitted by the Contractor and approved by the Minister as specified in Article 7.1; or b the Geologic Basement is encountered; or c a Discovery is made and the Minister is informed thereof; or d insurmountable technical problems are encountered which in accordance with good oilfield practice make further drilling impractical provided that if the said Exploration Well is abandoned owing to the said problems before reaching the Geologic Basement the Contractor shall

drill a substitute well in the Contract Area to the same minimum depth as aforesaid unless otherwise agreed with the Minister or until the amount in Article 4.2 a less any amounts actually expended on the abandoned well is reached or one of the criteria listed at Articles 4.2 b to d is satisfied.

4.3 Expenditure Obligation The sum actually spent in fulfilment of the work obligation in a specific phase or period shall be deemed to have satisfied the Contractors minimum expenditure obligation for that phase or period. For the avoidance of doubt in the event the Contractor has performed its work obligations for an amount less than the amount specified in an annual work programme and budget submitted under Article 7 Contractor shall be deemed to have fulfilled its expenditure obligation for that phase or period.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 14 Article 5 Relinquishment of Areas

5.1 5.2 If prior to the end of the initial period of the Petroleum Prospecting Licence issued to the Contractor under Article 3.1 an application is made by the Contractor for renewal of the Licence under section 24 1 of the Act the Contractor shall relinquish at the end of the initial period an area equal to at least twenty percent 20 of the original Contract Area less the exclusions provided for in Article 5. If prior to the end of the first renewal period of the Petroleum Prospecting Licence an application is made by the Contractor for a second renewal of the Licence under section 24 1 of the Act the Contractor shall then relinquish at the end of this first renewal period an area equal to at least twenty percent 20 of the original Contract Area less the exclusions provided for in Articles 5.3.

5.3 The areas to be relinquished pursuant to Articles 5.1 and 5.2 shall

- a comprise Blocks as defined in the Act;
- b c d e exclude any Discovery Area together with a reasonable area of protective acreage surrounding the Discovery Area; and any area under an Appraisal Programme pursuant to Article 8.4;
- exclude any Discovery Area of Natural Gas in a market development phase;
- exclude any Production Area; be selected by Contractor so that
- i ii the area relinquished shall comprise one 1 discrete area having regard to any representations made by the Minister with respect to location shape and size; the blocks to be retained for and during the first renewal period pursuant to Articles 5.1 and 5.2 shall constitute one 1 discrete area unless otherwise agreed to by the Minister.

5.4 In the event that an area or areas

cannot be identified for relinquishment in accordance with this Article without including in such area or areas in whole or in part a subsisting Discovery Area or Production Area or the Minister is of the opinion that the areas to be relinquished will not enable licensing separately or jointly with contiguous unlicensed areas then the Minister and Contractor shall consult together with a view to agreeing on the areas to be relinquished in the light of the circumstances then prevailing. If after sixty 60 days from receiving notice of the Contractor s proposed relinquishments the Parties cannot agree on a proposed relinquishment the Parties shall refer the matter to a sole expert pursuant to Article 26. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A . Page 15 5.5 5.6

For the purpose of this Article a Discovery Area shall not include any Discovery Block which relates to a Discovery in respect of which the Contractor has notified the Minister that the Discovery is not of potential commercial interest pursuant to section 31 1 of the Act unless such Discovery Block forms a part and only to that extent of another subsisting Discovery Area. If a Petroleum Prospecting Licence ceases to have effect with respect to Discovery Blocks pursuant to section 32 1 of the Act such reduction in size of the Contract Area shall be treated as an advance relinquishment under this Article and shall reduce the area next required to be relinquished accordingly. 5. 7 Without prejudice to the obligations undertaken in Article 4 the Contractor may at any time during the period of the Petroleum Prospecting Licence on giving the Minister no less than three 3 months notice in writing of its intention to do so relinquish any Block or Blocks in the Contract Area pursuant to section 28 of the Act and in accordance with Articles 5.4 and 5.5. Any such relinquishment shall count towards any subsequent mandatory relinquishments required under Articles 5.1 5.2 or 5.3 above as the case may be. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 16 Article 6

Delegation ; Cooperation between Contracto r and GGMC 6.1 The Minister may subject to the provisions of the Act or any other law delegate any person to exercise and perfom1 any of his functions under this Agreement and anything done by the delegate of the Minister in pursuance of the delegation shall have the same validity and effect as it would have if done by the Minister. 6.2 The Minister also hereby authorizes GGMC to perfom1 inter alia the following functions a to monitor

the Petroleum Operations carried out by the Contractor; b c d e f to review any proposed exploration work programme and budgets presented by Contractor under Article 7 and any Appraisal Programme presented by the Contractor under Article 8; to review any Development Plan submitted by the Contractor in connection with an application for a Petroleum Production Licence pursuant to section 34 of the Act; to ensure the maintenance and availability for inspection of operating records and reports for Petroleum Operations in accordance with the Agreement; to ensure the accounting procedures specified in Annex C of this Agreement are followed ; to ensure compliance with the provisions of this Agreement Petroleum Act and Regulations. 6.3 The Contractor and the delegate of the Minister shall cooperate in good faith in the exercise of the Minister s functions delegated pursuant to this Article and the Contractor shall keep the delegate of the Minister advised of all activities taking place during the course of Petroleum Operations and shall provide the delegate of the Minister with all available information relating to Petroleum Operations as the Minister or the delegate of the Minister may reasonably require. Towards this end the delegate of the Minister and the Contractor shall meet at regular intervals but at least once every six 6 months to review the progress and results of the Petroleum Operations and to discuss the work programme and other activities to be undertaken in the ensuing months. 6.4 With respect to the matters to be reviewed pursuant to Article 6.2 should the delegate of the Minister wish to make any specific proposals or revisions thereto the delegate of the Minister shall so notify the Contractor specifying its reasons therefor; within reasonable time thereafter the Contractor and the delegate of the Minister shall meet and endeavour to agree on the proposals or revisions. The Contractor shall consider and take into account the proposals of the delegate of the Minister and shall attempt in good faith to reach agreement on such proposals. If the Contractor and the delegate of the Minister fail to agree within sixty 60 days of submission by the Contractor the exploration work programme and budget including as appropriate any minimum work programme to be undertaken pursuant to Article 4 submitted pursuant to Article 7 and the Appraisal Programme except in the case of Gas to which the provision

of Article 12 shall apply submitted pursuant to Article 8 revised in accordance with any amendments or additions thereto agreed by the delegate of the Minister and the Contractor shall be deemed adopted. Nothing herein above provided shall preclude the right of the Minister to delegate any additional function to the delegate of the Minister or subject to Article 6.1 to delegate from time to time any functions including those herein contained to any other agency of Government. A delegation shall not result in the increase of the obligations or liabilities of the Contractor and notice of any delegation shall be given promptly to the Contractor. Any approvals required by the Minister or delegates of the Minister shall not be unreasonably withheld. If the Contractor requests required approval from the Minister or delegates of the Minister such approval shall be deemed as granted if no response is provided within sixty 60 days of the request. The Minister and the delegate of the Minister shall upon request either provide to the Contractor or assist the Contractor in obtaining the assistance required for Contractor to fulfil requirements of the contract including not limited to the following a b approvals issued by Government agencies or local government institutions Which are required to conduct hydrocarbon operations including approvals necessary to import goods and services free from duties and taxes; approvals for easements and right of way to enable Contractors to conduct operations; c approvals for security for field operations and personnel; d e f permission for entry and exit visas and working permits for Contractors employees subcontractors and their dependents; supply reports analyses samples geological geophysical and production data necessary to Contractor from areas inside and outside the Contract Area; approvals to export hydrocarbons and use essential infrastructure necessary for the economic export of hydrocarbons at normal commercial terms. Petroleum Agreement Government of Guyana Repsol Exploración S.A.

Page 18 Article 7 Annual Work Programme and Budget 7.1 Within sixty 60 days after the Effective Date the Contractor shall prepare and submit to the Minister in detail a work programme and budget setting forth the Petroleum Operations. which the Contractor proposes to carry out including as appropriate any minimum work obligations to be undertaken pursuant to Article 4 during the remaining portion of the Calendar Year. In subsequent years no less than one 1 month before the

beginning of the Calendar Year the Contractor shall prepare and submit to the Minister a work programme and budget setting forth Petroleum Operations which the Contractor proposes to conduct during the upcoming Calendar Year. 7.2 The Contractor may for good cause amend the details of any work programme or budget submitted to the Minister pursuant to Article 7.1 provided that a notice of the details of the reasons for the amendments is given to the Minister; b such amendments shall not have the effect of reducing the minimum work obligations undertaken under Article 4 without the prior consent in writing of the Minister; c any proposed amendment shall be subject to review pursuant to Article 6.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 19 Article 8 Discovery and Development

8.1 Where pursuant to section 30 of the Act notice has been given to the Minister of a Discovery in the Contract Area the Contractor shall forthwith inform the Minister of the steps it proposes to take to satisfy the requirements of section 30 1 a iii of the Act. 8.2 Where the Contractor pursuant to section 31 1 of the Act has informed the Minister that in its opinion the Discovery is of potential commercial interest the Contractor shall as soon as practicable thereafter submit for the consideration of the Minister its proposals for an Appraisal Programme to meet the requirements of section 30 1 b of the Act. 8.3 Where an Appraisal Programme has been adopted by the Contractor pursuant to Article 8.2 the Minister may on application by the Contractor pursuant to section 31 2 of the Act stating reasons therefor extend the period within which application may be made by the Contractor for a Petroleum Production Licence. 8.4 8.5 In furtherance to article 8.3 above if Contractor deem a Non Associated Gas Discovery is of potential commercial interest the time period between the notice of Discovery provided for in section 31 1 of the Act and the application for grant of a Petroleum Production Licence shall be extended pursuant to section 31 2 of the Act if necessary to such reasonable time as agreed to in friendly negotiations between the Parties and in pursuance of section 31 of the Act to conduct an Appraisal Programme develop a Natural Gas market and design and construct facilities necessary to commercialize the Natural Gas. Where the Contractor has made an application to the Minister for a Petroleum Production Licence in respect of any part of the Contract Area in accordance with section

34 1 of the Act such application shall be accompanied by the proposals required under section 34 3 of the Act hereinafter referred to as the Development Plan and shall satisfy the provisions of section 36 of the Act and the Regulations. The Development Plan shall provide that not later than six 6 months after the grant of the first Petroleum Production Licence the Contractor shall in consultation with GGMC prepare and implement a programme for training and employment of Guyanese nationals in each phase and level of Petroleum Operations and for the development of management and technical skills for the safe and efficient conduct of Petroleum Operations. 8.6 Where the Minister considers that the application has not met the requirements of Article 8.4 he shall so notify the Contractor within sixty 60 days of receipt of the application and GGMC and Contractor shall meet to discuss the application with a view to ensuring that the requirements of Article 8.5 are met. In the event that the Parties are unable to agree on amendments to the application to meet such requirements within sixty 60 days from the date of aforesaid application or such longer period as the Parties shall agree or where the Minister fails to respond to or act on the aforesaid application within sixty 60 days the Contractor may refer the matter to a sole expert pursuant to Article 26 for determination within sixty 60 days of appointment of such expert or such other time Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 20 period as may be agreed between the Contractor and the Minister. 8. 7 Where the Minister considers that the aforesaid application has met the requirements of Article 8.5 he shall within sixty 60 days of receipt thereof so notify the Contractor. In such event or where in the event of a dispute it is determined by the sole expert pursuant to Article 26 that the Contractor has made an application which meets the requirements of Article 8.5 provided the Contractor is not in default under this Agreement the Minister shall grant within sixty 60 days of such notification or determination as the case may be to Contractor a Petroleum Production Licence in the Form D of the schedule as specified in the Regulations over the area for which the application has been made on terms and conditions consistent with this Agreement and the Act and Regulations which will enable the Contractor to carry on Petroleum Operations in the Production Area in accordance with the Development Plan wherein

the level of production set shall be consistent with the maximum efficient rate of production which conforms to sound reservoir engineering principles in accordance with good international petroleum industry practice. The initial term of the Petroleum Production Licence shall be twenty 20 Years commencing next after the date of the grant of said licence in accordance with the Act. In the event the Minister imposes policybased production limits on production below those consistent with maximum efficiency rates for the Field or Fields any such production limits will be imposed countrywide and shall be allocated proportionately based upon demonstrable verifiable Field production capacities.

8.8 While the Contractor holds a Petroleum Prospecting Licence or has made an application pursuant to Article 8.5 and in accordance with section 34 1 of the Act the Minister shall not grant a Petroleum Production Licence in respect of all or part of the Contract Area or area covered by such application whether on a geographical or geological basis to any third party.

8.9 Where the Contractor pursuant to section 31 1 of the Act has served notice on the Minister that in its opinion a Discovery made in the Contract Area is not of potential commercial interest the provisions of section 32 1 of the Act shall apply.

8.10 If it was determined that the Field as to which the Commercial Discovery applies extends beyond the boundaries of the Contract Area or if such is subsequently determined in the course of development or producing operations in the Field then Contractor may apply for an extension of the Contract Area to include the additional acreage encompassing the Field as determined by the analysis of all the relevant information. The Minister may grant the extension to the Contractor for such additional acreage to enable the entire Field to be developed and produced with optimal efficiency in accordance with good oil Field practice. The said acreage shall not be available to Contractor if it is held under Licence to a third party. In such instances the provision of Section 44 of the Act shall apply.

8.11 The Contractor may apply for a renewal of a Petroleum Production Licence for a maximum ten 10 years. The application for renewal shall be granted as long as the Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 21 Contractor is in good standing under the Licence.

a Natural Gas In the event of any NonAssociated Gas discovery within the Contract Area in recognition of the fact that Natural Gas

projects generally have much longer lead times from discovery to first commercial production than is the case for Crude Oil projects the Minister shall grant Contractors request for the 10 year Petroleum Production License renewal so long as maximum Contractor is in good standing under the Licence. ten b The Minister shall not refuse to grant the renewal of a Petroleum Production Licence under section 401 of the Act without first providing the Contractor; i Notice stating the grounds of the intended refusal; and ii Ninety 90 calendar days following the date of the notice referenced in Article 8.9bi to respond to or remedy the stated grounds for refusal. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 22 Article 9 Records Reports and Information ; Confi dental ity 9.1 Records Reports and Infom1ation a b c d e The Contractor shall at all times while this Agreement is in force maintain and submit to the Minister in accordance with the provisions of the Act and the Regulations the Petroleum Production Licence and this Agreement full and accurate reports records retums and accounts of Petroleum Operations in the Contract Area. All data well logs maps magnetic tapes cuts of cores and cutting samples and all other geological and geophysical information obtained by the Contractor in the course of carrying out Petroleum Operations hereunder and all geological technical financial and economic reports studies and analyses generated in relation thereto hereinafter referred to as Petroleum Data shall be submitted to the Minister in accordance with the Regulations. The Contractor may freely export for processing or laboratory examination or analysis samples or other original materials constituting Petroleum Data provided that samples equivalent r. ze and quality or where such merial is capable of reproduction copies of equivalent quality have first been delivered to the Minister. Petroleum Data shall be the joint property of the Minister and the Contractor but shall become the sole property of the Minister with respect to any area which ceases to be part of the Contract Area whether as result of relinquishment or expiry surrender or termination of a Licence or otherwise in accordance with the Act from the date on which such area ceases to be part of the Contract Area. through duly appointed representatives upon providing The Minister the Contractor with at least seven 7 days notice shall be entitled to observe the Petroleum Operations conducted by the Contractor at his sole

cost and expense and at all reasonable times to inspect all assets records and data kept by the Contractor relating to such Petroleum Operations. In the exercise of such rights under this paragraph the Minister shall not unduly interfere with the Contractors Petroleum Operations under this Agreement. f Nothing in this Article shall be construed as requiring the Contractor or any of the Parties comprising the Contractor to disclose any of its proprietary technology or that of its Affiliated Companies which is not acquired in the course of Petroleum Operations under this Agreement. 9.2 Confidentiality a All Petroleum Data information and reports obtained or prepared by the Contractor Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 23 hereunder shall so long as they relate to any part of the Contract Area be treated as confidential and each of the Parties undertakes not to publish reproduce or otherwise deal with such Petroleum Data or to disclose the same or the thereof to any other person without the consent in writing of the other Party such consent not to be unreasonably withheld provided however that subject to Article 9.2 b this Article shall not i prevent disclosure by the Contractor aa to an Affiliated Company or employees of an Affiliated Company; bb cc dd to consultants professional advisers data processing centres laboratories and SubContractors where disclosure is essential to work for Contractor; to a bank or other financial institution where disclosure is essential to work or financing for Contractor or Affiliated Company of Contractor; to the extent required by any applicable law or the regulations of any stock exchange upon which the shares of the Contractor Jr a Affiliated Company are quoted or by governmental order decree regulation or rule or to the extent required under any legal proceeding or any court order binding on Contractor or Affiliated Company of Contractor; ee to bona fide prospective assignees or transferees of an interest hereunder of the Contractor or in connection with merger consolidation or a sale of stock of the Contractor or an Affiliated Company thereof; ff in connection with data trades; gg of data information and reports already known to the Contractor or Affiliated Company prior to the Effective Date; or hh of data information and reports acquired independently from a third party that represents that it has the right to disseminate such data at the time it is acquired by the Contractor or Affiliated Company; ii prevent disclosure pursuant to section

4 of the Act provided however that neither the Minister nor Contractor shall disclose Petroleum Data relating to any area subject to a Licence to a competitor of the Contractor without the prior written consent of the other Party; or Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 24 iii be construed as imposing on any Party any obligation hereunder with respect to any petroleum data information or reports which are without disclosure by such Party generally known to the public. b c Any petroleum data information or reports disclosed by the Contractor pursuant to this Article shall be disclosed on terms which ensure that the data infom1ation or repot1s aforesaid are treated as confidential by the recipient except for disclosures made pursuant to Article 9.2 add and prompt notice of all disclosures with respect to Articles 9.2 a i ee and ff shall be given to the Minister All petroleum data which becomes the sole property of the Minister pursuant to Article 9.1 d shall continue to be treated as confidential by the Contractor for a period of one 1 year from the date on which it became the sole property of the Minister but may be used by the Contractor in connection with data trades with the prior written consent of the Minister such consent not to be unreasonably withheld subject however to Article 9.2 b. d Where a Licence ceases to be in force with respect to any area the Contractor shall deliver to the Minister originals of all petroleum data and other information relating to such area pursuant to regulation 26 of the Regulations provided however that on application duly made to hi;l1 pursuant to regulation 28 Gf the R6ulations the Minister shall permit the Contractor to retain copies of petroleum data and information relating to the Contact Area subject to Article 9.2 b. e Notwithstanding the provisions of Article 9.1 d all the Contractors proprietary technology except technology for which the cost of development has been approved as Recoverable Contract Cost under this Agreement shall remain the property of the Contractor. Petroleum Agreement Govemment of Guyana Repsol Exploraci6n S.A. Page 25 Article 10 Annual Licence Rental Charge The Contractor shall on the Effective Date of the Petroleum Prospecting Licence or the date of grant of any Petroleum Production Licence as the case may be and thereafter so long as the said Licence remains in force on each mmiversary date thereof pay without demand to the Government an annual Licence rental charge in respect of the Contract Area for the entire

Exploration Period and such payments shall apply to those areas remaining after taking into account any relinquishments pursuant to Article 5 as specified below. Payments under this Article 10 shall be paid directly into bank accounts held and controlled by GGMC as notified in writing Initial Period First Renewal Period Second Renewal Period One hundred thousand US Dollars 100000.00US One hundred thousand US Dollars 100000.00US One hundred thousand US Dollars 100000.00US

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Article 11 Cost Recovery and Production Sharing 11.1 Subject to the terms and conditions of this Agreement the Contractor shall bear and pay all Contract Costs incurred in carrying out Petroleum Operations and shall recover Contract Costs only from Cost Petroleum as herein provided. 11.2 All Recoverable Contract Costs incurred by the Contractor shall subject to the terms and conditions of any agreement relating to NonAssociated Gas made pursuant to Article 12 be recovered from the value determined in accordance with Article 13 of a volume of Petroleum hereinafter referred to as Cost Petroleum produced and sold from the Contract Area and limited in any Month to an amount which equals seventyfive percent 75 of the total production from the Contract Area for such Month excluding any Crude Oil and/or Natural Gas used in Petroleum Operations or which is lost. Recoverable Contract Costs means such Contract Costs as the Contractor is permitted to recover as from the date they have been incurred pursuant to the provisions of Annex C. 11.3 To the extent that in any Month Recoverable Contract Costs exceed the value of Cost Petroleum determined in accordance with Article 13 and/or Article 12 the unrecoverable amount shall be carried forward and subject to the limitation stipulated in Article 11.2 shall be recoverable in the immediately succeeding Month and to the extent not then recovered in the subsequent Month or Months. 11.4 The balance of Crude Oil and/or Natural Gas available in any Month after Recoverable Contract Costs have been satisfied to the extent aforesaid hereinafter referred to as Profit Petroleum shall be shared between the Government and the Contractor for each Field in the following proportions Profit Petroleum Production CBOPD Contractors Share Ministers Shares First Next Next Next Above 20 000 20 000 20 000 20 000 80.000 50.0 47.5 45.0 42.5 40.0 50.0 52.5 55.0 57.5 60.0 11.5 The quantity of Cost

Petroleum actually utilized in satisfying the Recoverable Contract Costs may be allocated by the Contractor to production from any Field or Fields. 11.6 Subject to the provision of Article 14 the Profit Petroleum shall be shared between the Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 27 Government and Contractor on a Monthly basis according to their respective entitlements as set out in Article 11.4. 11.7 To the extent that the actual quantities and costs required to determine Cost Petroleum and Profit Petroleum for the Month in question are not known Crude Oil and/or Natural Gas sharing shall be calculated on an interim basis each Month using the following: a unrecovered Recoverable Contract Cost; b estimated current Recoverable Contract Cost by reference to the agreed work programme and budget supplemented by any other relevant documents or information which are accepted by Contractor and Minister as being reliable indicators of the actual position for the Month in question; c estimated production for the Month in question; d Crude Oil and/or Natural Gas price from the previous Month calculated. 11.8 Retroactive adjustments shall be made to the Crude Oil and/or Natural Gas entitlements and shall be agreed with the Minister based on recalculations utilizing actual quantities of Crude Oil and/or Natural Gas produced and saved and recoverable Contract Costs. Any revised entitlements shall be made subject to any applicable lifting agreements as soon as practicable after such elements have definitely been determined. 11.9 The Contractor shall have the right to use in any Petroleum Operations as much of the production as may reasonably be required by such Petroleum Operations therefor and the quantities so used or lost shall be excluded from any calculations of Cost Petroleum and Profit Petroleum entitlement. Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 28 Article 12 Associated and Non Associated Gas. 12.1 Associated Gas a b c d The Associated Gas produced from any Oil Field within the Contract Area shall be with priority used for the purposes related to the operations of production and production enhancement of Oil Fields such as Gas injection Gas Lifting and power generation. Based on the principle of full utilisation of the Associated Gas and with no impediment to normal production of Crude Oil a plan of utilisation of the Associated Gas shall be included in the Development Plan of each Oil Field. If there is any

excess Associated Gas in the Oil Field after utilisation pursuant to Article 12.1 a the Contractor shall carry out a feasibility study regarding the utilisation of such excess Associated Gas of such Oil Field. Such feasibility study if carried out before submission of the Development Plan of an Oil Field shall be included in the Development Plan. In the event that the Contractor conducts a further feasibility study of the utilisation of the excess Associated Gas of such Oil Field such further feasibility study shall be submitted to the GGMC for review and If the excess Associated Gas in any Oil Field is the subject of the discussion, construction of facilities for such utilisation and the production of excess Associated Gas shall be carried out while a Petroleum Production Licence continues in force. If the Contractor believes that excess Associated Gas of an Oil Field has commercial value the Contractor shall be entitled but not required to make further investment to utilise such excess Associated Gas subject to terms at least as attractive as those established for Crude Oil in Article 11 including but not limited to cost recovery for such further investment. If Contractor believes such Associated Gas is potentially commercial under the current Agreement terms for Oil then Article 11 shall apply and the reference made to Barrels of Oil Per Day BOPD in Article 11.4 shall be replaced by Barrels of Oil Equivalents per Day BOESD. If the Contractor believes improved terms are necessary the Parties shall carry out friendly negotiations in a timely manner to find a new solution to the utilisation of the said excess Associated Gas and reach an agreement in writing. If the Contractor does not believe that the Associated Gas has commercial value but the Minister believes the Associated Gas does have commercial value the Government may utilize the Associated Gas provided there is no impediment to normal production of Crude Oil. All handling from the point of separation of Crude Oil shall be at the sole risk and expense of the Government and will not affect the amount of Cost Petroleum and Profit Petroleum due to Contractor. e Expenses incurred by the Contractor in the production and use of the Associated Petroleum Agreement Government of Guyana Repsol Exploracion S.A. Page 29 Gas of an Oil Field as stipulated in Article 12.1 and those incurred in carrying out any feasibility study on the utilisation of the excess Associated Gas shall be charged to the development cost of the Oil Field and shall be cost recoverable. t If the Parties

agree that the excess Associated Gas of an Oil Field has no commercial value then such Gas shall be disposed of by the Contractor provided that there is no impediment to normal production of the Crude Oil in the most economic manner consistent with good international petroleum industry practice.

12.2 Non Associated Gas a When the Contractor in accordance with Article 8.2 has informed the Minister of any Non Associated Gas discovery within the Contract Area that is of potential commercial interest the Contractor shall inform the Minister whether Contractor believes such discovery is potentially commercial under the current Agreement terms. If the Contractor believes that the fiscal terms will have to be revised in order to economically commercialize the NonAssociated Gas discovery the Contractor shall propose revisions to the fiscal terms as the basis for entering into good faith negotiations to reach mutually acceptable terms for developing the Non Associated Natural Gas discovery. The agreement which shall form an annex to this Agreement shall be based on and include the following principles i that For a period of twelve 12 months from the date of the notice delivered to the Minister under Article 8.2 the Contractor and the Minister shall engage in good faith negotiations of such revisions to Article 11 that would be necessary in order to provide the Contractor with project economics terms at least as attractive as those established for Crude Oil in Article 11. The Parties recognize in order to achieve an economically viable development of NonAssociated Natural Gas different fiscal regimes may have to be considered. In the event the Parties cannot agree upon the necessary revisions to Article 11 a sole expert shall be engaged pursuant to Article 26.3. Once the sole expert renders its decision the Contractor shall review the decision and shall notify the Minister as to whether it shall proceed with the development of the NonAssociated Gas discovery under the terms of the sole expert decision. In the event the Contractor elects not to proceed the nonAssociated Gas discovery to the Government. the Contractor shall relinquish ii The time period between the notice of discovery provided for in section 31 1 of the Act and the application for grant of a Petroleum Production Licence shall be extended pursuant to section 31 2 of the Act if necessary to provide reasonable time as agreed to in friendly negotiations between the Parties and in pursuance of section 331 of the Act to conduct an Appraisal

Programme develop a Gas market and design and construct facilities necessary to commercialize the Natural Gas. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 30 b

c d Following the signature of the agreement herein the Contractor shall work out an Appraisal Programme for the discovered Gas Field according to the terms and conditions determined in the said agreement and submit it to the GGMC for review pursuant to Article 6.4. The Contractor shall carry out the Appraisal Programme which was reviewed and agreed upon with GGMC. The expenses incurred in carrying out the said Appraisal Programme by the Contractor shall be charged to the Exploration Costs of the Contract Area and shall be cost recoverable as permitted under the tem1s of Annex C. After completion of the Appraisal Programme of a Gas Field the Contractor shall submit a report on the Appraisal Programme to GGMC for its review and discussion. If the Contractor retains a Gas Field beyond the expiration of the Exploration Period pursuant to Article 12.2 the Contractor shall pay to the Minister at the commencement of each year of the retention period an annual rental to be arrived at through friendly negotiations but which shall be no less than Two Hundred Thousand United States Dollars 200000US.. The holding fee shall be refunded to Contractor on a pro rata daily basis in the event the Contractor relinquishes the Gas Field or declares such Gas discovery to be a commercial discovery prior to the er.d of such year. 12.3

General Ccnditions Applicable to Natural Gas a Subject to the Governments election to take its production in kind and reserving its rights to market its own production the Parties may agree in writing where such agreement shall be considered a part of this Agreement on such terms and conditions to be determined by friendly negotiations but not inconsistent with the bases for the development and full utilization of any Natural Gas Fields within the Contract Area in accordance with the international petroleum practices. Subject to any such written agreement Contractor shall have the sole responsibility for marketing all the available Natural Gas from the Contract Area and for negotiating for the sale thereof on a joint basis at fair market prices and tem1s common to both the Minister and the Contractor in accordance with Third Party Sales principles. The Contractor will pursue markets both within and outside Guyana and seek to market Natural Gas the highest

realization outlets after deduction of transportation costs. The Contractor will seek to recognize Natural Gas potential value at the international value of alternative fuels in the end user market of the buyers.

b The Contractor shall have the right but not the obligation to process Natural Gas for conversion to liquids chemicals or similar gas utilisation projects and Contractor shall have the right to dispose of the liquids or products therefrom. The Contractor shall have the right to process Natural Gas for recovery of the liquids contained therein. Natural Gas Liquids NGLs recovered and sold shall be valued Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 3l based upon the international value of such products as published in Platts and adjusted to reflect the fair market value of such products FOB Guyana. In addition the Contractor shall have the right to liquefy the Natural Gas for sale as LNG andor the right to compress the Natural Gas to accommodate sales as compressed natural gas CNG.

c The Contractor shall have the right to use Natural Gas both Associated Gas and NonAssociated Gas as may be required for Oil Field and Gas Field operations including the right to reinject for pressure maintenance and enhanced recovery without charge fee or royalty. After a gas marketing alternative for Non Associated Gas has been secured and the Natural Gas reserves indicated in the Development Plan have been allocated to a gas marketing option or to one or more Natural Gas sale contracts the satisfaction of the Natural Gas Domestic Supply Obligation shall not condition prevent or impede the performance of Contractors obligations pursuant to any existing Natural Gas sales contract or to materially erode the economic return of a Natural Gas Development provided that Contractor shall not reduce the delivery of the Natural Gas required to fulfil the Natural Gas Domestic Supply Obligation. Nevertheless Contractor shall make reasonable efforts to supply at fair market value prices volumes in excess of Natural Gas as may be reasonably requ3;ed by the Minister provided h2t Contractor shall give preference to performance of any commitments pursuant to any gas sales contract then in effect.

12.4 General Conditions Related to Petroleum Operations a Subject to the approvals of appropriate governmental authorities which approvals shall not be unreasonably withheld the Contractor shall have the right to construct operate and maintain roads drill water wells and to place

and/or construct fixtures and installations necessary to conduct the Petroleum Operations including but not limited to storage tanks trunk pipelines shipment installations pipelines cables or similar lines liquefaction processing and compression located inside or outside the Contract Area as well as construct operate and maintain or lease facilities for the transportation of Crude Oil and Natural Gas from the Contract Area. Any required governmental approvals may be conditional on the use by other producers of the excess capacity if any of those facilities. Where the Minister and Contractor agree that a mutual economic benefit can be achieved by constructing and operating common facilities the Contractor shall use its reasonable efforts to reach agreement with other producers on the construction and operation of such common facilities.

b Subject to negotiations on a reasonable price and available capacity rights the Contractor may have access to and use of any export facility or pipeline or other facilities or infrastructure built by the Government or by any wholly or partially owned Guyana state enterprises on terms no less favourable than those of any other party having access or use of such facility.

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c Subject to negotiatiOns as to a reasonable price and mvnership interest in the facilities the Contractor may have the right to participate in the construction ownership and operation of any of the types of facilities described in subclause 12.4a above that are built by the Government or by any wholly or partially owned state enterprises or by any third pa1iies on terms no less favourable than those of any other party patticipating therein.

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Article 13 Valuation of Crude Oil or Natural Gas

13.1 For the purpose of this Agreement the value of a Barrel of Crude Oil or an Mcf of Natural Gas shall be the average fair market price determined as follows

a as soon as practicable after the end of each Calendar Month in which Crude Oil or Natural Gas has been produced and sold from any Field pursuant to this Agreement an average price in terms of United States dollars per Barrel or Met FOB Delivery Point for each Field shall be determined in respect of production during that Calendar Month. It is understood that production from different Fields may be of differing quality and that separate average prices may accordingly be determined for any Calendar Month in respect of

production from each Field; b the prices aforesaid shall be determined as follows i ii in the event that fifty percent 50 or more of the total volume of sales by the Contractor during the Calendar Month of Crude Oil or Natural Gas of a given quality produced hereunder from a Field were Third Party Sales as hereinafter defined the price of all Crude Oil or Natural Gas from such Field of that quality shall be determined to be the simple arithmetic average price actually realised calculated by dividing the total receipts from all such sales calculated FOB the Delivery Point by the total number of Barrels of Crude Oil or Mcfs of Natural Gas sold from such Field in such sales; in the event that less than fifty percent 50 of the total volume of sales by the Contractor during the Calendar Month of Crude Oil or Natural Gas of a given quality produced hereunder from a Field were Third Party Sales the price of all Crude Oil or Natural Gas from such Field of that quality will be determined by the arithmetic average of aa The simple arithmetic average price actually realised in the Third Party Sales during the Calendar Month of such Crude Oil produced hereunder if any calculated by dividing the total receipts from all such sales calculated FOB at the Delivery Point by the total number of barrels of Crude Oil sold in such sales from such Field; and bb The simple arithmetic average price per barrel at which one or more crude oils of similar quality to the Crude Oil are being sold such price being determined by calculating the average for the Month in which production takes place of the mean of the high and low FOB price or prices for each day of those crude oils as quoted in Platts Crude Oil Market Wire daily publication. In the event that Platts ceases to be published or is not published for a period of thirty 30 consecutive days then the Parties shall agree on an appropriate Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 34 alternative publication. In determining the final price account shall be taken of any differences between the Crude Oil and the crude oils quoted in Platts for quality API gravity sulphur pour point product yield as well as differences in quantity delivery time payment and other contract terms to the extent known. Allowance will also be made to take account of the market area into which the Crude Oil is sold should it be different from the area used for Platts. The selected crude oils will be agreed between Contractor and the Minister in advance for each Calendar Year and in making the selection

preference will be given to crude oils of similar quality to Crude Oil from the relevant Field. The arithmetic average aforesaid will be determined by percentage volume of total sales of Crude Oil by Contractor that are and that are not as the case may be Third Party Sales during the Calendar Month in question. cc n the ... of Natural Gas the Contractor and the Minister shall agree on a methodology for valuation of Natural Gas under this Article 13 .1 b ii which represents the fair market value of such Natural Gas FOB Guyana taking into account composition of the Natural Gas. This methodology will be reviewed annually and modified if necessary. iii all such prices will be adjusted to FOB Delivery Point. iv for the purposes of this Article Third Party Sales of Crude Oil or Natural Gas made by the Contractor shall include any Third Party Sales made by the Contractor or an Affiliated Company of Contractor on the Ministers behalf pursuant to Article 14 but shall exclude aa sales whether direct or indirect through brokers or otherwise of any seller to any Affiliated Company of such seller unless at demonstrably arms length price for example where an Affiliate Company of Contractor buys and then resells to a third party at an armslength price which is disclosed to the Minister; bb Crude Oil or Natural Gas exchanges barter deals or restricted or distress transactions or any Crude Oil or Natural Gas transaction which is motivated in whole or in part by considerations other than the usual economic incentives for commercial arms length crude oil or natural gas sales; and Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A.

Page 35 cc Government to government sales. 13.2 Contractor shall be responsible for determining the relevant prices in accordance with this Article. The calculation basis of calculation and the price arrived at shall be supplied to the Minister and shall be subjected to agreement by the Minister before it is finally determined . Pending final determination the last established average Crude Oil or Natural Gas price shall be used. 13.3 During the first Calendar Year of production from the Contract Area the Contractor and the Minister will meet in order to establish a provisional selection of the crude oils and an appropriate mechanism for the purposes of giving effect to Article 13.1 b ii above. This selection will be reviewed annually and modified if necessary. 13.4 In the event of any difference or dispute between the Contractor and the Minister concerning selection of the crude oils

or natural gas the calculation or the basis of calculation of the prices and the prices arrived at or generally about the manner in which the prices are determined according to the provisions of this Article the matter or matters in issue shall finally be resolved by a sole expert appointed pursuant to Article 26.3.

13.5 For the purposes of this Article in determining the quality of a Crude Oil regard shall be given to: all relevant characteristics including but not limited to gravity sulphur and maximum pour point and product yield. In the case of Natural Gas quality of the Natural Gas shall be determined based on its composition.

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Article 14 Disposal of Production

14.1 Each of the Parties shall have the right to take in kind at the Delivery Point and separately dispose of its share of the total quantities of production available under this Agreement. The Contractor shall have the right to use as much production as may be needed in any Petroleum Operations within the Contract Area and also within the transportation and terminal system. In the event of third party usage of the transportation terminal systems the quantities so used or lost outside the Contract Area shall be proportionate to aggregate use of that transportation and terminal system. All quantities so used or lost shall be excluded from any calculations of entitlement pursuant to Article 11. The quantity of production to which the Government is entitled pursuant to Article 11 shall be measured and delivered to the Government at the Delivery Point and the Government shall be responsible for all costs and risks associated with the Government's Lifting Entitlement from and after the Delivery Point.

14.2 Within twelve (12) months after the Minister's approval of a Development Plan or within a later period as may be agreed between the Parties but in any event no longer than three (3) months before the first scheduled lifting of Crude Oil the Contractor shall propose to the Minister off-taking procedures to govern the method whereby the Parties will nominate and lift their respective shares of Crude Oil. The details of such procedures shall be discussed and agreed upon between Minister and Contractor. The major principles of such procedures shall include the following:

14.3 a Lifting shall be carried out so as to avoid interference with Petroleum Operations.

b c In the event that any Party shall find itself unable for any reason to lift such quantities of Crude Oil as are to be lifted in accordance with procedures it shall forthwith

notify the other Parties to that effect. Such procedures shall include such deterrents as the Parties may agree to prevent a Party from delaying the lifting of any quantities of Crude Oil not so lifted to a later period. In the absence of any agreement to the contrary between the Parties the Contractor and the Minister shall share in each type of grade of Crude Oil in proportion to their respective Lifting Entitlement.

14.3 The Contractor shall if requested by the Minister use reasonable efforts to market abroad on competitive terms all or part of the Ministers Lifting Entitlement subject to payment by Minister of costs normally borne by a seller in such transactions and on other terms to be agreed including an agreed marketing fee in respect thereof. The Minister shall provide the Contractor with at least six 6 months notice before changing between receiving payments in kind as provided under Article 14.1 and seeking the Contractor to market the Ministers Lifting Entitlement under this Article.

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14.4 Subject to the provisions of Article 17 hereof the Contractor shall have the right to export at the export point chosen for this purpose all Petroleum to which it is entitled under this Agreement free of any duty tax or other financial impost and to receive and retain abroad all proceeds from the sale of such Petroleum.

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Article 15 Taxation and Royalty

15.1 Subject to Article 32. and except as provided in Article 15.2 15.8 and except as otherwise set forth in this Article 15.1 no tax valueadded tax excise tax duty fee charge or other impost shall be levied at the date hereof or from time to time thereafter on the Contractor or Affiliated Companies in respect of income derived from Petroleum Operations or in respect of any property held transactions undertaken or activities performed for any purpose authorised or contemplated hereunder other than a b c subject to the provisions of Article 21 import duties at the rates specified from time to time in the Customs Act Cap. 8201; taxes duties fees or other imposts for income derived from specific services performed by the Contractor for the public or commercial enterprises and which is unrelated to income derived from Petroleum Operations under this Agreement; rent due to Government in respect of any land rights granted or assigned to the Contractor; d annual licence rental charge it cnder Article 10; e f subject to Article 15.7 local

government rates or taxes being rates or taxes not calculated by reference to income under laws of general application and which are nondiscriminatory are commercially reasonable and do not result in a rate or tax to Contractor in excess of those generally applicable in Guyana; i stamp duties ii registration fees iii licence fees and iv any other similar duty fee or other impost of a minor nature provided the abovereferenced categories are imposed under laws of general application. 15.2 Except as provided in this Article 15 Contractor Affiliated Companies SubContractors and individuals who are expatriates shall be subject to the income tax laws of Guyana including the Income Tax Act of Guyana Cap. 81:01 and the Corporation Tax Act of Guyana Cap. 81:03 and shall separately comply with the requirements of those laws in particular with respect to filing returns assessment of tax and keeping and showing of books and records. 15.3 The taxable income of the Contractor arising in each year of assessment under this Agreement for purposes of the income tax laws of Guyana including the Income Tax Act and the Corporation Tax Act referred to in Article 15.2 shall include the amounts of Contractor's income tax and corporation tax paid pursuant to Article 15.4.

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15.4 The Minister hereby agrees a b that a sum equivalent to the tax assessed pursuant to Article 15.2 and 15.3 will be paid by the Minister to the Commissioner General Guyana Revenue Authority on behalf of the Contractor and that the amount of such sum will be considered income of the Contractor; and that the appropriate portion of the Government's share of Profit Petroleum delivered in accordance with the provisions of this Agreement shall be accepted by the Minister as payment in full by the Contractor of Contractor's share of each of the following levies whatsoever the applicable rate of such levies may be which the Minister shall then pay on behalf of the Contractor under Article 15.4 a to the Commissioner General Guyana Revenue Authority i the share of royalty payable by Contractor pursuant to Article 15.6; ii the Contractor's share of the income taxes imposed by the laws of Guyana including but not limited to income tax imposed by the Income Tax Act and corporation tax imposed by the Corporation Tax Act and payable at the date hereof or from time to time thereafter and any other levy or charge on its profits which may become payable from time

to time under my laws acts statutes regulations or orders by the Government; and iii any other similar charge imposed and payable in respect of Petroleum Operations at the date hereof or from time to time hereafter except charges of the type specified in Article 15.1 ab. 15.5 The Contractor shall provide the Minister with the Contractors income tax returns to be submitted by the Minister to the Commissioner General Guyana Revenue Authority so the Minister can pay income tax on behalf of the Contractor as provided under Article 15.4 a. On such returns the Minister shall note that he is paying the income taxes on behalf of the Contractor so that the Commissioner General Guyana Revenue Authority can properly prepare the receipts required under this Article 15 .5. Within one hundred and eighty 180 days following the end of each year of assessment the Minister shall furnish to Contractor proper tax certificates in Contractors name from the Commissioner General Guyana Revenue Authority evidencing the payment of the Contractors income tax under the Income Tax Act and corporation tax under the Corporation Tax Act. Such certificates shall state the amount of tax paid individually on behalf of Contractor or parties comprising the Contractor and other particulars customary for such certificates. 15.6 The Governments share of Profit Petroleum specified in Article 11 includes royalty payable by the Contractor at the rate of one percent 1 of Crude Oil produced and sold and delivery to the Minister pursuant to Article 14 of his share of Profit Petroleum equivalent to royalty shall constitute payment of such royalty in kind. Within one hundred and eighty 180 days following the end of each year of assessment receipts evidencing Petroleum Agreement Government of Guyana Repsol Exploracion S.A. Page 40 payment of Contractors royalty shall be furnished by the Minister to the Contractor stating the amount and other particulars customary for such receipts. 15.7 Subject to the conditions of section 49 of the Act the Minister may remit in whole or in part or defer payment of any royalties payable by Contractor. 15.8 Nothing in this Agreement shall be construed to place an obligation on the Government to file a tax return declaring its share of production or profit share or to regard such profit share as income within the meaning of section 5 of the Income Tax Act Cap 81 01 or section 4 of the Corporation Tax Act Cap 8103 15.9 The Minister hereby agrees that the Contractor shall be exempted from the Property Tax Act pursuant to section

51 of the Act and any other act which amends or replaces in part or in whole the Property Tax Act

15.10 Notwithstanding any provision to the contrary in this Article Contractor Affiliated Companies or NonResident SubContractors shall be exempted from VAT during the Exploration period on services rendered.

15.11 Notwithstanding any provision to the contrary in this Article the Government warrants and agrees with the Contractor that it will procure from the Guyana Revenue Authority GRA the granting of assurances in respect to the Value Added Tax Act for i The contractor and subcontractors of the company to be registered in accordance with the relevant sections of the Value Added Tax Act; and Upon the submission and filing of the appropriate Value Added Tax Return forms within the prescribed timeframe Contractor and subcontractors shall have the right to obtain VAT refunds according to applicable Value Added Tax Regulations.

15.12 The Minister agrees that for the duration of the Exploration Period and for any area within the Contract Area where exploration activity is in progress the provisions of section 1 Ob of the Corporation Tax Act Cap 8103 including any successor provisions to section 1 Ob of the Corporation Tax Act Cap 81 03 shall not apply to the Contractor with respect to any payments made to any Affiliated Companies or SubContractors. Notwithstanding any provision to the contrary in this Article Affiliated Companies or NonResident SubContractors shall not be subject to the provisions of the Income Tax Act of Guyana Cap. 81.01 and the Corporation Tax Act of Guyana Cap 81 03 during the Exploration Period on income earned in Guyana for any given tax year if the Affiliated Company or NonResident SubContractor has conducted business in Guyana for one hundred eighty three 183 days or Jess on a cumulative basis in the tax year of assessment.

15.13 There shall be no tax duty fee withholding charge or other impost applicable on interest payments dividends deemed dividends transfer of profits or deemed remittance of profits from Contractors Affiliated Companies or NonResident SubContractors branch in Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 41 Guyana to its foreign or head office or to Affiliated Companies.

15.14 The Minister agrees that for the duration of the Exploration Period and for any area within the Contract Area where exploration activity is in progress the provisions of section 18h of the Income Tax Act Cap 81 01

including any successor provisions to section 18h of the Income Tax Act Cap 81:01 shall not apply to each party comprising the Contractor with respect to headoffice expenses paid to any Affiliated Companies.

15.15 The Expatriate Employee shall be liable to pay personal income tax in Guyana on income earned in Guyana. Guyana represented herein by the Minister shall cause the proper authorities to issue appropriate tax certificates to Expatriate Employees when required.

i ii If an Expatriate Employee is liable to pay income tax in Guyana on income earned in Guyana such Expatriate Employee shall pay such income tax at a rate equal to the current income tax rate of Guyana; Notwithstanding any provision to the contrary in this Article Expatriate Employees shall not be subject to the provisions of the Income Tax Act of Guyana Cap. 81:01 and shall not be liable for personal income tax in Guyana on income earned in Guyana for any given tax year if the expatriate is physically present in Guyana for one hundred eighty three (183) days or less on a cumulative basis in the tax year of assessment.

15.16 An Order shall be made giving effect to the provisions of this Article in statutory form and language as specified in section 51 of the Act.

Petroleum Agreement
Government of Guyana Repsol Exploración S.A. Page 42 Article 16 Contracts and Assignments

16.1 The relevant party comprising the Contractor or the Operator shall upon request provide to the Minister copies of a b c contracts with respect to the sale or disposal of Petroleum including mvments issued thereunder; any deed of assignment of an interest of any party comprising the Contractor under this Agreement pursuant to Article 25; any instrument by which the Contractor pledges mortgages encumbers or hypothecates its interest under this Agreement or the Contract Area.

16.2 Assignments of any kind between one party comprising Contractor and its Affiliated Company as well as any assignment of any kind made in accordance with this Agreement including one to an unrelated party shall be exempted from any duties or taxes including Capital Gain Taxes payable in such respect and shall be subject to a fee payable to GGMC upon approval of the assignment for the amount of one hundred thousand United States Dollars; 100,000 US\$. Petroleum Agreement
Government of Guyana Repsol Exploración S.A. Page 43 Article 17 Domestic Supply Obligation

17.1 Terms for Crude Oil. a b If the Crude Oil requirements of the domestic market in Guyana the

Crude Oil Domestic Demand exceed the Ministers total entitlement from all Crude Oil production in Guyana then the Contractor shall be obliged together with any third parties which produce Crude Oil in Guyana to supply and sell a volume of Crude Oil to be used for such Crude Oil requirements in Guyana calculated on the basis of the ratio which the Contractors Lifting Entitlement to Crude Oil bears to the sum of Contractors Lifting entitlement plus the total entitlement of all other producers in Guyana subject to Article 17.lc. The volume of Crude Oil which the Contractor shall be required to sell under this Article shall not exceed the Contractors share of Profit Petroleum. The Minister shall give the Contractor notice on or prior to April 1 of the year preceding the Calendar Year in which the Government will have the said requirement and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. For the purpose of this Agreement Crude Oil Domestic Demand shall consist of those quantities of Crude Oil i used to produce refined products or petrochemicals in Guyana for end use by business and residential consumers in Guyana or ii used to produce power in Guyana for end use by business and residential customers in Guyana the amounts for which shall be based upon independent verifiable government statistics. Crude Oil refined products petrochemicals or fuel for power generation that are exported from Guyana shall not be considered part of Crude Oil Domestic Demand. The Contractor shall in any Year have a right to supply out of Contractors Lifting Entitlement the proportion of the Crude Oil requirements of Guyana that the quantity produced from the Contract Area bears to the total production at the time in Guyana to the extent that such requirement is not satisfied from any contract entered into prior to the date of commencement of production from the Contract Area. For the purpose of this paragraph the term the Crude Oil requirements of Guyana means the amount by which in any Year Crude Oil Domestic Demand exceeds the Ministers total entitlement to all Crude Oil produced in Guyana. The Contractor shall give the Minister notice on or prior to April 1 of the Calendar Year preceding the Calendar Year in respect of which Contractor wishes to exercise the aforesaid right and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. Notwithstanding the foregoing the Contractor shall have the right to supply the total amount calculated pursuant to the

foregoing provisions. c The price payable for the sale of Crude Oil pursuant to this Article shall be paid in United States dollars or other currency as may be agreed at a place specified by the Contractor within thirty 30 days of receipt of the Contractors invoice by the Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 44 Minister and shall be determined in accordance with Article 13 failing which Contractor s obligations in respect of the Domestic Supply Obligations of this Article 17 shall be suspended until payment is made good at which time deliveries shall be resumed subject to any alternative commitments that may have been reasonably entered into by Contractor to dispose of the Crude Oil during the period of default in payment. Contractor shall recover any am ount due and unpaid by the Government plus interest at the Agreed Interest Rate from the Governments Lifting Entitlement of Crude Oi l. Any sale of Crude Oil as provided for in Article 17.1 a c shall occur at the Delivery Point or such other point as the Minister and the Contractor may mutually agree. All tenns and conditions for the sale of Crude Oil pursuant to this Article shall be specified in a contract of sale entered into between the Minister and Contractor. d e

17.2 Terms tor Natural Gas. a If the Natural Gas requirements of the domestic market in Guyana the Natural Gas Domestic Demand exceed the Ministers total entitlement from all Natural J. production in Guyana then the Ccntractor shall be obliged tof;eter .i.l. J.ny third parties which produce Natural Gas in Guyana to supply and sell a volume of Natural Gas to be used for such NatlLal Gas Domestic Demand in Guyana calculated on the basis of the ratio which the Contractors Lifting Entitlement to Natural Gas bears to the sum of Contractors Lifting entitlement plus the total entitlement of all other producers in Guyana subject to Article 17.2c. The volume ofNatural Gas which the Contractor shall be required to sell under this Article shall not exceed the Contractors share of Profit Petroleum. The Minister shall give the Contractor notice on or prior to April 1 of the year preceding the Calendar Year in which the Government will have the said requirement and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. For the purpose of this Agreement Natural Gas Domestic Demand shall consist of those quantities of Natural Gas used for domestic residential commercial and industrial consumption including fuel used for domestic

power generation determined by the Minister before the submission of a Development Plan including a forecast of the reasonable variation in demand in the future. Natural Gas liquefied or compressed in Guyana for export or used as feedstock for petrochemical exports such as methanol and fertilizer shall not be considered part of Natural Gas Domestic Demand. Any sales of Natural Gas to the domestic market shall be priced at the netback price of such Natural Gas in the production Field which shall be calculated as the market destination price where the Natural Gas would be sold minus transport marketing processing compression liquefaction and any other fee or tariff paid to Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 45 take the gas from the Field to the destined market. In the event of a failure to reach agreement on the price volume and/or terms of sale either Party may submit the dispute for sole expert determination pursuant to Article 26.3 . The Contractor shall in any Year have a right to supply out of Contractors Lifting Entitlement the proportion of the Natural Gas requirements of Guyana that the quantity produced from the Contract Area bears to the total production at the time in Guyana to the extent that such requirement is not satisfied from any contract entered into prior to the date of commencement of production from the Contract Area. For the purpose of this paragraph the term the Natural Gas requirements of Guyana means the amount by which in any Year Domestic Demand exceeds the Ministers total entitlement to all Natural Gas produced in Guyana. The Contractor shall give the Minister notice on or prior to April 1 of the Calendar Year preceding the Calendar Year in respect of which Contractor wishes to exercise the aforesaid right and the term of the supply shall be on a Calendar Year basis unless otherwise agreed. Notwithstanding the foregoing the Contractor shall have the right to supply the total amount calculated pursuant to the foregoing provisions. The price payable for the sale of Natural Gas pursuant to this Article shall be paid in United States dollars or other currency as may be agreed at a place specified by the Contractor within thirty 30 days of receipt of the Contractors invoice by the Minister and shall be determined in accordance with Article 17.2a failing which Contractor's obligations in respect of the Domestic Supply Obligations of this Article 17 shall be suspended until payment is made good at

which time deliveries shall be resumed subject to any alternative commitments that may have been reasonably entered into by Contractor to dispose of the Natural Gas during the period of default in payment. Contractor shall recover any amount due and unpaid by the Governments Lifting Entitlement of Natural Gas. the Agreed Interest Rate from the Government plus interest at Any sale of Natural Gas as provided for in Article 17.2a c shall occur at the Delivery Point or such other point as the Minister and the Contractor may mutually agree. All terms and conditions for the sale of Natural Gas pursuant to this Article shall be specified in a contract of sale entered into between the Minister and Contractor.

b c d e Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 46 Article 18 Guyana Resources 1 8.1 In the conduct of Petroleum Operations pursuant to this Agreement the Contractor shall require that the Operator give preference to a b the purchase of Guyanese goods and materials provided that such goods and materials are available on a timely basis of the quality and in the quantity required by Operator at competitive prices; and the employment of Guyanese SubContractors in so far as they are commercially competitive and satisfy the Operators financial and technical requirements and meet the requirements of Article 18.1 a. 18.2 The Operator shall establish appropriate tender procedures for the acquisition of goods. materials .nd services which shall ensure that Guyanese suppliers and SubContractors are given adequate opportunity to compete for the supply of goods and services. 18.3 Within ninety 90 days after the end of each Calendar Year the Operator shall provide the Minister with a report outlining its achievements Iri utilising Guyanese resources durmg that Calendar Year.

Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 47 Article 19 Employment and Training 19.1 Subject to the requirements of any Jaw relating to immigration Govenunent shall provide the necessary work permits and other approvals required by the Contractor for employment of Expatriate Employees in Guyana for the purpose of Petroleum Operations. 19.2 Without prejudice to the right of the Contractor to select employees and determine the number thereof in the conduct of Petroleum Operations the Operator shall employ and SubContractors shall employ Guyanese citizens having appropriate qualifications and experience

whenever and wherever possible . 19.3 During each year of the term of the Petroleum Prospecting License or any renewal thereafter the Contractor shall pay to GGMC the amounts of Initial Period First Renewal Period Second Renewal Period Thirty thousand United States Dollars 30000US. Thirty thousand United States Dollars 30000US. Thirty thousand United States Dollars 30000US. Payments under this Article 19.3 shall be paid directly into bank accounts held and controlled by the GGMC as noted in writing. The purposes of these payments are noted hereunder; a b c d to provide Guyanese personnel nominated by GGMC with on-the-job training in Contractor's operations in Guyana and overseas and/or practical training at institutions abroad particularly in the areas of logistical planning for undertaking Petroleum Operations seismic acquisition and interpretation economic analysis petroleum accounting and contract administration; to send qualified Guyanese personnel selected by GGMC on courses at universities colleges or other training institutions selected by GGMC; to send Guyanese personnel selected by GGMC to conferences and seminars related to the petroleum industry; to purchase for GGMC advanced technical books professional publications scientific instruments or other equipment required by GGMC. 19.4 During each year of the term of the Petroleum Prospecting License or any renewal thereafter the Contractor in accordance with its internal applicable policy shall fully cover the cost of air travel tuition and registration fees suitable lodging and stipend for daily living and upkeep to provide training to one suitably qualified Guyanese selected by the GGMC to pursue a Masters Degree in Oil and Gas Engineering programme in the Centro Superior de Formacion in Madrid Spain. Candidates for this Master Degree must be university qualified and must pass the registration requirements. In the event that the Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 48 capacity of Centro Superior de Formacion is full in any given year then the Contractor will either propose an alternate university in Europe or United States to provide the training or will provide to have simultaneous training for more than one candidate in a different year. Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 49 Article 20 Rights to Assets and Insurance 20.1 Rights to Assets a b The Contractor shall have the right to use free of charge assets previously

installed by the Contractor in relinquished areas which are required for the Petroleum Operations in the remaining portion of the Contract Area provided that in the event of relicensing of the relinquished area such licence shall exclude the aforesaid assets. Subject to Article 20.1 c upon expiry or termination of this Agreement in accordance with the provisions hereof the Contractor shall upon notification by GGMC pursuant to Article 20.1 di i ii deliver to the Minister free of charge in good order and condition fair wear and tear excepted all installations works pipelines. pumps casings tubings engines and other equipment machinery or assets of a fixed or permanent nature constructed used or employed by the Contractor or the Operator in the Contract Area; deliver to the Minister free of charge any fixed assets relating to Petroleum Operations outside the Contract Area and movable assets owned by the Contractor or Operator and used or employed in connection with Petroleum Operations and located in Guyana for which costs have been fully recovered in accordance with Annex C herein; where costs have not been fully recovered the provisions of Article 20.1 b iii shall apply; iii sell to the Minister any other assets owned by the Contractor or Operator and used or employed by the Contractor or Operator in the Contract Area or elsewhere in Guyana in connection with Petroleum Operations at a price equivalent to the unrecovered cost of the assets. c The above provisions of Article 20.1 b shall not apply to i assets which are still required by the Contractor or Operator for use in respect of an area in Guyana subject to another petroleum agreement at the time of expiry or termination of this Agreement; ii equipment and other assets rented or leased by Contractor in Guyana; iii equipment and other assets rented or leased by Contractor and imported in Guyana for use in Petroleum Operations and subsequently exported therefrom; iv equipment and any other assets owned or leased by a SubContractor; Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 50 v household goods and vehicles which are the personal property of employees of the Contractor and SubContractor; vi equipment and assets otherwise not owned by Contractor or Operator. d The Contractor shall notify the Minister of all assets acquired as provided in section 4 of Annex C to this Agreement. i ii At least six 6 Calendar Months before expiry of the term of this three 3 Calendar Months following notice of

Agreement within termination of this Agreement or promptly following cancellation of all Licences GGMC shall notify the Contractor of the assets to be delivered or sold to the Government. Subject to the terms and the provisions of this Article the Contractor shall not within one 1 year of the date upon which it estimates that termination of this Agreement will occur remove from the Contract Area or sell any assets of a fixed or permanent nature which might be deliverable to the Government under this Article without the consent of the Minister such consent not to be unreasonably withheld.

iii Abandonment Programme and Budget aa Within sixty 60 days after the expiration of the term of this Agreement or the sooner relinquishment of some or all of the Contract Area the Contractor shall carry out to the Ministers satisfaction an abandonment programme agreed with the Minister for all installations and pipelines provided by Contractor under this Agreement that the Minister elects not to have delivered up to him in accordance with Article 20.1 b. With respect to the area being relinquished and/or facilities thereon such abandonment programme shall comply with and be limited to internationally accepted standards prevailing at the time of abandonment. bb Concurrent with the submission of a Development Plan as provided in Article 8.4 the Contractor shall submit for the Ministers approval a proposed abandonment programme and budget covering all such installations and pipelines provided by Contractor under this Agreement. The abandonment programme and budget may be revised from time to time with the agreement of the Minister to account for any changes in the Development Plan. cc The Minister shall act without unreasonable delay in reaching a decision on the Contractor's proposal under Article 20.1 d. ii bb and may approve or modify or impose conditions thereon . Before Petroleum Agreement Government of Guyana Repsol Exploración S.A.

Page 51 modifying or imposing conditions on the proposal the Minister shall notify the Contractor of the proposed modification or conditions and give the Contractor the opportunity to make written representations within sixty 60 days thereafter about the proposed modifications or conditions. After taking into consideration such representations the Minister and the Contractor shall make their best efforts to mutually agree on the proposed modifications or conditions of the abandonment programme and budget In the event that the Minister and Contractor cannot mutually agree on the

proposed abandonment programme and budget either Party may by written notice to the other Party propose that the dispute be referred for determination in accordance with the provisions of Article 26. dd In the event that the Contractor does not present a timely proposal to the Minister under Article 20.1 diiibb the Minister after giving thirty 30 days notice to the Contractor of his intention to do so may prepare an abandonment programme and budget for the Contract Area if the Contractor does not present a proposal by the end of the thirty 30 day period. When the Minister has so prepared the abandonment programme and budget it shall have the same effect as i it hri hP.en submitted by the Contractor 1.nr1 approved by the Minister. ee Contractor shall have the right on an annual basis to propose a revised abandonment programme and budget Such proposal shall be subject to the approval process in Article 20.1 diii cc . Any revisions to the abandonment programme and budget shall result in a revision to the guarantee referred to in Article 20.1 diiihh. ff All funds required to carry out the approved abandonn1ent programme shall be made available by Contractor when the costs for abandonment are incurred. gg All costs included in the approved abandonment progra11ille and budget shall be recoverable as operating costs on a unit of production basis commencing during the abandonment programme and budget is approved. The amount to be recovered in a respective period shall be calculated by dividing the approved abandonment budget by the estimated ultimate recoverable reserves which may be revised from time to time based upon the actual performance of the Fields and multiplying the result by the units produced in the period . the period when hh Contractor shall deliver to the Minister within seven 7 days after the date the abandonment programme and budget are approved an Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 52 undertaking from Contractors immediate parent company stating that such parent company shall ensure provision of financial and technical resources necessary to conduct the approved abandonment programme. The amount of the financial unde11aking shall be equal to the amount recovered under Article 20.1 diiiigg less any amounts spent under the approved abandonment programme. ii Notwithstanding the provisions of Article 20.1 diiiiff in the event the Minister elects to have all or a portion of the facilities delivered up to him in

accordance with Article 20.1 b the Contractor shall pay the Minister at the time of transfer the amounts stipulated in the latest approved abandonment budget for the transferred facilities. Upon transfer and receipt of the funds the Minister shall assume all responsibilities for the transferred facilities and their abandonment and shall hold the Contractor harmless against any liability with respect thereto accruing after the date of such transfer to the Minister. iv Subject to Article 20.1 c in the event that the Government acquires any assets pursuant to this Article the Government shall assume all liabilities with respect to such assets arising from and after the date of acquisition and shall not direct the Contractor to remove or abandon any such assets pursuant to regulation 9 la of the Regulations. The Government shall indemnify and hold Contractor harmless for any and all costs and claims which may arise from the use or abandonment of any asset from and after the date of acquisition by the Government. v Assets not acquired by the Government pursuant to this Article may be sold or otherwise freely disposed of by the Contractor subject to Article 21.2 and the Regulations.

20.2 Insurance a The Contractor shall effect at all times during the term of this Agreement insurance as required by applicable laws rules and regulations and of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practice appropriate for Petroleum Operations in progress in respect of but not limited to i loss or damage to all assets used in Petroleum Operations; ii iii pollution caused in the course of Petroleum Operations for which the Contractor or the Operator may be held responsible; loss or damage to property or bodily injury suffered by any third party in the course of Petroleum Operations for which the Contractor may be liable Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 53 to provide an indemnity pursuant to Article 2.4; iv the Contractors and/or Operators liability to its employees engaged in Petroleum Operations. To the extent permitted by applicable laws rules and regulations such insurance may be provided through Contractors affiliate insurance company. b c Subject to the Minister's approval which shall not be unreasonably withheld the Contractor notwithstanding the provisions of Article 20.2a shall have the right to self-insure all or part of the aforementioned insurances in Article 20.2a. The Contractor shall require the Operator to carry and

to endeavour to have its SubContractors carry insurance of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practices.

Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 54 Article 21 Import Duties

21.1 The Contractor and the SubContractors engaged in Petroleum Operations shall be pennitted to import free of duty VAT or all or any other duties taxes levies or imposts all equipment and supplies required for Petroleum Operations including but not limited to drill ships platfom1s vessels geophysical tools communications equipment explosives. radioactive sources vehicles oilfield supplies lubricants consumable items other than foodstuffs or alcoholic beverages or fuel as well as all items listed on Annex D. The aforementioned items including but not limited to the items listed on Annex D shall be deemed approved and certified by the Chief Inspector to be for use solely in carrying out Petroleum Operations. The Contractor shall give prior notification to the Minister of SubContractors engaged in Petroleum Operations. Subject to Article 21.1 and for as long as this Petroleum Agreement remains in force the Contractor and SubContractors engaged in Petroleum Operations hereunder shall be required to pay to the relevant authority excise tax on any fuel imports where such imports have been certified by the Chief Inspector to be used solely in carrying out Petroleum Operations in any area within the Contract Area at a rate often percent 10 or the prevailing rate whichever is lesser.

21.2 Subject to Article 20 any of the items imported into Guyana may if no longer required for Petroleum Operations herender be freely exported at any time by the importing party without the payment of any export duty or impost; provided however that on the sale or transfer by the importer of any such item to any person in Guyana other than the Government import duty shall be payable by the impmier on the value thereof at the date of such sale or transfer as determined by the Customs and Excise Department in accordance with their applicable rules.

21.3 Each Expatriate Employee who have been assigned to work in Guyana for the Operator or its SubContractors shall be pern1itted subject to the limitations and conditions set out in the Customs Act to import into Guyana free of import duty and taxes within six 6 months on first arrival his personal and household effects including one 1 motor vehicle provided however that no property so

imported by the employee shall be sold by him in Guyana except in accordance with Government regulations and upon the payment of the prescribed customs duties. Any importation or replacement of motor vehicles by Expatriate Employees shall be a matter for consultation with the Minister. 21.4 Each Expatriate Employee shall have the right to export from Guyana free of all duties and taxes and at any time all of the items imported under Article 21.3. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 55 Article 22 Foreign Exchange Control 22.1 Each party comprising the Contractor shall during the term of this Agreement have the right a b c d e to retain abroad all foreign exchange obtained from the exp01i sales of Contractors Petroleum and to remit and retain abroad all foreign exchange earned from sales of Petroleum or assets in Guyana; finance Petroleum Operations hereunder to through any combination of equity interaffiliate or third party loans intercompany open accounts or production payments but no payments of principal or interest in respect thereof shall be made from any source in Guyana other than the bank accounts referred to in Article 22.1 c; in any currency to open and maintain bank accounts denominated in Guyanese dollars andor United States dollars in Guyana and freely dispose of the sums deposited therein without any restriction; provided the said accounts are credited only with sums deposited in foreign currency or with the proceeds of the sale of foreign currency oeing credits relating to or derived from retroleum Operations; to pen and maintain bank accounts in any foreign currency outside Guyana .which may be credited without restriction and freely dispose of any sums deposited therein without restriction and without any obligation to convert into Guyana currency any part of the said amounts save that such accounts shall not be credited with the proceeds of the sale of any Guyanese currency without the consent of the Bank of Guyana; to purchase and with the approval of the Bank of Guyana to sell Guyanese currency through the authorized banks without discrimination at the rate of exchange determined by the Bank of Guyana for authorized banks at the time of purchase or sale. 22.2 Expatriate Employees engaged in Petroleum Operations shall be subjected to all Exchange Control Regulations that may be in effect from time to time. Expatriate Employees shall be entitled to remit freely abroad any portion of their salaries paid in Guyana and any investment

income that may be earned on the portion of their salaries paid in Guyana. 22.3 Where any party comprising Contractor Affiliated Company or SubContractor by notice in writing to the Commissioner General Guyana Revenue Authority has guaranteed the full and proper discharge by an Expatriate Employee engaged in Petroleum Operations of his liability to income tax under the laws of Guyana that Expatriate Employee shall be entitled to receive payment of the whole or any part of his remuneration in the country in which he is nonnally resident. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 56 Article 23 Accounting and Audits 23.1 The Contractor shall be responsible for maintaining accounting records relating to Petroleum Operations under this Agreement in accordance with the Accounting Procedures set out in Annex C hereto . 23.2 The Minister shall have the right to audit the acco unting records of the Contractor in respect of Petroleum Operations in accordance with Accounting Procedure. 23.3 Nothing in this Article shall be construed as limiting the right of Govenunent or any officer of Government pursuant to any statutory power to audit or cause to be audited the books of the Contractor. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 57 Article 24 Force Majeure 24.1 Any nonperformance or delay in performance wholly or in part by any Patiy hereto or any of its obligations under this Agreement or in fulfilling any condition of any Licence granted to such Party or in meeting any requirement of the Act or Regulations and any Licence issued thereunder shall except for the payment of monies due by Government to Contractor or monies due to Govenmment under section 43 4 of the Act unless such failure to pay is prevented by any action of the Govenmment not be a breach of this Agreement the Licence or the Act and Regulations if and to the extent that such nonperfonnance or delay wholly or in part is caused by Force Majeure as defined in this Article. 24.2 In this Article the term Force Majeure shall mean any event beyond the reasonable control of the Party claiming to be affected by such event which has not been brought about at its instance and which has caused such nonperformance or delay in performance and without limitation to the generality of the foregoing includes acts of God natural phenomena or calamities earthquakes floods tsunamis epidemics quarantines fires wars declared or undeclared hostilities invasions

blockades riots strikes insurrection civil disturbances mining of the seas piracy international disputes affecting the extent of the Sont;ct Area and any governmental J.cton or inaction that would prevent performance of an obligation or ability of the Contractor to export Petroleum except as provided in Article 14.5. 24.3 Where any Party is claiming suspension of its obligations on account of Force Majeure such Party shall promptly notify the other Parties in writing of the occurrence thereof giving particulars of the Force Majeure and obligations affected. Each Party shall promptly notify the other Parties as soon as the Force Majeure has been removed or no longer prevents it from carrying out its obligations hereunder. 24.4 Where a Party is prevented from exercising any rights or performing any obligations under this Agreement due to a Force Majeure the Minister hereby agrees pursuant to section 43 3 of the Act subject to the proviso therein that a period of additional time necessary for restoration of damages caused during a Force Majeure delay shall be added to the time allowed under this Agreement for the performance of such obligation and for the performance of any obligation or the exercise of any right dependent thereon and to the term of any Licence issued pursuant to this Agreement. In the event the Parties cannot agree on whether the occurrence of the event in question is considered a force majeure event or if the Minister does not agree an additional time period should be added pursuant to section 433 of the Act then a Party may refer the dispute to Arbitration pursuant to Article 26 to determine the nature of the force majeure event and its influence on the contractual obligations of the Party concerned. The Contractor shall have the option of terminating this Agreement without any further obligation if Force Majeure exceeds one 1 year. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 58 24.5 Without prejudice to the other provisions of this Article the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be adopted in the circumstances. 24.6 The Government shall not invoke Force Majeure due to any order regulation or written directive of the Government which affects the Government's performance of its obligations under this Agreement. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 59 Article 25 Assignment 25 .1 Subject to the regulation 20 of the Regulations any party comprising the

Contractor shall not assign or transfer in whole or in part any of its rights privileges duties or obligations under this Agreement or any Licence issued pursuant to this Agreement to any person firm or corporation without the prior written consent of the Minister. 25.2 The Minister shall give his consent under Article 25.1 where a the assignment or transfer will not adversely affect the performance or obligations under this Agreement; b the assignment is not contrary to the interests of Guyana; or c subject to a above the assignment or transfer is to an approved Affiliated Company. 25.3 In the event that the Minister does not give his consent or does not refuse a request for an assignment or transfer by any party comprising Contractor within sixty 60 days of receipt of such request; his consent shall be deemed to have been given by the Minister. 25.4 Any assignment made pursuant to this Article shall bind the assignee to all the terms and conditions hereof and the terms and conditions of any Licence issued pursuant to this Agreement unless otherwise agreed and as a condition to any assignment the assignee shall provide an unconditional undertaking to the Minister to assume all obligations by any party comprising the Contractor under this Agreement or any Licence issued pursuant to this Agreement. 25.5 An application for assignment or transfer of a Licence shall be made in accordance with Form E of the schedule specified in the Regulations. The applicant shall submit such additional information relating to the intended assignee which the Minister may reasonably require to enable him to dispose of the application.

Petroleum Agreement
Government of Guyana Repsol Exploracion S.A. Page 60 Article 26 Sole Expert Determination and Arbitration

26.1 The Parties shall make reasonable efforts to resolve amicably all Disputes by negotiation. A notice of the existence of a Dispute shall be given by a Party to another Party in accordance with Article 33 . In the event that no agreement is reached within sixty 60 days after the date on which a Party notifies the other that a Dispute exists or such longer period as specifically agreed by the Parties any Party shall have the right to have such Dispute determined by arbitration or a sole expert as provided for in this Article 26. 26.2 Any claim demand cause of action dispute or controversy arising out of or in connection with this Agreement including any question regarding its formation existence validity enforceability performance termination or alleged breach Dispute which

cannot be settled amicably by negotiation shall be resolved by binding arbitration or by a sole expert pursuant to Article 26.3 Article 26.4 or Article 26.6 whichever applies. 26.3 Any matter required to be referred to a sole expert for determination under this Agreement including under Articles 5.4 8.5 12.2a 13.4 and any other matter which the Parties expressly agree in writing to refer to a sole expert shall be referred to a sole expert for determination by a Party giving notice to such effect pursuant to Article 33. The sole expert shall be appointed by agreement between the Parties and in the event the Parties fail to agree on the sole expert within thirty 30 days after receipt of the written notice from any Party proposing the appointment of a sole expert such expert shall be appointed by the International Centre for Expertise of the International Chamber of Commerce ICC. A sole expert shall be an independent and impartial person of international standing with relevant qualifications and experience. The expert once appointed shall have no ex parte communications with any of the parties to the Dispute concerning the expert determination or the underlying Dispute. The Parties shall cooperate fully in the expeditious conduct of such expert determination and to provide the expert with access to all facilities books records documents information and personnel necessary to make a fully informed decision in an expeditious manner. The sole expert shall act as an expert and not as an arbitrator or mediator and shall endeavour to resolve the Dispute within thirty 30 days of his appointment but no later than sixty 60 days after his appointment. The sole expert shall decide the manner in which any determination is made but in any event shall accept oral and/or written submissions and arguments from the Parties. All correspondence documentation and information provided by a Party to the sole expert shall be copied to the other Party and any oral submissions to the sole expert shall be made in the presence of all Parties and each Party shall have a right of response. The decision of the sole expert on matters referred to him shall be final and binding on the Parties. The Parties shall refer any Dispute arising out of or relating to such expert decision including enforcement thereof to arbitration pursuant to Article 26.4 or Article 26.6 whichever applies. 26.4 Subject to the provisions herein the Parties hereby consent to submit to the International Centre for the Settlement of Investment Disputes ICSID any Dispute relating to or

arising Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 61 out of this Agreement to arbitration pursuant to the rules of the Convention on the Settlement of Investment Disputes between States and Nationals of Other States hereinafter referred to as the Convention. It is hereby stipulated that the transaction to which this Agreement relates is an investment within the meaning of the Convention. The Government hereby irrevocably waives any claim to immunity for itself its agencies its enterprises and any of its assets with regard to any sole expert determination or arbitration pursuant to this Article 26 and to any proceedings to recognise or to enforce this Article 26 or any proceeding to recognise or enforce a sole expert determination or an arbitral award rendered in an arbitration thereunder. Without prejudice to the generality of the foregoing the waiver of immunity shall include immunity from service of process and immunity from jurisdiction of any competent court or any arbitration tribunal and immunity of any of the Governments its agencies or its enterprises property from execution of any sole expert determination or arbitration award or judgment entered thereon.

26.5 If the Secretary General of ICSID refuses to register a request for arbitration or if a tribunal of arbitrators constituted pursuant to Article 26.4 above determines that a dispute is outside of ICSID's jurisdiction either Party may request arbitration of the dispute before three arbitrators pursuant to the Arbitration Rules of the United Nations Commission on International Trade Law UNCITRAL. The American Arbitration Association shall administer the arbitration under the UNCITRAL Arbitration Rules and shall act as the appointing authority; when the UNCITRAL Arbitration Rules call for an appointing authority.

26.6 The seat of the arbitration proceedings pursuant to this Article 26 shall be Washington DC United States of America however hearings may be held at such other place as the Parties may agree to in writing. The arbitration proceedings shall be conducted in the English language.

26.7 The fees and expenses of a sole expert as well as the charges for the use of ICSID or other facilities shall be borne equally by the Contractor and the Government. Each Party shall bear any other expenses it incurs in connection with expert or conciliation proceedings. In the case of arbitration proceedings the arbitrators shall assess the expenses incurred by the Parties the fees and expenses of the arbitrators the charges for the use of the facilities and any

other costs related to the arbitration and shall decide by whom such costs shall be paid in their award. The arbitral award shall be made and payable in dollars of the United States of America free of any tax or other deduction. The award shall include interest unless the arbitration tribunal determines that it is not appropriate. Interest shall run from the date of any breach or violation of this Agreement. Interest shall continue to run from the date of award until the award is paid in full. Interest shall be calculated at the Agreed Interest Rate. The arbitrators shall render a decision within six 6 months after having been confirmed or such other time as the Parties may agree. 26.8 The decision of a majority of the arbitrators shall be final and binding on all the Parties and judgment on the award may be entered by any court of competent jurisdiction.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 62 Article 27 Applicable Law 27.1 This Agreement shall be governed by interpreted and construed in accordance with the laws of the Republic of Guyana and consistent with such rules of international law as may be applicable or appropriate including the generally accepted customs and usages of the international petroleum industry. 27.2 The parties comprising the Contractor agrees to abide by the laws regulations orders directives and notifications of Guyana which shall also apply to its Affiliated Companies and SubContractors engaged in Petroleum Operations in Guyana.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 63 Article 28 Protection of the Environment 28.1 In accordance with the Environmental Protection Act 1996 the Contractor shall obtain an environmental authorization as required from the Environmental Protection Agency and comply with the provisions of that Environmental Protection Act in relation to any activity of this Agreement that is governed by that Environmental Protection Act. 28.2 The Contractor is precluded from initiating any exploration or development activity on those areas outside of the Contract Area which the Environmental Protection Agency may determine to be sensitive or protected. 28.3 28.4 In furtherance of regulation 6 of the Regulations in the conduct of Petroleum Operations the Contractor shall take necessary and adequate precautions in accordance with good international petroleum industry practice against pollution and for the protection of the environment and the living resources

of the rivers and sea. If the Contractor's failure to comply with the provisions of Article 28.1 results in pollution or damage to the environment, riverine or marine life or otherwise the Contractor shall take all reasonable measures in accordance with good international petroleum industry practice to remedy the failure and the effects thereof and shall where pollution occurs treat or disperse it in an environmentally acceptable manner. The Contractor shall not be obligated to remedy or clean up pollution or environmental damage of any type that existed prior to the commencement of Petroleum Operations by the Contractor or arises as a consequence of preexisting environmental conditions.

28.5 The Contractor shall notify the Minister forthwith in the event of any emergency or accident arising from Petroleum Operations affecting the environment and shall take such action as may be prudent and necessary in accordance with good international petroleum industry practice in such circumstances. 28.6 If the Contractor does not act promptly pursuant to Article 28.4 so as to control or clean up any pollution within a reasonable period specified by the Minister the Minister may after giving the Contractor reasonable notice in the circumstances take any actions which are necessary in accordance with good international petroleum industry practice and the reasonable costs and expenses of such actions shall be borne by the Contractor.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 64 Article 29 Termination and Cancellation 29.1 29.2 29.3

This Agreement shall be deemed to have been terminated if the Petroleum Prospecting Licence granted to the Contractor pursuant to Article 3 and every Petroleum Production Licence granted to the Contractor under Article 8 has either expired or under and in accordance with the Act and any relevant provision of this Agreement been surrendered by the Contractor or lawfully cancelled by the Minister pursuant to section 42 of the Act but save as aforesaid shall continue in full force and effect so long as the Contractor continues to hold any of the said Licences. Should any issue arise between the Parties as to whether the Contractor is in default and such issue cannot be amicably settled by consultation between the Parties and a dispute thereon is referred for resolution pursuant to Article 26 this Agreement and the said Licences shall continue in force pending resolution of such dispute. Pursuant to section 42 of the Act the Minister shall not cancel a Licence on the basis of

default unless the Minister has by notice served on the licensee given not less than thirty 30 days notice of such intention and the basis of default. In the notice the Minister shall specify a reasonable date not less than sixty 60 Business Days before which the licensee must submit a written response or remedy the default.

29.4 On termination of this Agreement or cancellation of any Licence as aforesaid the rights and obligations of the Parties shall cease by the termination or cancellation but such termination or cancellation shall not affect any right of action existing or liabilities incurred by a Party before the date of termination or cancellation and any legal proceedings that might have been commenced or continued against a Party may be commenced or continued against it.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 65 Article 30 Effective Date

30.1 The Effective Date shall be 12th April 2013 .

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 66 Article 31 Miscellaneous

31.1 The Government assures the Contractor that the Contract Area lies entirely within the territorial limits of Guyana and that Guyana has sovereignty over such area. The Government shall assert its right to the entire Contract Area and seek to resolve current or future claims if any by other States that impugn any portion of the Contract Area. The Government shall also use its best efforts to permit due observance of the terms and conditions of this Agreement by both Parties. Both Parties undertake not to take any action inconsistent with the terms and conditions of the Agreement

31.2 This Agreement shall not be amended or modified in any respect except by written agreement entered into by all the Parties which shall state the date upon which the amendment or modification shall become effective.

31.3 In the event of any conflict between any provisions in the main body of this Agreement and any provisions in the Annexes the provision in the main body shall prevail.

31.4 The headings of this Agreement are for convenience of reference only and shall not be taken into account in interpreting the terms of this Agreement.

31.5 A reference to the singular in this Agreement includes a reference to the plural and vice versa.

31.6 The provisions of this Agreement shall inure to the benefit of and be binding upon the Parties and their permitted assignees and successors in interest.

31.7 No waiver by any Party of any one or more obligations or defaults by any other Party shall be construed

as a waiver of any other obligations or defaults whether of a like or of a different character. 31.8 This Agreement supersedes and replaces any previous Agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the date of this Agreement. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Page 67 Article 32 Stability of Agreement 32.1 Except as may be expressly provided herein the Government shall not amend modify rescind tem1inate declare invalid or unenforceable require renegotiation of compel replacement or substitution or otherwise seek to avoid alter or limit this Agreement without the prior writ1en consent of Contractor. 32.2 After the signing of this Agreement and in conformance with Article 15 the Government shall not increase the economic burdens of Contractor under this Agreement by applying to this Agreement or the operations conducted thereunder any increase of or any new petroleum related fiscal obligation including but not limited to any new taxes whatsoever any new royalty duties fees charges valueadded tax VAT or other imposts. 32.3 32.4 If at any time after the signing of this Agreement there is a change in the laws of Guyana whether t.hTough the amendment of existing Jaws including the hydrocarbons law the customs code or tax code or the enactment of new laws or a change having the force of law in the interpretation implementation or application thereof whether the change is specific to the Agreement the Contractor or of general application and such change has a materially adverse effect on the economic benefits includin those resulting from the fiscal regime provided by this Agreement accruing to the Contractor hereunder during the term of this Agreement th Government shall promptly take any and all affirmative actions to restore the lost or impaired economic benefits to Contractor so that Contractor receives the same economic benefit under the Agreement that it would have received prior to the change in law or its interpretation application or implementation. The foregoing obligation shall include the obligation to resolve promptly by whatever means may be necessary any conflict or anomaly between this Agreement and any such new or amended legislation including by way of exemption legislation decree andor other authoritative acts. In the event that Contractors overall economic benefits have been materially and adversely affected by actions or changes as set forth above in Section 32.3

whether directly or indirectly Contractor may notify the Government in writing. The Parties shall then meet within thirty 30 days after such notification with the objective of reaching agreement on a remedial action to be taken by the Government whether by exemption legislation decree and/or other authoritative acts or by amendment to the terms of the Agreement. If the Parties are unable to resolve their differences within one hundred twenty 120 days after Contractor has issued the aforementioned notification then the Contractor may refer the matter to arbitration in accordance with Article 26. In such case the arbitral tribunal is authorized to modify the Agreement to reestablish the economic benefits under the Agreement to Contractor described in Article 32.3 or in the event this is not possible including for example where such dispute would not qualify or constitute a legal dispute under Article 25 of the ICSID Convention to award damages to Contractor that fully compensate it for the loss of economic benefits under the Agreement both historical and future losses.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. Page 68 Article 33

Notices 33.1 All notices and other communications to be given under this Agreement shall be deemed to have been made properly if delivered in person in writing mailed with charges prepaid or sent by facsimile by one Party to the other at their respective addresses in Guyana as set forth below and copied to their overseas addresses. Any such notice or communication given as aforesaid shall be deemed to have been given and received at the time of delivery if delivered by hand or by courier or at the time of receipt if transmitted by facsimile

The Minister Responsible for Petroleum co Guyana Geology And Mines Commission 68 Upper Brickdam Stabroek P.O. BOX 1028 Georgetown GUYANA. Commissioner GGMC Attention 5922253047 Telephone 5922270084 Facsimile Repsol Exploración S.A. co 157C Waterloo Street North Cummingsburg Georgetown GUYANA And 2001 Timberlock Place Suite 4000 The Woodlands TX 77380 United States of America Jose A. Murillas Attention 592226 1810 Telephone . 592226 1825 Facsimile

33.2 Any Party may by notice as provided hereunder to the other Parties and GGMC change its address and other particulars for notice purposes. IN WITNESS whereof the Parties have caused their duly authorised representatives to set their hands at the City of Georgetown in the Republic of Guyana in

the presence of one another the day and year first above written. Signed by The Minister Responsible For Petroleum 5etn7eepublic of Guyma. His Excellency Donald Ramotar President of the Republic of Guyana Minister Responsible For Petroleum A orised Company OfficerDirector . .st

A. A1V II UAJ Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. REPJOL Repsol Exploracion S.A. Guyana Page 69 ANNEX A DESCRIPTION OF CONTRACT AREA

Description of area to be granted under Petroleum Pros pecti ng License pursuant to Articl e 3 of the Petroleum Agreeeme nt. The area comprises approximately 6525 square kilometres described herein consisting of graticular blocks identified herein and shown on the Block Reference Map at Annex B.

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Guyana Repsol Exploraci6n S.A. ANNEX A contd DESCRIPTION OF CONTRACT AREA The

following five 5 minute by five 5 minute square graticular blocks describe the area. The blocks as

described are shown on the Block Reference Map at Annex B Block Q

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14252637 denotes part block Petroleum Agreement Government of Guyana Repsol Exploraci6n

S.A. ANNEX 8 BLOCK REFERENCE MAP Page Intentionally Blank Block Reference Map in Next

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Government of Guyana Repsol Exploraci6n S.A. ANNEX C ACCOUNTING PROCEDURE This

Annex is part of this Petroleum Agreement hereinafter referred to as the Agreement Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. SECTION 1 GENERAL PROVISIONS

1.1 Definitions For the purpose of this Accounting Procedure the terms used herein which are defined in the Agreement or in the Act shall have the same meaning when used in this Accounting Procedure. 1.2 Documentation Required to be Submitted by the Contractor a The Contractor shall keep the accounts operating records reports and statements relating to the Petroleum Operations i ii in accordance with the terms of the Agreement and this Accounting Procedure; and in such form as may be agreed from time to time between the Parties which shall identify the categories of costs expenses expenditures and credits classified in Sections 2 and 3 of this Annex. b Pcrsaant to above the Contractor shall make quarterly Statements relating o the Petroleum Operations including i Production Statement see Section 5 of this Annex. ii Value of Production and Pricing Statement see Section 6 of this Annex. iii Statement of Expenditures and Receipts see Section 7 of this Atmex. iv Cost Recovery Statement see Section 8 of this Annex. v EndofYear Statement see Section 9 ofthis Annex. vi Budget Statement see Section 10 ofthis Annex. 1.3 Language Units of Account and Exchange Rates a Accounts shall be maintained in Guyanese dollars and United States dollars; however the United States dollars accounts will prevail in case of conflict. Barrels shall be employed for measurements of production of Crude Oil required under the Agreement and this Annex. Standard cubic feet scf shall be employed for measurements of production ofNatural Gas required under the Agreement and this Annex. The language employed shall be English. b Should there be any gain or loss from exchange of currency it will be credited or Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. charged to the accounts under the Agreement. c i Amounts received and costs expenses and expenditures made in cunencies other than United States dollars or Guyanese dollars shall be converted into United States dollars by using the relevant foreign exchange rate published in the Wall Street Journal on the first business day following the Month in which the relevant transaction occurred. ii Amounts received and costs expenses and expenditures made in Guyanese dollars or in United States dollars shall be converted from Guyanese dollars into

United States dollars or from United States dollars into Guyanese dollars on the basis of the average of the buying and selling exchange rates between the currencies in question as determined and published by the Bank of Guyana prevailing on the last Business Day of the Calendar Month preceding the Calendar Month that the relevant transaction occurred. iii The actual exchange rates applied in accordance with subsection 1.3 c ii above and where relevant subsection 1.3 c i above shall be identified in the rele.. ar.. Statements required under SU 1J Seci e 1.2 a of this Annex. 1.4 Payments a b All payments between the Parties under the Agreement shall unless otherwise agreed be made in United States dollars and through a bank designated by the receiving Party. All sums due under the Agreement during any Calendar Month shall for each day such sums are overdue bear interest at the Agreed Interest Rate. 1.5 Audit and Inspection Rights of Government a The Minister shall have the right to audit upon ninety 90 days written notice at his sole cost and expense accounts and records of the Contractor maintained hereunder with respect to each Calendar Year within two 2 years from the end of each such Year. For purposes of auditing the Minister may audit examine and verify at reasonable times during normal business hours but not more than once per Calendar Year all charges and credits relating to the Contractors activities under the Agreement and all books of accounts accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records necessary to audit and verify the charges and credits. During such annual audit examination and verification in respect of each Calendar Year the Minister may review items previously subjected to audit in Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. earlier Years but such review shall i ii iii only be carried out in conjunction with the annual audit for any g1ven Year; and subject to Section 1.5 b no sooner than twelve 12 months following the previous audit thereof; and only be for the purposes of verifying a matter arising in a later period which relates to the earlier Years in question or as specified in Section 1.5 b. In conducting such audits the auditors may physically examine at the sole cost and expense of the Minister property facilities and stocks used in Petroleum Operations wherever located. Such examinations shall take place at reasonable times during normal business hours upon

fifteen 15 days prior notice. b At the conclusion of each audit the Parties shall endeavour to settle outstanding matters and a written report will be issued to the Contractor within sixty 60 days of the conclusion of such audit. The report shall include all claims arising from such audit. The Contractor shall reply to the report in writing as soon as possible and in any event not later than sixty 60 days following receipt of the report indicating acceptance or rejection of the audit claim and in the case of a rejection showing explanations thereof. Should the Minister consider that the report or reply requires further investigation on any item therein the Minister shall have the right to conduct further investigation in relation to such matter within sixty 60 days of its receipt of Contractors reply. If within sixty60 days of the Ministers further investigation the Parties are unable to agree to the disposition of the Ministers audit claim the claim shall be submitted to arbitration in accordance with Article 26 of the Agreement. All adjustments resulting from an audit agreed to by the Contractor and the Minister conducting the audit shall be reflected promptly in the accounts by the Contractor and any consequential adjustments in Crude Oil entitlements shall also be made promptly. In the event that an audit claim by the Minister is not settled to the satisfaction by the Contractors reply as provided for above the Contractor shall be entitled to recover any disputed amounts pending final resolution of the claim. However any subsequent adjustments in the Ministers share of Profit Petroleum following resolution of the claim shall be repaid with interest at the Agreed Interest Rate as Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A . a first claim from Contractors share of future Profit Oil. In the event that the Contractors share of Profit Petroleum is insufficient to provide for the Ministers extra entitlement including interest the Contractor shall promptly make an equivalent payment in United States dollars to the Minister. c Without prejudice to the finality of matters as described in subsections 1.5 a and 1.5 b all documents referred to in those subsections shall be maintained and made available for inspection by the Minister for two 2 years following their date of issue providing however that where issues are outstanding with respect to an audit the Contractor shall maintain documents for a longer period until the issues are resolved. d The Contractor may require that audits hereunder of accounts and records maintained by Affiliated

Companies of the Operator other than any Affiliated Company of the Operator which is conducting a substantial part of the Petroleum Operations on behalf of the Contractor be conducted either by the Operators statutory auditors working under the instruction of the Minister provided such appointment is accepted by the statutory auditors failing which by an independent firm of auditors of international standing to be approved by the Minister. e Nothing herein above provided shall entitle the Minister or his auditors to have access to data and records which i are subject to statutory restrictions on disclosure; or ii do not relate to Petroleum Operations; or iii are not customarily disclosed in auditing practice in the international petroleum industry; provided however that where the Minister or his auditors seek confirmation that charges subject to restricted access under a b and c above have been properly charged under this Agreement and Accounting Procedure they shall be entitled to seek at their sole cost from the statutory auditors of the Contractor or its Affiliated Companies as the case may be certification that such charges have been levied on a fair and reasonable basis.

Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. SECTION 2

CLASSIFICATION. DEFINITION AND ALLOCATION OF COSTS. EXPENSES AND EXPENDITURES

All costs expenses and expenditures relating to the Petroleum Operations referred to in Section 3 shall be classified defined and allocated as follows 2.1 Exploration Costs are all direct and allocated indirect expenditures incurred in the search for Petroleum in an area which is or was at the time when such costs were incurred in the Contract Area including a Aerial geophysical geochemical paleontological geological topographical and seismic surveys and studies and their interpretation provided the data relates to the Contract Area. b Core hole drilling and water well drilling. c d e f g Labour materials or equipment and services used in drilling Exploration and Appraisal Wells with the object of finding Petroleum or for the purposes of appraising the extent of producible reservoirs already discovered provided such wells are not completed as producing wells. Facilities or allocated portions thereof used solely in support of the purposes described in a b and c above. All General and Administrative Costs Annual Overhead Charges and all Service Costs allocated to Exploration Costs. Any other Contract Costs incurred in the search for and appraisal of Petroleum after the

Effective Date. Annual amounts set forth and paid to GGMC pursuant to Article 19.3 of the Agreement. h Rentals. i Licenses and other fees. 2.2 Development Costs shall consist of all expenditures incurred in a b Drilling wells which are completed as producing wells and drilling wells for purposes of producing from a producible reservoir whether these wells are dry or producing and drilling wells for the injection of water or gas to enhance recovery of Petroleum. Completing wells by way of installation of casing or equipment or otherwise after a well has been drilled for the purpose of bringing the well into use as a producer or as a well for the injection of water or gas to enhance recovery of petroleum. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. c d e f Intangible drilling costs such as labour consumable material and services having no salvage value which are incurred in drilling and deepening of wells for production purposes. The costs of field facilities such as pipelines Dow lines production and treatment units wellhead equipment subsurface equipment enhanced recovery systems offshore platforms petroleum storage facilities. expo11 terminals and p1ers harbours and related facilities and access roads for production activities. Engineering and design studies for field facilities . All General and Administrative Costs Annual Overhead Charges and all Service Costs allocated to Development Costs. 2.3 Operating Costs are all expenditures incurred in the Petroleum Operations which are other than Exploration Costs Development Costs General and Administative Costs and Annual Overhead Charge and Service Costs. The balance of General and Administrative Costs and Service Costs not allocated to Exploration Costs or Development Costs shall be allocated to Operating Costs. 2.4 Service Costs a These are direct and indirect expenditures in support of the Petroleum Operations including but not limited to warehouses piers marine vessels vehicles motorised rolling equipment aircraft fire and security stations workshops water and sewage plants power plants housing community and recreational facilities and furniture tools and equipment used in these activities and safety and security services. Service Costs in any Calendar Year shall include the total costs incurred in such Year to purchase and/or construct said facilities as well as the annual costs to maintain and operate the same. b All Service Costs will be allocated to Exploration Costs Development Costs and

Operating Costs in accordance with standard industry accounting practice or on an equitable basis otherwise agreed between the Minister and the Contractor.

2.5 General and Administrative Costs and Annual Overhead Charge

a b General and Administrative Costs are all general and administrative costs in respect of the local office or offices including but not limited to supervisory accounting and employee relations services but which are not otherwise recovered. An Annual Overhead Charge for services rendered outside Guyana and not otherwise charged under the Contractors activities under the Agreement and for staff advice and assistance including but not limited to financial legal accounting and employee relations this Accounting Procedure for managing Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. services. For the period from the Effective Date until the date on which the first Petroleum Production Licence under the Agreement is granted by the Minister this annual charge shall be five percent 5 of the Contract Costs including those covered in subsections 2.1 through 2.5a incurred during the Calendar Year. From the date of grant of the Petroleum Production Licence the Annual Overhead Charge will be First US1 0000000.of Contract Costs Next US1 0000000.of Contract Costs 5 3 In excess ofUS20000000.ofContract Costs 1.5 c All General and Administrative Costs and Annual Overhead Charge will be allocated to Exploration Costs Development Costs and Operating Costs in accordance with standard industry accounting practice or on an equitable basis otherwise agreed between the Minister and the Contractor. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A.

SECTION 3 COSTS EXPENSES EXPENDITURES AND CREDITSOFTHE CONTRACTOR

3 .I Costs Recoverable Without Further Approval of the Minister Subject to the provisions of the Agreement the Contractor shall bear and pay the following costs and expenses in respect of the Petroleum Operations. These costs and expenses will be classified w1der the headings referred to in Section 2. They are all recoverable as Contract Costs by the Contractor under the Agreement.

a Surface Rights This covers all costs attributable to the acquisition renewal or relinquishment of surface rights acquired and maintained in force for the Contract Area including any amounts payable pursuant to Article 10 of the Agreement.

b Labour and Associated Labour

Costs i ii iii iv v Gross salaries and wages including bonuses of the employees of the Parties comprising the Contractor directly engaged in the Petroleum Operations irrespective of the location of such employees it being understood that in the case of k. e personnel only a portion of vhs time is wholly dedicated to Petroleum Operations only that prorata portion of applicable wages and salaries will be charged. Costs regarding holiday vacation sickness and disability payments applicable to the salaries and wages chargeable under i above. Expenses or contributions made pursuant to assessments or obligations imposed under the laws of the Republic of Guyana which are applicable to cost of salaries and wages chargeable under i above. Cost of established plans for employees life insurance hospitalisation pensions and other benefits of a similar nature customarily granted to the employees of the Parties comprising the Contractor. Reasonable travel and personal expenses of such employees including those made for travel and relocation of the Expatriate Employees assigned to the Republic of Guyana all of which shall be in accordance with the nonnal practice of the Parties comprising the Contractor. vi Any personal income taxes owing to the Republic of Guyana by employees of the Parties comprising Contractor and paid or reimbursed by a Party comprising the Contractor. c Transportation Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. The cost of transportation of employees equipment materials and supplies necessary for the conduct of the Petroleum Operations. d Charges for Services i Third Patiyy Contracts The actual costs of contracts for technical and other services entered into by the Contractor for the Petroleum Operations made with third parties other than Affiliated Companies of the Contractor are recoverable; provided that the prices paid by the Contractor are competitive with those generally charged by other international or domestic suppliers for comparable work and services. ii Affiliated Companies Without prejudice to the charges to be made in accordance with subsection 2.5 in the case of services rendered to the Petroleum Operations by an Affiliated Company the charges will be no higher than the usual prices charged by the Affiliated Company to third parties for comparabe servis under similar terms and coditions elsewhere and will be fair and reasonable in the light of prevailing international oil industry practice and conditions. The salaries

wages and related costs of employees of an Affiliated Company that are temporarily or permanently assigned in Guyana and are directly engaged in Petroleum Operations shall be chargeable to the project at their actual documented cost. The salaries wages and related costs of employees of an Affiliated Company that are temporarily or pennanently outside of Guyana and are directly engaged in Petroleum Operations shall be chargeable to the project at their actual documented cost. Costs for salaries wages and related costs shall be charged to the project on an actual basis or at a rate based upon the average cost in The accordance with methodology of determining rates based on average cost shall be provided to the Government upon their request. Such rates may be reviewed at least annually with the Minister. Reasonable actual documented expenses including travel costs of those employees whose salaries and wages are chargeable to the project and are reimbursed by the Contractor under their usual practice shall also be charged to the project. the Affiliated Companys usual practice. e Material i So far as is practicable and consistent with efficient and economical operation only such material or equipment shall be purchased or furnished by the Contractor for use in the Petroleum Operations as may be required Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. for use in the reasonably foreseeable future and the accumulation of surplus stocks shall be minimized. ii The Contractor does not warrant material beyond the suppliers or manufacturers guarantee express or implied and in case of defective material or equipment any adjustment received by the Contractor from the suppliersmanufacturers or their agents will be credited to the accounts under the Agreement. iii a Except as provided in b below material purchased by the Contractor for use in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts if any purchase and procurement fees plus freight and forwarding charges between point of supply and point of shipment freight to port of destination insurance taxes custom duties consular fees other items chargeable against imported material and where applicable handling and transportation expenses from point of importation to warehouse or operating site and cost of the material in question length should not exceed those prevailing transactions on the open market for material of similar quality and supplied on similar

terms at the time of procurement. in normal arms b Material purchased from Affiliated Companies of the Parties comprising Contractor shall be charged at the prices specified at 1 and 2 hereof. 1 New Material Condition A Shall be valued and invoiced at a price which should not exceed length transactions on the open market at the time of procurement. the price prevailing in normal arms 2 Used Material Conditions B and C i is is suitable in sound and serviceable Material which condition and reuse without reconditioning shall be classified as Condition B and priced at not more than seventyfive percent 75 of the price of new material defined in 1 above. for ii Material which cannot be classified as Condition B but which a Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. reconditioning will after further serviceable for original function as good be b secondhand material Condition B or for shall reconditioning; is serviceable for original function but not suitable be classified as Condition C and priced at not more than fifty percent 50 of the current price of new material Condition A as The cost of defined the to reconditioning shall be charged reconditioned material provided that the Condition C material value plus the cost of reconditioning does not exceed the value of Condition B material. 1 above. in iii Material which cannot be classified as Condition B or Condition C shall be priced at a value commensurate with its use. iv When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price as provi drd for in 2 ii hereof such material shall be priced on a basis that will result in a net charge to the accounts under the Agreement consistent with the value of the service rendered. f Rentals Duties and Other Assessments All rentals taxes levies charges fees contributions and any other assessments and charges levied by the Government in connection with the Petroleum Operations and paid directly by the Contractor. g Insurance and Losses Insurance premium and cost incurred for insurance pursuant to Article 20 provided that if such insurance is wholly or partly placed with an Affiliated Company of the Parties comprising the Contractor such premium and costs shall be recoverable only to the extent generally charged by competitive insurance companies other than an Mfiliated Company of a Party comprising the Contractor. Costs losses and damages incurred to the extent not made good by insurance are recoverable including costs losses or

damages resulting from the indemnities in Article 2 of the Agreement unless such costs losses or damages have resulted solely from an act of willful misconduct or gross negligence of the Contractor.

Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A.

h Legal Expenses All costs and expenses of litigation and legal or related services necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of activities under the Agreement or sums paid in respect of legal services necessary or expedient for the protection of the interest of the Parties are recoverable. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliated Company of the Parties comprising Contractor such compensation will be included instead under subsection 3.1b or 3.1d above as applicable.

i Training Costs All costs and expenses incurred by the Contractor in training of Guyanese personnel and such other amounts as may be expended on training under Article 19 of the Agreement.

j General and Administrative Costs and Annual Overhead Charge The costs described in subsection 2.5a and the charge described in subsection 2.5b.

k PreContract Costs The sum of one million United States Dollars US1000000. in respect of all costs and expenses incurred by Contractor prior to the Effective Date.

1 Interest and Financing Costs Interest expenses and related fees incurred on loans raised by the Parties comprising the Contractor for Petroleum Operations and other financing costs provided that such expenses fees and costs are consistent with market rates.

m Abandonment Costs Amortized abandonment costs calculated pursuant to Article 20.1diii.

n Social project contributions Costs and expenses not exceeding two million United States Dollars 2000000US. in any given Year incurred by Contractor in social programmes in the influence area of the Licence.

Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A.

3.2 Costs Recoverable only with Approval of the Minister

a Costs and expenses exceeding two million United States Dollars 2000000US in any given Year incurred by Contractor in social programmes in the influence area of the Licence.

b Donations and charitable contributions to recognized organisations in Guyana.

c Expenditure on research into and

development of new equipment material and techniques for use in searching for developing and producing petroleum which will be of benefit to Petroleum Operations.

3.3 Costs not Recoverable under the Agreement

a With the exception of the sum specified in subsection 3.1k costs incurred before the Effective Date.

b c d e Petroleum marketing or transportation costs of Petroleum beyond the Delivery Point.

f Amounts paid under Article 3.2 of the Agreement if any and other amounts paid with regard to nonfulfillment of contractual obligations subject to Section 3.1g.

g Costs of arbitration and the sole expert in respect of any dispute under the Agreement.

h Fines and penalties imposed by Courts of Laws of the Cooperative Republic of Guyana.

i Payments made in accordance with Article 15.4 of the Agreement.

j Costs incurred as a result of willful misconduct or gross negligence of the Contractor or failure to insure where insurance is required pursuant to Article 20.2a of the Agreement.

3.4 Other Costs and Expenses

Other costs and expenses not covered or dealt with in the provisions of this Section 3 and which are incurred by the Contractor in the conduct of the Petroleum Operations are recoverable subject to the approval of the Minister.

3.5 Credits under the Agreement

The net proceeds of the following transactions will be credited to the Accounts under the Agreement and shall reduce the amount of Contract Costs which the Contractor is Petroleum Agreement Government of Guyana Repsol Exploración S.A. entitled to recover from Cost Petroleum by a corresponding amount

a b c d e f g h The net proceeds of any insurance or claim in connection with the Petroleum Operations or any assets charged to the accounts under the Agreement when such operation or assets were insured and the premium charged to the accounts under the Agreement.

i Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Agreement.

j Any adjustment received by the Contractor from the suppliers/manufacturers or their agents in connection with defective material the cost of which was previously charged to the accounts under the Agreement.

k Rentals refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Agreement including any costs and expenses previously charged to the accounts pursuant to subsection 3.1 h and which have been successfully recouped from legal proceedings

but excluding any award granted to the Contractor under arbitration or sole expert proceedings referred to in subsection 3.3d above. The value at the time of export of inventory materials subsequently exported from the Cooperative Republic of Guyana without being used in the Petroleum Operations the acquisition costs of which have been charged to the accounts under the Agreement. The proceeds from the sale or exchange by the Contractor of materials equipment plant or facilities the acquisition costs of which have been charged to the accounts under the Agreement including such items sold to the Government; The proceeds from the sale of Petroleum Data which relates to the Contract Area provided that the acquisition costs of such rights and information have been charged to the accounts under the Agreement; The proceeds derived from the sale or licence of any intellectual property the development costs of which have been charged to the accounts under the Agreement.

3.6 Duplication of Charges and Credits Notwithstanding any provision to the contrary in this Accounting Procedure it is the intention that there shall be no duplication of charges or credits to the accounts under the Agreement.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. SECTION 4 RECORDS AND VALUATION OF ASSETS The Contractor shall maintain detailed records of property in use for the Petroleum Operations in accordance with normal practice in exploration and production activities of the international petroleum industry. The Contractor shall notify the Minister annually in writing of all assets acquired and all assets disposed of during the preceding twelve 12 months. At reasonable intervals but at least once a year with respect to moveable assets and once every three 3 years with respect to immovable assets inventories of the property under the Agreement shall be taken by the Contractor. The Contractor shall give the Minister at least thirty 30 days written notice of its intention to take such inventory and the Minister shall have the right to be represented when such inventory is taken . The Contractor will state clearly the principles upon which valuation of the inventory has been based. When an assignment of rights under the Agreement takes place a special inventory may be taken by the Contractor at the request of the assignee provided that the costs of such inventory are borne by the assignee.

Petroleum Agreement Government of Guyana Repsol Exploración S.A. SECTION 5

PRODUCTION STATEMENT 5.1 Upon commencement of production of Petroleum from the Contract Area the Contractor shall submit a monthly Production Statement to the Minister showing the following information separately for each Field and in aggregate for the Contract Area. a The gross quantity of Crude Oil and Natural Gas produced. b The quantities of Crude Oil and Natural Gas used for the purpose of carrying on Petroleum Operations including drilling and Production Operations and pumping to Field storage. c Quantities of Crude Oil and Natural Gas lost. d The quantities of Natural Gas flared. e The quantity of Crude Oil produced and saved. f The quantity of Natural Gas produced and saved. g h i G The quantity of stocks of Crude Oil held at the beginning of the Calendar Month in question. The quantity of stocks of Crude Oil held at the end of the Calendar Month in question. The number of days in the Month during which Petroleum was produced from each Field. The average daily production rate for each Field calculated in accordance with Article 11.6 of the Agreement. 5.2 The Production Statement for each Calendar Month shall be submitted to the Minister not later than sixty 60 days after the end of such Calendar Month. Petroleum Agreement Government of Guyana Repsol Exploracion S.A. SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT 6.1 The Contractor shall for the purposes of Article 13 of the Agreement prepare a statement providing calculations of the value of Crude Oil and the value of the Natural Gas produced and saved during each Calendar Month for each Field . This statement which shall be prepared for each quantity of Crude Oil and the Natural Gas produced from the Contract Area shall contain the following information a b The quantities prices and receipts realised therefor by the Contractor as a result of Third Party Sales of Crude Oil and the Natural Gas made during the Calendar Month in question. The quantities prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and the Natural Gas made during the Calendar Month in question other than Third Party Sales. c The percentage of total volume of Crude Oil sales which were Third Party Sales. d e The percentage of total volume of Natural Gas sales which were Third Party Sales. Information supplied to the Minister by Contractor for the purposes of Article 13.2 of the Agreement.

SECTION 6 VALUE OF PRODUCTION AND PRICING STATEMENT

6.1 The Contractor shall for the purposes of Article 13 of the Agreement prepare a statement providing calculations of the value of Crude Oil and the value of the Natural Gas produced and saved during each Calendar Month for each Field . This statement which shall be prepared for each quantity of Crude Oil and the Natural Gas produced from the Contract Area shall contain the following information a b The quantities prices and receipts realised therefor by the Contractor as a result of Third Party Sales of Crude Oil and the Natural Gas made during the Calendar Month in question. The quantities prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and the Natural Gas made during the Calendar Month in question other than Third Party Sales. c The percentage of total volume of Crude Oil sales which were Third Party Sales. d e The percentage of total volume of Natural Gas sales which were Third Party Sales. Information supplied to the Minister by Contractor for the purposes of Article 13.2 of the Agreement.

6.2 The Value of Production and Pricing Statement for each Calendar Month shall be submitted to

the Minister not later than sixty 60 days after the end of such Calendar Month. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. SECTION 7 STATEMENT OF EXPENDITURE AND RECEIPTS 7.1 The Contractor shall prepare with respect to each Calendar Quarter or on a monthly basis if requested by the Minister in writing a Statement of Expenditure and Receipts under the Agreement. The Statement will distinguish between Exploration Costs Development Costs and Operating Costs consistent with the individual categories specified in Sections 2 and 3 herein and will separately identify major items of expenditures within these categories. The statement will show the following a Actual expenditures and receipts on a monthly basis for the period in question. b Cumulative expenditure and receipts for the budget year in question. c Cumulative expenditures and receipts since the Effective Date. d Latest forecast of cumulative expenditures to year end. e Variations between budget forecast and latest forecast with explanations thereof. 7.2 Subject to 7.1 the Statement of Expenditure and Receipts shall be submitted to the Minister no later hJ1 si SO days after the end of such C ledar Qumier or Month as the case may be. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. SECTION 8 COST RECOVERY STATEMENT 8.1 The Contractor shall prepare with respect to each Calendar Month a Cost Recovery Statement containing the following information a Recoverable Contract Costs carried forward from the previous Month if any. b Recoverable Contract Costs for the Month in question. c d Total Recoverable Contract Costs which is that cost at subsection 8.1 a plus that cost at subsection 8.1 b. Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Month in question. e Contract Costs recovered for the Month in question. 8.2 8.3 8.4 f Total cumulative amount of Contract Costs to be carried forward into the next Month. TI infr..tion to besubmitted under Se tic1 8.1 d and e above shal t.Je g r. in separate statements for each Field so as to indicate together the Contractors total allocation of Cost Oil as required under Article 11 of the Agreement. The Cost Recovery Statement to be submitted under subsection 8.1 shall identify the unrecovered cost of assets for the purpose of Article 20.1 b iii of the Agreement. During the Production Period the Cost Recovery Statement for each Month shall be submitted to the Minister

no later than sixty60 days after the end of such Month and twice a year during the Exploration Period not later than 90 days after the end of each calendar semester. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A . SECTION 9 ENDOFYEAR STATEMENT 9.1 The Contractor shall prepare an EndofYear Statement. The Statement will contain aggregated information for the Year in the same format as required in the Value of Production and Pricing Statement Cost Recovery Statement and Statement of Expenditures and Receipts but will be based on actual quantities of Petroleum produced and expenses incurred. The Endof Year Statement for each Calendar Year shall be submitted to the Minister within one hundred and twenty 120 days of the end of such Calendar Year. a Crude Oil i the Domestic Supply Report describing In the event the domestic supply obligations under Article 17 are effected by the Government as to Crude Oil not later than one hundred and twenty 120 days after the end of each Calendar Year the Minister acting on behalf of the Government shall make available to Contractor an amtual summary the Governments total entitlement from all Crude Oil production in Guyana during the prior Calendar Year b the quantity of Crude Oil actually provided to the Government by Contractor and all third parties which produce Cr.dc Oil in Guyana during the priJr C;ar Year and c a description of the quantities and use of all Crude Oil provided to the Government by Contractor and all third parties which produce Crude Oil in Guyana including without limitation domestic power supply from power plant facilities refined products for domestic consumption from refineries etc. and any quantities of Crude Oil refined products petrochemicals or fuel for power generation that are exported from Guyana. a b Nat ural Gas i In the event the domestic supply obligations under Article 17 have been effected by the Government as to Natural Gas not later than one hundred and twenty 120 days after the end of each Calendar Year the Minister acting on behalf of the Government shall make available to Contractor an annual summary the Domestic Supply Report describing a the Governments total entitlement from all Natural Gas production in Guyana during the prior Calendar Year b the quantity ofNatural Gas actually provided to the Government by Contractor and all third parties which produce Natural Gas in Guyana during the prior Calendar Year and c a description of the quantities and use

of all Natural Gas provided to the Government by Contractor and all third parties which produce Natural Gas in Guyana including without limitation domestic residential commercial and industrial consumption fuel used for domestic power generation etc. or and any quantities of Natural Gas liquefied or compressed in Guyana Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. for export or used as feedstock for petrochemical exports such as methanol and fe1iilizer. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. SECTION 10 BUDGET STATEMENT 1 0.1 The Contractor shall prepare an armual budget pursuant to Article 7 of the Agreement the Budget Statement. The Budget Statement will distinguish between Exploration Costs Development Costs and Operating Costs consistent with the individual categories speciied in Sections 2 and 3 and will show the following a Forecast expenditures and receipts under the Agreement for the Calendar Year. b Cumulative expenditures and receipts to the end of the said Year. Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. ANNEX D PreApproved and Certified Petroleum Operations Items A As stimulation chemicals used downhole or injected in oilgas formations Acoustical survey equipment including sonar side scanning sonar full wave form sonic loggers Aeromagnetic recording survey systems Air slips also known as tubing slips All terrain vehicles A TVs Automated equipment at the wellhead processing plant or refinery used to monitor and control production B Bags cloth with printed tags used in well testing Bails links Barrel chemical mixing when used at the wellhead Batteries for production machinery and equipment Batteries geophysical when used exclusively for seismic prospecting in blasting and recording systems Bits drill includes PDCs tricones Blasting systems used for seismic prospecting Blowout ignition system Blowout preventers BOPs Boxes shipping used in well testing core Building portable Building support when used as weatherrelated protective covering for equipment such as electrical generators or instrumentation Buildings that provide ufr... or dwelling space; geologist lab Itailcrs; skidmounted living trailers Bulldozers earth moving equipment c Cable electrical Cable wire rope Cables electrical integrated into machinery Cables used for seismic prospecting Calibration gas for H2S monitors and H2S analyzers Casing Casing accessories Catwalks see Scaffolding Cement

oilwell Cementing equipment Centralizers casing attachment Centrifuge used to remove fine drill solids from mud systems Chemical mixing barrel when used at the wellhead Chemical storage drums when used at the manufacturing or processing site Chemicals used in drilling and production operations Chemicals used in refining operations Choke manifold and valves Circulating system includes discharge and return lines Circulating systems includes mud tanks mud mixers discharge and return lines and separators Cleanersdegreasers includes oilfield equipment Cloth bags with printed tags used in well testing Coil tubing Coil tubing reel Collars drilling Communication equipment includes satellite communications equipment Annex D Page I Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Compressors for compression of air or natural gas Computers to monitor productiondrilling machinery and equipment Consumables consumable equipment used in drilling and production operations Control panels used to run generators at a well head Core boxes Corrosion inhibitors added to upstream installations for preventative maintenance Couplings Custom software designed for and integrated into drilling and production machinery or equipment D Data processing units used for seismic prospecting DC electric motors integrated used to drive the drawworks mud pumps or top drives also commonly called traction motors Deflocculants used in fresh water mud systems Dehydration chemicals Dehydrators including mole sieve used at the well head ; used during the production testing phase Demulsifiers used in production operations to remove water from crude oil Density counters spectral gammagamma Detectors flame when used during the production testing phase as an alternative to a flare stack Diesel power generating systems Discharge and return lines Dispersants production chemicals Distribution panel electrical that controls the electrical distribution for the entire rig package Dope pipe Drift fM casing tubing and line pipe Drill bits. includes tricone PDCs Polycrystalline Diamond Compact Drill collar handling equipment Drill collars used in exploration and development drilling Drill line spool wire rope Drill pipe used in exploration and development drilling Drill pipe handling equipment Drill stem testing equipment includes instrumentation Drilling detergent; muds; surfactants Drilling Rigs and associated equipment Onshore and Offshore Drilling fluid chemicals used to create drilling fluid see

mud Drills all drills used exclusively for seismic prospecting includes heli enviro LIS track truck buggy Drives top rotary and pump Drums for chemical storage when used at the manufacturing or processing site E EDR system only an EDR and the embedded dedicated computer equipment that is integrated into the unit used at the drilling site Electric generators and alternators Electric logging equipment Electrical cable distribution panel electrical generating systems Electrical distribution panel Electrical generating systems integrated Electrical submersible pumps ESP for artificial lift of petroleum Electrical surveying equipment Electrical thermostats Electromagnetic surveying equipment includes time and frequency domain induced polarization equipment Emergency gas shut off devices Petroleum Agreement Government of Guyana Repsol Explorac i6n S.A. Annex D Page 2 Engine oils Engines used for oilfield service Equipment hoisting Explosives includes those used in seismic coring construction F Field potentiometers Filter bags for the production machinery and equipment Fishing tools for retrieving tools lost downhole Fittings includes those used in the transportation and distribution system for example on gathering lines Flame detectors when used during the production testing phase as an alternative to a flare stack Flare stacks includes mobile flare stacks used during the production testing phase Flare tank systems located at the wellsite that are directly connected to the drilling rig and are used to control polluting emissions Flare tanks and lines Float equipment Fluids fracturing stimulating well servicing Foamers used downhole to enhance production Forklifts Fracturing chemicals Fracturing equipment Fuel gas lines for oil and gas production machinery Fuel storage tanks see Tanks Full wave form sonic lognr G Gammaray spectrometers Gas welding acetylene argon when used as an inert welding gas or in repair jobs; calibration gas for H₂S monitors and H₂S analyzers Gas dehydration equipment used in processing plants or refineries up to the point where the petroleum or natural gas is a marketable product Gas detection monitors that detect hazardous gas and provide a warning Gas flow equipment when used downhole to monitor gas flow Gas lift lines located at a production wellsite to encourage the flow or transport of gas from the reservoir to the surface Gas shut off devices emergency that are attached to a gas line and automatically shut off gas supply Gauges engine Generating systems diesel power

electrical Gensetsgenerators portable mobile or standby alternators generatorsgensets Geophones Geophysical batteries when used exclusively for seismic prospecting in blasting and recording systems Geronimo and escape lines Global positioning systems used for seismic prospecting; used for creating stakeless surveys Graders Gradiometers includes potassium gradiometers for radioactive methods of geophysical prospecting Gravel for well pads processing plant onsite roads Gravitational recording survey systems Gravity meters Grease Ground penetrating radar equipment Gunny sacks Guns perforating that are used during the production testing phase Petroleum Agreement Government of Guyana Rep sol Exploraci6n S.A. Annex D Page 3 H Hammer wrenches Hand held tools Heat exchangers Heaters line located at the well head to preheat gas but not line heaters on pipeline; used during the production testing phase Helidrills for seismic prospecting Hoisting equipment Hooks and swivels drill pipe handling equipment Hydraulic tank Hydraulic winches Hydrogen sulfide used for gas scrubbing Hyperspectral spectrometers used for remote sensing Imaging equipment seismic Incinerator when used during the production testing phase in place of a flare stack to burn off excess natural gas Indicator weight Inductive conductivity probes used for electrical or electromagnetic surveying infrared and hyperspectral spectrometers Infrared spectrometers used for remote sensing Inhibitors corrosion added to upstream installations for preventative maintenance Injectr had that runs or retrieves the coil t11bing Instrumentsinstruments or equipment for seismic prospecting Integrated dtesel power generating systems Integrated electrical operating systems Integrated fuel tanks see Tanks Integrated navigation systems used for seismic prospecting Integrated pump units Integrated steam heaters L Lab testing equipment used for testing drilling fluids Lab testing equipment used for testing production fluids Labels for vials used in well testing Laptop computers see entry under Computers LIDAR Light Detection and Ranging mapping equipment used for remote sensing Light towers or light plants Lighting industrial explosion proof Lights Lignite drilling mud or fluid Line heaters located at the well head to preheat gas but not line heaters on the pipeline Line heaters used on pipelines but not line heaters located at the well head for preheating gas Industry Line pipe Liners used on the ground Lines catline drill flare load

line geronimo and escape sand line spool tong Lines discharge return flare Links bales Liquefaction equipment used in a processing plant or refinery to liquefy CO₂ so that it can be transported and marketed Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Annex D Page 4 Liquid viscosifiers Loaders includes loaders used to move drill pipe to and from the drilling rig Logging equipment electric wireline Lubricants specialty M Machinery and equipment used to inject substances into a reservoir Magnetic susceptibility meters Magnetometers Main drum also known as a drill drum Main drum also known as drill drum part of the drawworks Maintenance tools includes cheater bars Manifold choke valve that is an integral piece of the high pressure pumping system Manifold choke; mud Manufactured proppant Measurement while drilling equipment MWD used to monitor the drill bits downhole position Meter skids used in the transportation of natural gas or petroleum from the well head as they are part of the distribution system Mobile radios Molecular sieve Mole sieve pellets when used as a part of exempt dehydrator equipment Monitoring equipment that monitors or controls the operation of machinery and equipment Monitors hazardous gas detection monitors that provide a warning Mooring systems for storage vessels Motors includes mud motors Motors traction mud Motors used in the production testing phase; mud motors used downhole in the drilling process Mud chemicals used in the creation of drilling fluid Mud mixers tank manifold motors Mud logging equipment and supplies MWD Measurement While Drilling equipment and supplies N Navigation systems used for seismic prospecting; used for creating stakeless surveys Nitrogen used to stimulate production Nonpolarizing electrodes used for making measurements in drill holes 0 Optical sensors p Packers Paint supplies Perforating guns used during the production testing phase Pipe dope Pipeline installation equipment Pipeline coatings cement or otherwise Piping systems used downhole in the production and testing phase Pit volume totalizer PVT used for monitoring the bore hole Polarization equipment time and frequency domain induced Portable building Potentiometers field Power tongs and jaws also see Tongs Power plants includes diesel electrical Annex D Page 5 Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Power tongs Power washers Pressure piping systems and its components used

during the production testing phase Preventers blowout BOP Probes inductive conductivity used for electrical or electromagnetic surveying Production processing equipment includes separators compressors tanks flow lines pumps and valves Prospecting seismic see seismic prospecting Protectors thread Pump lines and valves that run from the mud pump to well Pump units includes submersible trash or sump Pumpjacks Pumps explosion proof Pumps and motors used in the production testing phase R Racks pipe used in the drilling process Radar equipment ground penetrating side looking aperture Radio phone mobile VHF two-way Radio antenna MDS Radioactive prospecting scintillometers spectral gammagamma density counters geiger-müller counters gamma-ray spectrometers potassium gradiometers Radioactive sources used in wireline logging Ram thread protectors telescoping Rerctive wolrjinJ gases when used in a repair Sfrvic Recorder box used for seismic prospecting Recording system used for seismic prospecting Reel for coil tubing Reflectance equipment used for remote sensing Regulators includes when used in the transportation and distribution system for example gathering lines Remote sensing equipment includes ultraviolet lamps and reflectance infrared and hyperspectral spectrometers Resistivity survey equipment used for electrical or electromagnetic surveying Return and discharge lines of a circulating system Rod basket Rotary and pump drives Rotary and pump drives Rotary table s Safety valves used for well control that are a part of the equipment on the service rig Sand includes sand used to stimulate well production Satellite communications equipment SCADA equipment Supervisory Control and Data Acquisition used at the well head processing plant or refinery Scintillometers Seismic instrumentation drilling equipment imaging equipment Seismic explosives Seismic prospecting recording system seismic instrumentation geophones cables data processing units Seismic vessels and associated equipment Selfpotential meters used for electrical or electromagnetic surveying Petroleum Agreement Government of Guyana Repsol Exploracion S.A.

Annex 0 Page 6 Sensors optical Separator vessels used during the production testing phase Snubbing unit composed of a blowout preventor stack a hydraulic jack and a power unit to run the hydraulics Solids control equipment Sonar includes side scanning Sonic loggers full wave form

Spectral gammagamma density counters Spectrometers infrared or hyperspectral used for remote sensing gamma ray Spools includes drill line spool Spools specialized pieces that adapt tubing to BOPs or for spacing requirements between BOP and wellhead Stabbing guides used in the drilling process Stimulating fluids Stimulation as chemicals used downhole or injected in oilgas formations Storage tanks see Tanks Submersible trash pump unit used to pump drilling fluids mudwater Sulphur recovery equipment used in processing plants and refineries Survey equipment see Global positioning systems and Navigation systems T Tank battery Tanks flare integrated fuel mud or water stand alone fuel tank fully integrated with drilling rig that serves as the direct fuel supply for the rig Tanks storage used at a refinery or processing plant Tanks water storage Telecommunication equipment Thermostats electrical designed for use with any of the machinery or equipment on this list Thread protectors used in the drilling process Time and frequency domain induced polarization equipment used for electrical or electromagnetic surveying Tongs backup and integral tongs power tongs and jaws Tongs power also called rotary or casing tongs power tongs and jaws backup and integral tongs Tools fishing tools for retrieving tools lost downhole Tools hand Top drives Drill Rig Torque gauges used in the drilling process Towers light Traction motors Travelling blocks Tricones drill bits Tubing includes coil Tubing slips also known as air slips Twoway radios u Ultraviolet lamps used for remote sensing v Vacuum and wash pump used to clean up around rig and wash equipment Vacuum tanks or systems truck or trailer mounted Vacuum units Valve outlet manifold integral part of the high pressure pumping system Annex D Page 7 Petroleum Agreement Government of Guyana Rep sol Exploraci6n S.A. Valve manifold integral part of the high pressure pumping system Valves includes those used in the transportation and distribution system for example gathering lines Valves safety used for well logging drill stem testing or the production testing phase Vehicles Vessels separator used during the production testing phase Vessels supply and anchor handling for offshore petroleum operations Vessels for storage of crude oil FPSO Vessels Mobile Offshore Drilling Units Vibrators used for seismic prospecting Viscosifiers liquid ; dry polymer; concentrated w Walkways see Scaffolding Waste gas transmission see Pipes Waste

management bins Waste water treatment units mobile Water clarifiers used to remove residual oil in produced water prior to disposal or reuse Water disposal lines includes associated machinery and equipment that are located within the processing plant Water storage tanks Welding equipment and supplies Well flow lines transporting raw product from a well to a satellite battery line pipe or processing plant Well logging equipment includes surface and downhole tools Well testing equipment includes surface and downhole tools Wellhead equipment Winches Wireline or slickline unit skid or truckmounted Petroleum Agreement Government of Guyana Repsol Exploraci6n S.A. Annex D Page 8 EX1.02 4 exhibit102.htm EXHIBIT 1.02 PSC FOR RJ BLOCK 20 DATED MARCH 2 2007 PRODUCTION SHARING CONTRACTBETWEENTHE GOVERNMENT OF INDIAAND OIL INDIA LTD.ANDGEOGLOBAL RESOURCES BARBADOS INC.WITH RESPECT TO CONTRACT AREAIDENTIFIED ASBLOCK RJONN20042 CONTENTSProductionDefinitionsParticipating Interests License and Exploration PeriodRelinquishmentWork ProgrammeManagement CommitteeOperatorship Operating Agreement and Operating CommitteeGeneral Rights and Obligations of the PartiesGovernment AssistanceDiscovery Development and Petroleum Exploration License and Mining LeaseUnit DevelopmentMeasurement of PetroleumProtection of the EnvironmentRecovery of Cost PetroleumProduction Sharing of PetroleumTaxes Royalties Rentals Duties etc. Domestic Supply Sale Disposal and Export of Crude Oil and CondensateValuation of PetroleumCurrency and Exchange Control ProvisionsNatural GasEmployment Training and Transfer of TechnologyLocal Goods and ServicesInsurance and IndemnificationRecords Reports Accounts and AuditARTICLE12345678910111213141516171819202122232425PAGE NO.1231213141617182122262728303132363738394041424647495052535657585961626368697 07172 ARTICLE262728293031323334353637APPENDICESAppendix AAppendix BAppendix CAppendix DAppendix E1 Appendix E2AppendixFAppendixGAppendixHCONTENTSInformation Data Confidentiality Inspection and SecurityTitle to Petroleum Data and AssetsAssignment of Participating InterestGuaranteesTerm and Termination of the ContractForce MajeureApplicable Law and Language of the ContractSole Expert Conciliation and ArbitrationChange of Status of

CompaniesEntire Agreement Amendments and Waiver and

miscellaneousCertificatesNoticesCONTENTSDescription of the Contract AreaMap of the Contract
AreaAccounting Procedure to the ContractCalculation of the Investment Multiple for Production
Sharing purposesForm of Parent company Financial and Performance GuaranteeForm of Company
Financial and Performance GuaranteeProcedure for acquisition of goods and servicesProforma of
Bank Guarantee to be provided pursuant to Article 29Cost estimates for Minimum Work
ProgrammePAGE NO.73757677798082838586878889909192939495PAGE

NO.969798128129130131132133134135138139141142 This Contract made this 2nd day of March
2007 betweenThe President of India acting through the Joint Secretary Ministry of Petroleum and
Natural Gas hereinafter referred to as the Government of the FIRST PART;Ms Oil India Limited a
Company incorporated under the Companies Act 1956 having its corporate office at 5 Sikandra
Road New Delhi 10001 hereinafterreferred to as OIL which expression shall include its successors
and such assigns as are permitted under Article 28 hereof of the SECOND PART;ANDMs
GeoGlobal Resources Barbados Inc. a Company incorporated under the laws of Barbados West
Indies having its registered office at 310 605 1 Street SWCalgary Alberta Canada T2P 3S9
hereinafter referred to as GGRB which expression shall include its successors and such assigns as
are permitted under Article 28hereof of the THIRD PART;ANDWITNESSETHWHEREAS1 2 3 4 5 6
The Oilfields Regulation and Development Act 1948 53 of 1948 hereinafter referred to as the Act
and the Petroleum and Natural Gas Rules 1959 made thereunderhereinafter referred to as the
Rules make provisions inter alia for the regulation of Petroleum Operations and grant of Licenses
and Leases for explorationdevelopment and production of Petroleum in India;The Rules provide for
the grant of Licenses and Leases in respect of land vested in a State Government by that State
Government with the prior approval of theCentral Government;Rule 5 of the Rules provides for an
agreement between the Central Government and the Licensee or Lessee containing additional
terms and conditions with respect tothe License or Lease;The Government desires that the
Petroleum resources which may exist in India be discovered and exploited with the utmost

expedition in the overall interest of India and in accordance with modern oilfield and petroleum industry practices; OILGGRB have committed that it has they have or will acquire and make available the necessary financial and technical resources and the technical and industrial competence and experience necessary for proper discharge and performance of all obligations required to be performed under this Contract in accordance with modern oilfield and petroleum industry practices and will provide guarantees as required in Article 29 for the due performance of its obligations hereunder; and As a result of discussions between representatives of the Government and OILGGRB on the proposal of OILGGRB the Government has agreed to enter into this Contract with OILGGRB with respect to the Contract Area identified as block RJONN20042 and detailed in Appendix A and Appendix B on the terms and conditions herein set forth. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows

ARTICLE 1 DEFINITIONS

In this Contract unless the context requires otherwise the following terms shall have the meaning ascribed to them hereunder

Accounting Procedure means the principles and procedures of accounting set out in Appendix C.

Act means Oilfields Regulation and Development Act 1948 as amended from time to time.

Affiliate means a company or a body; a which directly or indirectly controls or is controlled by a Company which is a Party to this Contract; or b which directly or indirectly controls or is controlled by a company which directly or indirectly controls or is controlled by a Company which is a Party to this Contract. For the purpose of this definition it is understood that control means i ownership by one company of more than fifty percent 50 of the voting securities of the other company; or ii the power to direct administer and dictate policies of the other company even where the voting securities held by such company exercising such effective control in that other company is less than fifty percent 50 and the term controlled shall have a corresponding meaning.

Appendix means an Appendix attached to this Contract and made a part thereof.

Appraisal Programme means a programme carried out following a Discovery in the Contract Area for the purpose of appraising Discovery and delineating the Petroleum Reservoirs to which the Discovery relates in terms of thickness and lateral extent and

determining the characteristics thereof and the quantity of recoverable Petroleum therein. Appraisal Well means a Well drilled pursuant to an Appraisal Programme. Approved Work Programme and Approved Budget means a Work Programme or a Budget that has been approved by the Management Committee pursuant to the provisions of this Contract.

1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.14 1.15 1.16 1.17 Arms Length Sales means sales made freely in the open market in freely convertible currencies between willing and unrelated sellers and buyers and in which such buyers and sellers have no contractual or other relationship directly or indirectly or any common or joint interest as is reasonably likely to influence selling prices and shall inter alia exclude sales whether direct or indirect through brokers or otherwise involving Affiliates sales between Companies which are Parties to this Contract sales between governments and government owned entities counter trades restricted or distress sales sales involving barter arrangements and generally any transactions motivated in whole or in part by considerations other than normal commercial practices. Article means an article of this Contract and the term Articles means more than one Article. Associated Natural Gas or ANG means Natural Gas produced in association with Crude Oil either as free gas or in solution if such Crude Oil can by itself be commercially produced. Barrel means a quantity or unit equal to 158.9074 litres forty two 42 United States gallons liquid measure at a temperature of sixty 60 degrees Fahrenheit 15.56 degrees Celsius and under one atmosphere pressure 14.70 psia. Basement means any igneous or metamorphic rock or rocks or any stratum of such nature in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of Petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected in accordance with the knowledge generally accepted in the international petroleum industry.

1.13 Budget means a budget formulated in relation to a Work Programme. Business Day means any of the Calendar Day excluding holidays. Calendar Day means any of the seven 7 days of a week. Calendar Month means any of the twelve 12 months of the Calendar Year. Calendar Quarter or Quarter means a period of three 3 consecutive Calendar Months commencing on the first day of

January April July and October of each Calendar Year. 1.18 1.19 1.20 1.21 1.22 1.23 1.24 1.25 1.26
1.27 Calendar Year means a period of twelve 12 consecutive Months according to the Gregorian
calendar commencing with the first 1st day of January and ending with the thirtyfirst 31st day of
December. Commercial Discovery means a Discovery of Petroleum reserves which has been
declared as a Commercial Discovery in accordance with the provisions of Article 10 and Article
21. Commercial Production means production of Crude Oil or Condensate or Natural Gas or any
combination of these from the Contract Area excluding production for testing purposes and delivery
of the same at the relevant Delivery Point under a programme of regular production and
sale. Company for the purpose of this Contract means a company which is a Party to this Contract
and where more than one Company is Party to the Contract the term Companies shall mean all such
Companies collectively including their respective successors and permitted assigns under Article
28. Condensate means those low vapour pressure hydrocarbons obtained from Natural Gas through
condensation or extraction and refers solely to those hydrocarbons that are liquid at normal surface
temperature and pressure conditions provided that in the event Condensate is produced from a
Development Area and is segregated at the Delivery Point or transported then the provisions of this
Contract shall apply to such Condensate as if it were Crude Oil. Contract means this agreement and
the Appendices mentioned herein and attached hereto and made an integral part hereof and any
amendments made thereto pursuant to the terms hereof. Contract Area means on the Effective Date
the area described in Appendix A and delineated on the map attached as Appendix B or any portion
of the said area remaining after relinquishment or surrender from time to time pursuant to the terms
of this Contract including any additional area as provided under Article 11.3. Contract Costs means
Exploration Costs Development Costs and Production Costs as provided in Section 2 of the
Accounting Procedure and allowed to be cost recoverable in terms of Section 3 of the Accounting
Procedure. Contract Year means a period of twelve 12 consecutive months counted from the
Effective Date or from the anniversary of the Effective Date. Contractor means the Companyies. 1.28
1.29 1.30 1.31 1.32 1.33 1.34 Cost Petroleum means the portion of the total value of Petroleum

Produced and Saved from the Contract Area which the Contractor is entitled to take in a particular period for the recovery of Contract Costs as provided in Article 15. Crude Oil or Oil or Crude means all kinds of hydrocarbons and bitumen both in solid and in liquid form in their natural state or obtained from Natural Gas by condensation or extraction including distillate and Condensate when commingled with the heavier hydrocarbons and delivered as a blend at the Delivery Point but excluding Natural Gas. Deepwater Area for deepwater blocks areas means area falling beyond four hundred 400 metre isobath. Delivery Point means except as otherwise herein provided or as may be otherwise agreed between the Parties having regard to international practice the point at which Petroleum reaches the outlet flange of the delivery facility either offshore or onshore and different Delivery Points may be established for purposes of sales. Delivery Points shall be approved by the Management Committee. Development Area means part of the Contract Area which encompasses one or more Commercial Discoveries and any additional area that may be required for proper development of such Commercial Discoveries and established as such in accordance with the provisions of the Contract. Development Costs means those costs and expenditures incurred in carrying out Development Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Development Operations means operations conducted in accordance with the Development Plan and shall include but not be limited to the purchase shipment or storage of equipment and materials used in developing Petroleum accumulations the drilling completion and testing of Development Wells the drilling and completion of Wells for Gas or water injection the laying of gathering lines the installation of offshore platforms and installations the installation of separators tankages pumps artificial lift and other producing and injection facilities required to produce process and transport Petroleum into main Oil storage or Gas processing facilities either onshore or offshore including the laying of pipelines within or outside the Contract Area storage at Delivery Points the installation of said storage or Gas processing facilities the installation of export and loading facilities and other facilities required for the development and production of the said Petroleum accumulations and for

the delivery of Crude Oil and Gas at the Delivery Point and also including incidental operations not specifically referred to herein but required for the most efficient and economic development and production of the said Petroleum accumulations in accordance with modern oilfield and petroleum industry practices. 1.35 1.36 1.37 1.38 1.39 1.40 1.41 1.42 1.43 the development of a Commercial Discovery which has been approved by the Management Committee or the Government pursuant to Article 10 or Article 21. Development Plan means a plan submitted by the Contractor for Development Well means a Well drilled deepened or completed after the date of approval of the Development Plan pursuant to Development Operations or Production Operations for the purposes of producing Petroleum increasing production sustaining production or accelerating extraction of Petroleum including production Wells injection Wells and dry Wells. Directorate General of Hydrocarbons or DGH means an organisation including its successors under the Ministry of Petroleum and Natural Gas. Discovery means the finding during Petroleum Operations of a deposit of Petroleum not previously known to have existed which can be recovered at the surface in a flow measurable by conventional petroleum industry testing methods. Discovery Area means that part of the Contract Area about which based upon Discovery and the results obtained from a Well or Wells drilled in such part the Contractor is of the opinion that Petroleum exists and is likely to be produced in commercial quantities. Effective Date means the later of the date on which this Contract is executed by the Parties or the date of issue of License or date from which License has been made effective by the Central Government or State Governments as the case may be. Environmental Damage means soil erosion removal of vegetation destruction of wildlife pollution of groundwater or surface water land contamination air pollution noise pollution bush fire disruption to water supplies to natural drainage or natural flow of rivers or streams damage to archaeological palaeontological and cultural sites and shall include any damage or injury to or destruction of soil or water in their physical aspects together with vegetation associated therewith aquatic or terrestrial mammals fish avifauna or any plant or animal life whether in the sea or in any other water or on in or under land. Exploration Costs means those costs and expenditures incurred in carrying out Exploration Operations as

classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Exploration Operations means operations conducted in the Contract Area pursuant to this Contract in searching for Petroleum and in the course of an Appraisal Programme and shall include but not be limited to aerial geological geophysical geochemical palaeontological palynological topographical and seismic surveys analysis studies and their interpretation investigations relating to the subsurface geology including structural test drilling stratigraphic test drilling of Exploration Wells and Appraisal Wells and other related activities such as surveying drill site preparation and all work necessarily connected therewith that is conducted in connection with Petroleum exploration. Exploration Period means the period mentioned in Article 3 during which Exploration Operations may be carried out by the Contractor as provided in Article 3 hereof. Exploration Phase or Phase means any of the periods specified in Article 3 in which the Contractor is required to complete the Minimum Work Programme specified therein. Exploration Well means a Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity be it of structural stratigraphic facies or pressure nature to at least a depth or stratigraphic level specified in the Work Programme. Field means an Oil Field or a Gas Field or combination of both as the case may be. Financial Year means the period from the first 1st day of April to the thirtyfirst 31st day of March of the following Calendar Year. Foreign Company means a Company within the meaning of Section 591 of the Companies Act 1956. Frontier Area means any area identified demarcated and so notified by the Government or its authorised agencies for the purpose of exploration and exploitation of Oil and Gas which is logistically and technically difficult and lacks infrastructural and/or marketing facilities etc. 1.44 1.45 1.46 1.47 1.48 1.49 1.50 1.51 Gas means Natural Gas. 1.52 1.53 1.54 Gas Field means within the Contract Area a Natural Gas Reservoir or a group of Natural Gas Reservoirs within a common geological structure or feature. Government or Central Government means Government of India unless otherwise stated. Investment shall have the meaning ascribed to that expression in paragraph 3 of Appendix D. 1.55 1.56 1.57 1.58 1.59 1.60 1.61 1.62 1.63 1.64 1.65 1.66 Investment Multiple means the ratio of

accumulated Net Cash Income to accumulated Investment by the Contractor as determined in accordance with Appendix D. Lease means a petroleum mining lease referred to in the Rules and shall unless otherwise stated therein exclude right for exploration and exploitation of coal lignite bed methane CBM. Lessee means the Contractor to whom a Lease is issued under the Rules for the purpose of carrying out Petroleum Operations in a Development Area or Contract Area. LIBOR means the London InterBank Offer Rate for six month maturates of United States Dollars as quoted by the International Swaps and Derivative Association or such other bank being a BBA LIBOR contributor panel bank as the Parties may agree. License means a petroleum exploration license referred to in the Rules. Licensee means the Contractor to whom a License is issued under the Rules for the purpose of carrying out Petroleum Operations in the Contract Area. Minimum Work Programme means with respect to each Exploration Phase the Work Programme specified in Article 5 with respect to such Phase. Management Committee means the committee constituted pursuant to Article 6 hereof. Month means Calendar Month. Natural Gas means wet gas dry gas all other gaseous hydrocarbons and all substances contained therein including sulphur carbon dioxide and nitrogen but excluding extraction of helium which are produced from Oil or Gas Wells excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from gas. Net Cash Income shall have the meaning assigned in paragraph 2 of Appendix D. Non Associated Natural Gas or NANG means Natural Gas which is produced either without association of Crude Oil or in association with such quantities of Crude Oil which by itself cannot be commercially produced. 1.67 1.68 1.69 1.70 1.71 1.72 1.73 1.74 1.75 1.76 1.77 Oil Field means within the Contract Area an Oil Reservoir or a group of Oil Reservoirs within a common geological structure or feature. Operator means one of the Parties comprising the Contractor appointed as the Operator pursuant to Article 7. Operating Agreement means the joint operating agreement entered by the constituents of the Contractor in accordance with Article 7 with respect to conduct of Petroleum Operations. Operating Committee means the Committee established by that

name in the Operating Agreement pursuant to Article 7. Participating Interest means in respect of each Party constituting the Contractor the undivided share expressed as a percentage of such Party's participation in the rights and obligations under this Contract. Parties means the parties signatory to this Contract including their successors and permitted assigns under this Contract and the term Party means any of the Parties. Petroleum means Crude Oil and/or Condensate and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale. Petroleum Operations means as the context may require Exploration Operations Development Operations or Production Operations or any combination of two or more of such operations including construction operation and maintenance of all necessary facilities plugging and abandonment of Wells safety environmental protection transportation storage sale or disposition of Petroleum to the Delivery Point Site Restoration and any or all other incidental operations or activities as may be necessary. Petroleum Produced and Saved means gross Petroleum produced minus impurities such as water or solids produced along with Petroleum Petroleum recycled to the reservoir Petroleum used in Petroleum Operations or flared or otherwise unavoidably lost under the provisions of the Contract. Production Costs means those costs and expenditures incurred in carrying out Production Operations as classified and defined in Section 2 of the Accounting Procedure and allowed to be recovered in terms of Section 3 thereof. Production Operations means all operations conducted for the purpose of producing Petroleum from the Development Area after the commencement of production from the Development Area including the operation and maintenance of all necessary facilities therefor. Profit Petroleum means the total value of Petroleum Produced and Saved from the Contract Area in a particular period as reduced by Cost Petroleum and calculated as provided in Article 16. Recompletion means an operation whereby a completion in one zone is abandoned in order to attempt a completion in a different zone within an existing Well bore. Reservoir means a naturally occurring discrete accumulation of Petroleum. Rules means the Petroleum and Natural Gas Rules 1959 and any amendments made thereto from time to time. Section means a section of the Accounting Procedure. Self-sufficiency means in relation to any

Year that the volume of Crude Oil and Crude Oil equivalent of Petroleum products exported from India during that Year either equals or exceeds the volume of Crude Oil and Crude Oil equivalent of Petroleum products imported into India during the same Year as determined by Government.

Site Restoration shall mean all activities required to return a site to its state as of the Effective Date pursuant to the Contractors environmental impact study and approved by the Government or to render a site compatible with its intended after use to the extent reasonable after cessation of Petroleum Operations in relation thereto and shall include where appropriate proper abandonment of Wells or other facilities removal of equipment structures and debris establishment of compatible contours and drainage replacement of top soil revegetation slope stabilisation infilling of excavations or any other appropriate actions in the circumstances.

Statement or Statements refers to the statements required to be furnished in accordance with Appendix C of this Contract.

State Government means any government of a state of the Union of India which has control over the Contract Area for the purpose of grant of Licenses Leases. In case the Contract Area covers more than one state the State Government shall include all such governments of those states.

Subcontractor means any company or person contracted by the Contractor or Operator to provide goods or services with respect to Petroleum Operations.

1.78 1.79 1.80 1.81 1.82 1.83 1.84 1.85 1.86 1.87 1.88 1.89 1.90 1.91

US or USD or US Dollar or United States Dollar means the currency of the United States of America.

Well means a borehole made by drilling in the course of Petroleum Operations but does not include a seismic shot hole.

Work Programme means a work programme formulated for the purpose of carrying out Petroleum Operations.

Year means a Financial Year.

ARTICLE 2 PARTICIPATING INTERESTS

2.1 The initial Participating Interest of the Parties comprising the Contractor shall be as follows

OIL GGRB 75 25 seventy five per cent twenty five per cent

2.2 Except as provided in this Article or elsewhere in this Contract the rights and obligations of the Parties comprising the Contractor shall include but not be limited to

a the right to take Cost Petroleum in accordance with the provisions of Article 15;

b the right to take its Participating Interest share of Profit Petroleum in accordance with the provisions of Article 16;

c the

right to receive its Participating Interest share of any inental income and receipts arising from Petroleum Operations; andd the obligation to contribute its Participating Interest share of costs and expenses including Contract Costs. ARTICLE 3LICENSE AND EXPLORATION PERIOD3.1 The Exploration Period shall begin on the Effective Date and shall consist of two Exploration Phases first exploration Phase shall be for a period not exceeding four 4consecutive Contract Years and second Exploration Phase shall be for a period not exceeding three 3 consecutive Contract Years for a total period not exceeding seven7 consecutive Contract Years unless extended pursuant to the terms of this Contract.3.2 Except as otherwise provided in this Contract the term of the first Exploration Phase shall not exceed 4 four consecutive Contract Years hereinafter referred to as thefirst Exploration Phase.3.3 3.4 Except as otherwise provided in this Contract the term of the second Exploration Phase shall not exceed 3 three consecutive Contract Years from the end of the firstExploration Phase hereinafter referred to as the second Exploration Phase.At the expiry of any Exploration Phase of the Exploration Period provided that the Contractor has completed the Minimum Work Programme for that Exploration Phasethe Contractor shall have the option exercisable by giving a written notice to the Government at least thirty 30 days prior to the expiry of the relevant Phase either a to proceed to the next Exploration Phase on presentation of the requisite guarantees as provided for in Article 29; orb to relinquish the entire Contract Area except for any Discovery Area and any Development Area and to conduct Development Operations and ProductionOperations in relation to any Commercial Discovery in accordance with the terms of this Contract and the Contractor shall have no further obligation in respectof the Minimum Work Programme under Article 5 for any subsequent Exploration Phases of the Exploration Period.If neither of the options provided for in paragraphs a and b hereof is exercised by the Contractor this Contract shall terminate at the end of the then currentExploration Phase and the License shall be automatically cancelled.3.5 3.6 3.7 3.8 3.9 3.10 If at the end of an Exploration Phase the Minimum Work Programme for that phase is not completed the time for completion of the said Minimum Work Programme shallbe extended for a period necessary to enable completion thereof but not exceeding

six 6 months provided that the Contractor submits his request by giving a written notice to the Government at least thirty 30 days prior to the expiry of the relevant Phase and can show technical or other good reasons for noncompletion of the Minimum Work Programme and the Management Committee gives its consent to the said extension and provided further that the period of such extension shall be subtracted from the next succeeding Exploration Phase if any. In case the Minimum Work Programme of any particular Exploration Phase is completed before stipulated time as provided in the Article 3.2 the time so saved will be added to the next Exploration Phase if so requested by the Contractor giving a notice in writing to the Government thirty 30 days prior to such early completion of the Phase and in that event the provision of the Article 3.4 shall apply immediately after such early completion of the Phase. If at the end of an Exploration Phase execution of any Work Programme is in progress and which is in addition to the Minimum Work Programme such Exploration Phase shall be extended for a period not exceeding six 6 months to enable completion thereof provided that the Minimum Work Programme for such Phase has been completed and the Management Committee gives its consent to the said extension as provided in the Article 3.5. In the event of an extension as provided for herein the notice referred to in Article 3.4 shall be given at least thirty 30 days prior to the expiry of the relevant extension. Where sufficient time is not available prior to the expiry of the Exploration Period to complete an Appraisal Programme at the request of the Contractor the Government shall extend the Exploration Period for such period not exceeding eighteen 18 months as may be mutually agreed between the Parties for the Appraisal Programme to be carried out and for the Contractor and the Management Committee to comply with the provisions of Article 10 and Article 21. If no Commercial Discovery has been made in the Contract Area by the end of the Exploration Period the Contract shall terminate. If this Contract is terminated in accordance with its terms the License shall be automatically cancelled. If at the expiry of the Exploration Period a development plan for development of a Commercial Discovery and an application for Lease is under consideration by the Management Committee or Government as the case may be pursuant to Articles 10 11 and 21 respectively the License shall continue in force with

respect to that part of the Contract Area to which the application for the Lease relates pending a decision on the proposed development plan and the application for the Lease but shall cease to be in force and effect with respect to the remainder of the Contract Area.

ARTICLE 4 RELINQUISHMENT

4.14.24.44.54.64.7 If at the end of the first Exploration Phase the Contractor elects pursuant to Article 3.4 to continue Exploration Operations in the Contract Area in the second Exploration Phase the Contractor shall have the option to relinquish a part of the Contract Area in simple geometrical shape. In case the Contractor exercises its option to relinquish a part of the Contract Area at the end of the first Exploration Phase then such area to be relinquished shall not be less than twenty five percent 25 of the original Contract Area and the Contractor shall be entitled to retain the balance area including any Development Area and Discovery Area in not more than three 3 areas of simple geometrical shapes. Notwithstanding the provision of this Article 4.1 the Contractor shall be permitted to retain the Development Areas and Discovery Areas in accordance with Article 3.4. At the end of the third Exploration Phase the Contractor shall retain only Development Areas and Discovery Areas. If the Contractor exercises the option provided for in paragraph b of Article 3.4 the Contractor shall after any Discovery Areas or Development Areas have been designated relinquish all of the Contract Area not included within the said Discovery Areas or Development Areas. As and when the Contract is terminated under the provisions of Article 3 or in accordance with any other provisions of this Contract the entire Contract Area remaining with the Contractor shall be deemed to have been relinquished by the Contractor as on the date on which the Contract is terminated. Relinquishment of all or part of the Contract Area or termination of the Contract shall not be construed as absolving the Contractor of any liability undertaken or incurred by the Contractor in respect of the Contract Area during the period between the Effective Date and the date of such relinquishment or termination. Subject to Article 14.9 the liability of the Contractor shall be limited to any liability undertaken or incurred in respect of relating to or connected with the Contract and/or any claim arising out of or in relation to the act of negligence misconduct commission or omission in carrying out Petroleum Operations during the period between the Effective Date and

the date of relinquishment of the Contract Area or termination or expiry of the Contract as the case may be.

ARTICLE 5 WORK PROGRAMME

5.15.2 The Contractor shall commence Petroleum Operations not later than six (6) months from the Effective Date. In addition to the Bid Work Programme Commitment in first Exploration Phase specified below in Article 5.2.1 and 5.3 the Contractor shall be required to undertake and complete the 2D seismic API in grid size of 8 (eight) KM x 8 (eight) KM covering the entire Contract Area herein referred to as Mandatory Work Programme during first Exploration Phase. In case due to any reason intrinsic to the Contract Area reasons the Contractor is not able to cover any part of the contract area by 2D seismic survey of grid size specified in this Article the Contractor shall submit a proposal for substitution of the shortfall in the Mandatory Work Programme to the Management Committee for approval. The Management Committee shall consider and take a reasoned unanimous decision on the proposal of the Contractor in a timely manner. The Management Committee may ask the contractor by giving a reasonable time any relevant information details date to enable it to take a decision on the proposal. The Management Committee shall ensure that the substituted work programme shall be at least equal to the shortfall in the mandatory Work Programme when evaluated in terms of efforts and expenditure. In case Management Committee is not able to decide unanimously the matter may be referred for approval of the Government. In case no proposal is received from the Contractor for the substitution and fails to complete Mandatory Work Programme the provision of Article 5.6 shall apply.

5.2.1 During the currency of the first Exploration Phase as per Article 3.2 the Contractor shall complete the following Work Programme:

- i A seismic programme consisting of the acquisition processing and interpretation of 250 (two hundred fifty) line kilometers of 2D and 700 (seven hundred) sq kms of 3D seismic data in relation to the exploration objectives;
- ii Reprocessing of 463 (four hundred sixty three) line kilometer of 2D seismic;
- iii Gravity magnetic survey API of 2500 (two thousand five hundred) stations;
- iv Any other Surveys API Geochemical survey of 500 (five hundred) samples;

Twelve (12) Exploration Wells each shall be drilled to at least one of the following depths:

- i One (1) Well 2000 (two thousand) meters
- ii One (1) Well 2200 (two thousand two hundred) meters
- iii One (1) Well 2400 (two thousand four hundred) meters
- iv One (1) Well 2600 (two thousand six hundred) meters

Well 2200 two thousand two hundred meters One 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersOne 1 Well 2500 two thousand five hundred metersto Basement; andthat point below which further drilling becomes impracticable due to geological conditions encountered and drilling would be abandoned by areasonable prudent operator in the same or similar circumstances. Abandonment of drilling under this provision by the Contractor would requireunanimous approval of the Management Committee.5.3 During the currency of the second Exploration Phase as per Article 3.3 the Contractor shall complete the following Work Programmea One 1 Exploration Well shall be drilled to at least one of the following depthsi One 1 Well 2500 two thousand five hundred metersii to Basement; andiii that point below which further drilling becomes impracticable due to geological conditions encountered and drilling would be abandoned by a reasonableprudent operator in the same or similar circumstances. Abandonment of drilling under this provision by the Contractor would require unanimousapproval of the Management Committee.5.4 The actual depth objective for each of the Wells shall be determined by the Contractor in the light of the advice of the Management Committee before the commencementof the drilling. Each Well which reaches the geological objective for which the depth objective was determined shall be deemed to have been drilled to the depthobjective or to actual total depth whichever is greater. The Contractor shall ensure that all relevant subsurface geological geochemical and geophysical informationnecessary for the attainment of the exploration objectives in accordance with modern oilfield and petroleum industry practices is obtained during exploratory drilling. 5.55.65.75.85.9If the depthgeological objective of the Well is not achieved for any reason a substitute Well shall be drilled of the same specifications as stipulated in and subject toArticles 5.2 5.3 as the case may be.Subject to Article 31 the Contractor undertakes to complete the Mandatory Work Programme and Minimum Work

Programme in accordance with Articles 5.2 5.2.15.3 and 5.5 as the case may be. In the event the Contractor fails to fulfill the said Mandatory Work Programme or Minimum Work Programme or both by the end of the relevant Exploration Phase or early termination of the Contract by the Government for any reason whatsoever each Company constituting the Contractor shall pay to the Government within sixty 60 days following the end of the relevant Exploration Phase or early termination of the Contract as may be the case its Participating Interest share for an amount which when evaluated in terms of the Mandatory Work Programme or Minimum Work Programme specified for the relevant Phase is equal to the amount which would be required to complete the said Mandatory Work Programme of Minimum Work Programme or both. For determination of this amount available relevant information including the Budget and modern oilfield and petroleum industry practices may be taken into account. If the Minimum Work Programme for the second Exploration Phase has been completed earlier than eighteen months from the end of the Phase the Contractor shall meet with the Government to discuss the possibility of early relinquishment unless the Contractor undertakes further work with the approval of the Management Committee. In the event that the Contractor has carried out work in excess of the Minimum Work Programme in any Exploration Phase the excess exploration work done shall be set off against the Minimum Work Programme for the following Exploration Phase. As soon as possible after the Effective Date and thereafter within ninety 90 days before commencement of each following Year the Contractor shall submit to the Management Committee the Work Programmes and the Budgets relating to Petroleum Operations to be carried out during the relevant Year. Work Programme and Budgets for the Exploration Period shall include work sufficient to meet the relevant Minimum Work Programme with respect to each Exploration Phase specified in this Article 5.5.10 The Contractor may propose modifications or revisions to the details of a reviewed or an approved Work Programme and Budget as the case may be in the light of the then existing circumstances and shall submit to the Management Committee modifications or revisions to the Work Programme and Budget referred to in Article 5.9.5.11 Work Programmes and Budgets and any modifications or revisions thereto

relating to Exploration Operations shall be submitted to the Management Committee for review and advice as provided in Article 6.5. Work Programmes and Budgets related to Development Operations and Production Operations and any modifications or revisions thereto shall be submitted to the Management Committee for approval as provided in Article 10 and Article 21.

ARTICLE 6 MANAGEMENT COMMITTEE

6.1 6.2 6.3 6.4 There shall be constituted a committee to be called the Management Committee with functions as stated herein below. Government shall nominate two members representing Government in the Management Committee whereas each Company constituting the Contractor shall nominate one member each to represent Company in the Management Committee provided that in case the Contractor constitutes only one Company that Company shall have two members. The Parties shall nominate the members to the Management Committee within thirty days of the Effective Date. Each Party may nominate alternate members with full authority to act in the absence and on behalf of the members nominated under Article 6.2 and may at any time nominate another member or alternate member to replace any member nominated earlier by notice to other members of the Management Committee. One representative of the Government shall be designated as the Chairman of the Management Committee and the second representative of the Government shall be designated as the Deputy Chairman. The member of the Operator or the member designated by the Operator where Operator has two members in the Management Committee shall be designated as the Secretary of the Committee.

6.5 Operator on behalf of the Contractor with the approval of Operating Committee if constituted under the Article 7.4 or in case of a single Party constituting the Contractor then that Party shall submit following matters to the Management Committee for review and it shall have advisory functions:

- a the annual Work Programmes and Budgets in respect of Exploration Operations and any revisions or modifications thereto;
- b annual work progress and costs incurred thereon;
- c proposals for surrender or relinquishment of any part of the Contract Area by the Contractor;
- d proposals for an Appraisal Programme or revisions or additions thereto and the declaration of a Discovery as a Commercial Discovery;
- e any other matter required by the terms of this Contract to be submitted to it for review or

advice; andf any other matter which the Contractor dees to submit for review or advice including matters concerning interParty relationships.6.6 The following matters shall be submitted by Operator on behalf of the Contractor with the approval of Operating Committee if constituted under the Article 7.4 or in caseof single Party constituting the Contractor then by that Party to the Management Committee for approvala Annual Work Programmes and Budgets in respect of Development Operations and Production Operations and any modifications or revisions thereto;b proposals for the approval of development plans as may be required under this Contract or modifications or revisions to a Development Plan;c determination of a Development Area;d appointment of auditors along with scope of audit approval and adoption of audited report submitted under Article 25.4.3;e collaboration with licensees or contractors of other areas;f claims or settlement of claims for or on behalf of or against the Contractor in excess of limits fixed by the Management Committee from time to time;gproposal about abandonment planSite Restoration as required to be submitted under Article 14.10;h any other matter required by the terms of this Contract to be submitted for the approval of the Management Committee;i any other matter which the Contractor dees to submit to it; andj any matter which Government refers to the Management Committee for its consideration and reasoned opinion.6.7 Unless agreed otherwise by all the members of the Management Committee the Management Committee shall meet at least once every six 6 months during theExploration Period and thereafter at least once every three 3 months or more frequently at the request of any member. The Secretary with the approval of theChairman shall convene each meeting by notifying the members twenty eight 28 days prior to such a meeting or a shorter period of notice if the membersunanimously so agree of the time and place of such meeting and the purpose thereof and shall include in such notice a provisional agenda for such meeting. TheChairman shall be responsible for processing the final agenda for such meeting and the agenda shall include all items of business requested by the members to beincluded provided such requests are received by the Secretary at least ten 10 days prior to the date fixed for the meeting. The Secretary shall forward the agenda to themembers at least seven 7 Business Days prior to the date fixed for the meeting.

Matters not included in the agenda may be taken up at the meeting by any member with the unanimous consent of all the members whether present or not present at the meeting.

6.8 The Chairman or the Deputy Chairman as may be the case shall preside over the meetings of the Management Committee and in their absence any other member representing Government and present shall preside over the meetings.

6.9 6.10 6.11 Secretary to the Management Committee shall be responsible inter alia for preparation of the minutes of every meeting in the English language and provision to every member of the Management Committee with two 2 copies of the minutes approved by the Chairman within three 3 Business Days of the meeting. Unless agreed otherwise by all the members of the Management Committee the minutes of a meeting shall be finalised by the Management Committee within three 3 Business Days thereafter. Members shall notify the Chairman and the other members of their approval of the minutes by putting their signatures on one copy of the minutes and returning the same to the Chairman. Members may suggest any modification to the minutes while returning the signed copy. Members may also communicate with the Chairman through telex cable or facsimile or any other effective mode of communication agreed by all the members of the Management Committee. If the Chairman or any other member does not agree with the modification to the minutes suggested by any member the matter shall be brought to the attention of the other members and resubmitted to the Management Committee at the next meeting and the minutes shall stand approved as to all other matters. If a member fails to respond within the aforesaid three 3 Business Day period unless agreed otherwise by the Management Committee as herein provided the minutes shall be deemed to be approved by such member. Any member shall be entitled if either he or his alternate is unable to attend a meeting to cast his vote by telex cable facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee and received by the Chairman prior to the date on which the vote is taken in the course of the meeting or by giving a prior written notice to all other members appoint a member with his prior consent representing another Party in the Management Committee as its proxy to attend a meeting and to exercise the appointing members right to vote at

the meeting whether as directed by the appointing member or otherwise. A member appointed as a proxy and attending a meeting shall be present in two separate capacities and vote accordingly. All such votes shall have the same effect as if that member had been present and so voted at the meeting. In case of urgency where Operating Committee has made a recommendation together with reasons to the Chairman requiring consideration of a matter by the Management Committee without delay Chairman after being satisfied may waive the requirements of notice period for the meeting and circulation of agenda to such extent as would be consistent with the urgency and consideration of the matter by the Management Committee. Alternatively Chairman may approve submission of notice and agenda to members by telex or facsimile transmission or any other effective mode of communication agreed by all the members of the Management Committee receipt of which shall be confirmed by telephone by the Chairman requiring the members to confirm their decision by these modes of communication not later than three 3 Business Days from confirmation of receipt of notice and agenda by the member. Any member failing to convey the decision within the time limits of three 3 Business Days shall be deemed to have voted in favour of the proposal. The result of any such vote shall be notified by the Chairman to all the members. The meetings of the Management Committee shall be held in India unless otherwise mutually agreed by the members of the Management Committee. All expenses of the members of the Management Committee attending meetings shall be borne by the respective Party and shall in no event be cost recoverable. All matters requiring the approval of the Management Committee shall be generally approved by a unanimous vote of the members of the Management Committee present as well as the views of the members received by some other mode of communication. In case unanimity is not achieved in decision making process within a reasonable period as may be required under the circumstances the decision of the Management Committee shall be approved by the majority Participating Interest of seventy percent 70 or more with Government representative having a positive vote in favour of the decision. There shall be a quorum of the Management Committee for holding a meeting and making decisions with each Party to the Contract represented by at least one

of its nominated members in the Management Committee either present in person or represented as per Article 6.10. If there is no quorum in a meeting the meeting shall stand postponed to the same day and time in the next week and if quorum is not present or represented even in the next meeting and subject to a Government member being present the members present and represented will constitute the quorum and take decisions and decisions taken by such quorum shall be final and binding to all the absenting Parties or Parties not represented notwithstanding the provisions of Article 6.13. The Management Committee if it considers necessary may appoint legal financial or technical subcommittees comprised of such representatives as may be agreed by the Management Committee to consider any matter requiring approval or decision of the Management Committee. Such subcommittee expenses shall form part of Contract Cost with relevant cost classification as decided by the Management Committee pursuant to the Section 2 of the Accounting Procedure and will be cost recoverable. In the event a Party to the Contract is not entitled to vote in the Operating Committee meetings being in default under the Operating Agreement and Operator notifies Chairman of the default by the Party then the issue of exercising voting right by such defaulting Party in the Management Committee meetings shall be discussed by the Management Committee. The Management Committee excluding the defaulting Party after duly hearing the views of the defaulting Party on the matter of their default under Operating Agreement shall take unanimous decision on exclusion or otherwise of the defaulting Party from voting in the Management Committee meetings. For avoidance of any doubt it is clearly understood that unanimous decision by the Management Committee referred to in this Article 6.16 excludes defaulting Party from such decision. Accordingly if the Management Committee decides to exclude the defaulting Party from voting in the Management Committee then the said Party shall not be entitled to vote in the meetings of the Management Committee under Contract. In that event notwithstanding the provisions of Article 6.13 decisions of the Management Committee shall be made by vote of the members of the Management Committee excluding the member appointed by the said Party in default and any vote or purported vote by such member in the Management Committee shall be ignored. The said Party in default shall

be bound by all decisions of the Management Committee. The nondefaulting Parties under the Operating Agreement shall indemnify Government against any claims of whatsoever nature which may arise due to exclusion of defaulting Party from voting in the Management Committee.

OPERATORSHIP JOINT OPERATING AGREEMENT AND OPERATING COMMITTEE

ARTICLE 7.17.27.3 OIL shall be the Operator for the purpose of carrying out Petroleum Operations pursuant to this Contract during the term of the Contract. No change in the operatorship shall be effected without the consent of the Government and such consent shall not be unreasonably withheld. The functions required of the Contractor under this Contract shall be performed by the Operator on behalf of all constituents of the Contractor subject to and in accordance with the terms and provisions of this Contract and generally accepted modern oilfield and petroleum industry practices provided however that this provision shall not be construed as relieving the constituents of the Contractor from any of its obligations or liability under the Contract.

7.4 Within forty five 45 days of the Effective Date or such longer period as may be agreed to by Government the Companies constituting the Contractor shall execute a Joint Operating Agreement. The said agreement shall be consistent with the provisions of this Contract and shall provide for among other things a b the appointment resignation removal and responsibilities of the Operator; the establishment of an Operating Committee comprising of an agreed number of representatives of the Companies chaired by a representative of the Operator; functions of the said Operating Committee taking into account the provisions of the Contract procedures for decision making frequency and place of meetings; and contribution to costs default sole risk disposal of Petroleum and assignment as between the Parties to the Joint Operating Agreement.

7.4.1 7.4.2 Operator shall provide to the Government a copy of the duly executed Joint Operating Agreement within thirty 30 days of its execution date or such longer period as may be agreed to by the Government. In case a single Company constitutes the Contractor the provisions of Article 7.4 and 7.4.1 shall not be applicable. However in case of increase in the number of constituents of the Contractor the provisions of Article 7.4 and 7.4.1 shall apply from the date of such increase in the

number of the constituents. ARTICLE 8 GENERAL RIGHTS AND OBLIGATIONS OF THE PARTIES

8.1 Subject to the provisions of this Contract the Contractor shall have the following rightsa subject to the provisions of Article 12 the exclusive right to carry out Petroleum Operations to recover costs and expenses as provided in this Contract. The rightshall exclude exploitation of coalignite bed methane CBM by the Contractor in the Contract Area;b the right to use free of charge such quantities of Petroleum produced as are reasonably required for conducting Petroleum Operations in the Contract Area inaccordance with generally accepted modern oilfield and petroleum industry practices;c the right to lay pipelines build roads construct bridges ferries aerodromes landing fields radio telephones and related communication and infrastructure facilitiesand exercise other ancillary rights as may be reasonably necessary for the conduct of Petroleum Operations subject to such approvals as may be required and theapplicable laws in force from time to time for the regulation and control thereof;d the right to use all available technical data seismic and well information maps samples etc. of the Contract Area as on the Effective Date free of charge subject tonominal copyingreproduction costs for further Petroleum Operations. The Contractor shall submit the list of all data required by them to Directorate General ofHydrocarbons DGH based on the list of data provided in the information docket for the block pertaining to the Contract Area as soon as possible but not laterthan one hundred and eighty 180 days from the execution of the Contract and the same if available and reproducible shall be made available to the Contractorin the office of DGH within ninety 90 days from the submission of such request for data by the Contractor provided the Effective Date of the Contract hascommenced and the Contractor has furnished relevant guarantees under Article 29 of the Contract.e such other rights as are specified in this Contract.

8.2 The Government reserves the right to itself or to grant to others the right to prospect for and mine minerals or substances other than Petroleum within the Contract Area;provided however that if after the Effective Date others are issued rights or the Government proceeds directly to prospect for and mine in the Contract Area anyminerals or substances other than Petroleum the Contractor shall use its best efforts to avoid obstruction to or interference with

such operations within the Contract Area and the third parties and/or the Government as the case may be shall use best efforts to ensure that operations carried out do not obstruct or unduly interfere with Petroleum Operations in the Contract Area.

8.3 The Contractor shall, having due regard to modern oilfield and petroleum industry practices, a) except as otherwise expressly provided in this Contract, conduct all Petroleum Operations at its sole risk, cost and expense and provide all funds necessary for the conduct of Petroleum Operations including funds for the purchase or lease of equipment, materials or supplies required for Petroleum Operations as well as for making payments to employees, agents and Subcontractors; b) conduct all Petroleum Operations within the Contract Area diligently, expeditiously, efficiently and in a safe and workmanlike manner pursuant to the Work Programme formulated in accordance with Contract; c) ensure provision of all information, data, samples etc. which may be required to be furnished under the applicable laws or under this Contract; d) ensure that all equipment, materials, supplies, plant and installations used by the Contractor, the Operator and Subcontractors comply with generally accepted standards and are of proper construction and kept in safe and good working order; e) in the preparation and implementation of Work Programmes and in the conduct of Petroleum Operations follow modern oilfield and petroleum industry practices with such degree of diligence and prudence reasonably and ordinarily exercised by experienced parties engaged in a similar activity under similar circumstances and conditions; f) the procedure for acquisition of goods and services as of the Effective Date shall be as per the Appendix F of this Contract. Based on economic considerations and generally accepted practices in the international petroleum industry with the objective of ensuring cost and operational efficiency in the conduct of Petroleum Operations, the Appendix F to this Contract may be modified or changed with the prior approval of the Management Committee when circumstances so justify; g) after the designation of a Development Area pursuant to this Contract, forthwith proceed to take all necessary action for prompt and orderly development of the Development Area and for the production of Petroleum in accordance with the terms of this Contract; h) appoint a technically competent and sufficiently experienced representative and in his

absence a suitably qualified replacement therefor who shall be resident in India and who shall have full authority to take such steps as may be necessary to implement this Contract and whose names shall on appointment within ninety 90 days after commencement of the first Contract Year be made known to the Government; i provide acceptable working conditions living accommodation and access to medical attention and nursing care for all personnel employed in Petroleum Operations; j carry out such other obligations as are specified in this Contract in particular those specified in Article 14; and k be always mindful of the rights and interests of India in the conduct of Petroleum Operations.

ARTICLE 9 GOVERNMENT ASSISTANCE

9.1 Upon application in the prescribed manner and subject to compliance with applicable laws and relevant procedures the Government or its nominee will a use their good offices to provide the right of ingress and egress from the Contract Area and any facilities used in Petroleum Operations wherever located and which may be within their control; b use their good offices when necessary to assist the Contractor in procurement or commissioning of facilities required for execution of Work Programmes including necessary approvals permits consents authorisations visas work permits Licenses including Licenses and Leases rights of way easement surface rights and security protection at the Contractors cost required pursuant to this Contract and which may be available from resources within its control; and c in the event that onshore facilities are required outside the Contract Area for Petroleum Operations including but not limited to storage loading and processing facilities pipelines and offices use their good offices in assisting the Contractor to obtain from the authorities of the state in which such facilities are required such licenses permits authorizations consents security protection at the Contractors cost surface rights and easements as are required for the construction and operation of the said facilities by the Contractor.

ARTICLE 10 DISCOVERY DEVELOPMENT AND PRODUCTION

10.1 If and when a Discovery is made within the Contract Area the Contractor shall a forthwith inform the Management Committee and Government of the Discovery; b promptly thereafter but in no event later than a period of thirty 30 days from the date of the Discovery furnish to the Management Committee and Government particulars in writing of the Discovery; and c promptly run

tests to determine whether the Discovery is of potential commercial interest and within a period of sixty 60 days after completion of such tests submit a report to the Management Committee containing data obtained from such tests and its analysis and interpretation thereof together with a written notification of whether in the Contractor's opinion such Discovery is of potential commercial interest and merits appraisal.

10.2 10.3 10.4 If the Contractor determines to conduct a drill stem or production test in open hole or through perforated casing with regard to any Exploration Well it shall notify the Government of the time of such test at least forty eight 48 hours prior to the proposed test and the Government shall have the right to have a representative present during such test. If pursuant to Article 10.1 c the Contractor notifies the Management Committee that the Discovery is of potential commercial interest the Contractor shall prepare and submit to the Management Committee within one hundred and twenty 120 days of such notification a proposed Appraisal Programme with a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery designed to achieve both the following objectives i determine without delay and in any event within the period specified in Article 10.5 whether such Discovery is a Commercial Discovery and ii determine with reasonable precision the boundaries of the area to be delineated as the Development Area. The proposed Appraisal Programme shall be reviewed by the Management Committee within thirty 30 days after submission thereof pursuant to Article 10.3. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor which may be revised or modified or amended by the Contractor in light of the Management Committee review shall be adopted as the Appraisal Programme and the Contractor shall promptly commence implementation thereof; and the annual Budget for the Exploration Period adopted pursuant to Article 5 shall be revised accordingly.

10.5 10.6 10.7 The Contractor shall in respect of a Discovery of Crude Oil advise the Management Committee by notice in writing within a period of eighteen 18 months from the date on which the notice provided for in Article 10.1 c was delivered whether such Discovery should be declared a Commercial Discovery or not. Such notice shall be accompanied by a report on the Discovery setting forth all relevant technical and economic data including estimated recoverable

reserves sustainable production levels estimated development and production expenditures prevailing and forecasted prices and other pertinent technical and economic factors according to modern oilfield and petroleum industry practices as well as all evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or for the Contractor with respect to the Discovery and any other relevant information. If the Contractor is of the opinion that Crude Oil has been discovered in commercial quantities it shall submit the proposal to the Management Committee for review that the Discovery be declared a Commercial Discovery. In the case of a Discovery of Gas the provisions of Article 21 shall apply. The Management Committee shall within forty 40 days of the date of the notice referred to in Article 10.5 review the proposal of the Contractor and request any other additional information it may reasonably require so as to complete the review of the proposal made by the Contractor. The Contractor shall furnish the additional information within thirty 30 days from the date of the request. The review by the Management Committee shall be made and conveyed to the Contractor within the later of a ninety 90 days from the date of notice referred to in Article 10.5 or b forty 40 days of receipt of such other information as may be required under this Article. If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred in the Article 10.6 within two hundred 200 days of the declaration of the Discovery as a Commercial Discovery the Contractor shall submit to the Management Committee a comprehensive development plan of the Commercial Discovery which shall a relate to the Discovery Area and contain a Reservoir or part thereof and the boundaries of the proposed Development Area; b be designed to ensure the most efficient beneficial and timely use of the Petroleum resources discovered; and c be prepared in accordance with sound engineering economic safety and environmental principles recognised in the generally accepted modern oilfield and petroleum industry practices. Such plan shall contain detailed proposals by the Contractor for the construction establishment and operation of all facilities and services for and inental to therecovery storage and transportation of the Petroleum from the proposed Development Area to the Delivery Point together

with all data and supporting information including but not limited to: description of the nature and characteristic of the Reservoir data statistics interpretations and conclusions on all aspects of the geology Reservoir evaluation Petroleum engineering factors Reservoir models estimates of reserve in place possible production magnitude nature and ratio of Petroleum fluids and analysis of producible Petroleum; outlines of the development project and/or alternative development projects if any describing the production facilities to be installed and the number of Wells to be drilled under such development project and/or alternative development projects if any; estimate of the rate of production to be established and projection of the possible sustained rate of production in accordance with modern oilfield and petroleum industry practices under such development project and/or alternative development projects if any which will ensure that the area does not suffer an excessive rate of decline of production or an excessive loss of Reservoir pressure; estimates of Development Costs and Production Costs under such development project and/or alternative development projects if any; Contractors recommendations as to the particular project that it would prefer; iv) Work Programme and Budget for development proposals relating to the proposed Development Area; vi) anticipated adverse impact on the environment and measures to be taken for prevention or minimisation thereof and for general protection of the environment in conduct of operations; viii) measures to be taken for the health and safety of persons employed in Petroleum Operations; ix) the information required in Article 21.10.8 A proposed development plan submitted by the Contractor pursuant to Article 10.7 may be approved by the Management Committee within one hundred and ten 110 days of submission thereof or eighty 80 days of receipt of any additional information requested by the Management Committee. In case the Management Committee requires any reasonable additional information the same shall be requested by it within eighty 80 days from the submission of the development plan. The Contractor shall provide such additional information within thirty 30 days from the request by the Management Committee. If within a period of one hundred and ten 110 days after submission of a proposed development plan or eighty 80 days from the receipt of any additional information where asked by the Management Committee

the Management Committee fails to convey a decision to the Contractor the Contractor shall have option to submit the proposal to the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development plan for the approval of the Government. The Government shall respond on the proposed development plan submitted by the Contractor within one hundred and ten 110 days. In case Government refuses to approve the proposed development plan it shall convey the reasons for such refusal and the Contractor shall be given opportunity to make appropriate modifications to meet concerns of Government and the provisions of the foregoing Article and resubmit the plan within ninety 90 days from the date of receipt of refusal from the Government. 10.9 10.10 10.11 10.12 10.13 10.14 A Development Plan approved by the Management Committee or Government as may be the case from time to time shall commit the Contractor to the obligations stipulated in Articles 10.10 to 10.12. Work Programmes and Budgets for Development and Production Operations shall be submitted to the Management Committee as soon as possible after the approval of a Development Plan under Article 10.8 and thereafter not later than 31st December each Year in respect of the Year immediately following. The Management Committee when considering any Work Programme and Budget may require the Contractor to prepare an estimate of potential production to be achieved through the implementation of the said Work Programme and Budget for each of the three 3 Years following the Year to which the Work Programme and Budget relate. If major changes in yearly estimates of potential production are required these shall be based on evidence necessitating such changes. Not later than the fifteenth 15th of January each Year in respect of the Year immediately following commencement of Commercial Production the Contractor shall determine the Programme Quantity with the approval of the Management Committee. The Programme Quantity for any Year shall be the maximum quantity of Petroleum based on Contractors estimates as approved by the Management Committee which can be produced from a Development Area consistent with modern oilfield and petroleum industry practices and minimising unit production cost taking into account the capacity of the producing Wells gathering lines separators storage capacity and other

production facilities available for use during the relevant Year as well as the transportation facilities up to the Delivery Point. Proposed revisions to the details of a Development Plan or an annual Work Programme or Budget in respect of Development and Production Operations shall for good cause and if the circumstances so justify be submitted for approval to the Management Committee. In the event the area encompassing the Commercial Discovery extends beyond the Development Area designated in the Development Plan either within the original Contract Area but subsequently relinquished or outside the original Contract Area the Management Committee may make recommendations to the Government concerning enlargement of the Development Area provided the same was not awarded to any other company by the Government or is not held by any other party or not on offer by the Government and no application for a License or Lease is pending with the Government. However in case the area is held by any other party or on offer by the Government or application for License or Lease is pending with the Government the Management Committee shall notify the same to the Government for further action on the matter. Government may consider such request for extension at its sole discretion and on terms and conditions which it may consider fit.

ARTICLE 11 PETROLEUM EXPLORATION LICENSE AND MINING LEASE 11.1 11.2 11.3 11.4

The Contractor shall submit an application for grant of License in respect of the Contract Area as early as possible but not later than fifteen 15 Business Days from the date of execution of this Contract. On submission of a development plan of a Commercial Discovery pursuant to Article 10.7 the Contractor shall submit an application for a Lease in respect of the proposed Development Area to the relevant State Governments. Where a part of a Reservoir in respect of which a Commercial Discovery has been declared extends beyond the Contract Area subject to Article 10.14 such area may be included in the proposed Development Area in relation to which application for a Lease is made on terms and conditions as decided by the Central Government; provided that such area is not subject to a license or lease granted to any other person; not the subject of negotiations, bidding or contract awarded for a license or lease; and available for licensing i.e. is not an area over which Petroleum Operations are excluded. Where a Development Plan has been approved pursuant to

Article 10 and the Contractor has complied with the terms and conditions of the License and this Contract and is not in breach of any of the terms thereof or the provisions of any law and subject to normal Government clearances/approvals being obtained by the Contractor as applicable before grant/issue of the Lease the Central Government will assist the Contractor in obtaining the Lease from the relevant State Governments over the Development Area as agreed subject to Article 11.5 to enable the Contractor to carry out Petroleum Operations in the Development Area in accordance with the Development Plan.

11.5 The Lease shall be granted for an initial period of twenty 20 years from the date of grant thereof subject to a cancellation in accordance with its terms or for termination of this Contract in accordance with its terms;

b extension by mutual agreement between the Parties for five 5 years or such period as may be agreed after taking into account the balance recoverable reserve and balance economic life of the Field/Development Area from the expiry of the initial period provided that in the event of a Commercial production of Non Associated Natural Gas the extension may be for a period of ten 10 years or such period as may be mutually agreed between the Parties after taking into account the balance recoverable reserves and balance economic life of the Field/Development Area from the date of expiry of the initial term; and

c the terms of this Contract and other terms and conditions as set forth in such Lease be consistent with this Contract and the relevant legislation.

ARTICLE 12 UNIT DEVELOPMENT

12.1 If a Reservoir in a Discovery Area is situated partly within the Contract Area and partly in an area in India over which other parties have a contract to conduct petroleum operations and both parts of the Reservoir can be more efficiently developed together on a commercial basis on receiving information in writing from any party to these contracts or any information on this from any bonafide source the Government may for securing the more effective recovery of Petroleum from such Reservoir by notice in writing to the Contractor require that the Contractor

a collaborate and agree with such other parties on the joint development of the Reservoir ;

b submit such agreement between the Contractor and such other parties to the Government for approval within one hundred and eighty 180 days; and

c prepare a plan for such joint development of the said Reservoir within one hundred and eighty 180 days of the

approval of the agreement referred to in b above.12.2 12.3 If no plan is submitted within the period specified in Article 12.1 c or such longer period as the Government and the Contractor and the other parties referred to in Article 12.1 may agree or if such plan as submitted is not acceptable to the Government and the Parties cannot agree on amendments to the proposed joint development plan the Government may cause to be prepared at the expense of the Contractor and such other parties a plan for such joint development consistent with generally accepted modern oilfield and petroleum industry practices which shall take into consideration any plans and presentations made by the Contractor and the aforementioned other parties. If the parties are unable to agree on the proposed plan for joint development the Government may call for a joint development plan from an independent agency which agency may make such a proposal after taking into account the position of the parties in this regard. Such a development plan if approved by Government shall be binding on the parties notwithstanding their disagreement with the plan. However the Contractor may in case of any disagreement on the issue of joint development or the proposed joint development plan prepared in accordance with Article 12.2 or within forty five 45 Business Days of the plan approval as aforesaid in this Article notify the Government that it elects to surrender its rights in the Reservoir Discovery in lieu of participation in a joint development.12.4 12.5 If a proposed joint development plan is agreed and adopted by the parties or adopted following determination by the Government the plan as finally adopted shall be the approved joint development plan and the Contractor shall comply with the terms of the said development plan as if the Commercial Discovery is established. The provisions of Articles 12.1 12.2 and Article 12.3 shall apply mutatis mutandis to a Discovery of a Reservoir located partly within the Contract Area which although not equivalent to a Commercial Discovery if developed alone would be a Commercial Discovery if developed together with that part of the Reservoir which extends outside the Contract Area to the areas subject to contract for petroleum operations by other parties.

ARTICLE 13 MEASUREMENT OF PETROLEUM

13.1 Petroleum used for internal consumption for Petroleum Operations flared saved and sold from the Contract Area shall be measured by methods and appliances generally accepted

and customarily used in modern oilfield and petroleum industry practices and approved by the Management Committee and the Government.13.2 The Government may at all reasonable times inspect and test the appliances used for measuring the volume and determining the quality of Petroleum provided that anysuch inspection or testing shall be carried out in such a manner so as not to unduly interfere with Petroleum Operations.13.3 Before commencement of production from the Contract Area the Parties shall mutually agree onabcdmethods to be employed for measurement of volumes of Petroleum production;the point or points at which Petroleum shall be measured and the respective shares allocated to the Parties in accordance with the terms of this Contract;the frequency of inspections and testing of measurement appliances and relevant procedures relating thereto; andthe consequences of a determination of an error in measurement.13.4 13.5 13.6 The Contractor shall undertake to measure the volume and quality of the Petroleum Produced and Saved from the Contract Area at the agreed measurement pointconsistent with generally accepted modern oilfield and petroleum industry practices with the frequency and according to procedures agreed pursuant to Article 13.3. TheContractor shall not make any alteration in the agreed method or procedures for measurement or to any of the approved appliances used for that purpose without thewritten consent of the Management Committee and the Government.The Contractor shall give the Government timely notice of its intention to conduct measuring operations or any agreed alteration for such operations and the Governmentshall have the right to be present at and supervise either directly or through authorised representatives such operations.The Contractor shall keep all the records of analysis and measurement of hydrocarbons calibrations and proving of measurement system and make available toGovernment or its authorized agency such records on request. ARTICLE 14PROTECTION OF THE ENVIRONMENT14.1 The Government and the Contractor recognise that Petroleum Operations will cause some impact on the environment in the Contract Area. Accordingly in performance ofthe Contract the Contractor shall conduct its Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation ofnatural resources and shall in particular;a employ modern oilfield and petroleum

industry practices and standards including advanced techniques practices and methods of operation for the prevention of Environmental Damage in conducting its Petroleum Operations; b take necessary and adequate steps to prevent Environmental Damage and where some adverse impact on the environment is unavoidable to minimise such damage and the consequential effects thereof on property and people; ii ensure adequate compensation for injury to persons or damage to property caused by the effect of Petroleum Operations; and c comply with the requirements of applicable laws and the reasonable requirements of the Government from time to time.

14.2 14.3 If the Contractor fails to comply with the provisions of paragraph bi of Article 14.1 or contravenes any relevant law and such failure or contravention results in any Environmental Damage the Contractor shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof. If the Government in accordance with the laws has good reason to believe that any works or installations erected by the Contractor or any operations conducted by the Contractor are endangering or may endanger persons or any property of any person or are causing or may cause pollution or are harming or may harm fauna or flora or the environment to a degree which the Government deems unacceptable the Government may require the Contractor to take remedial measures within such reasonable period as may be determined by the Government and to repair any such damage. If the Government deems it necessary it may also require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such remedial measures or has repaired any damage caused.

14.4 The measures and methods to be used by the Contractor for the purpose of complying with the terms of paragraph bi of Article 14.1 shall be determined in timely consultation with the Government upon the commencement of Petroleum Operations or whenever there is a significant change in the scope or method of conducting Petroleum Operations and shall take into account the international standards applicable in similar circumstances and the relevant environmental impact study carried out in accordance with Article 14.5 below. The Contractor shall notify the Government in writing of the measures and methods finally determined by the Contractor and shall cause such measures and methods to be

reviewed from time to time in the light of prevailing circumstances.14.5 The Contractor shall cause a person or persons with special knowledge on environmental matters to carry out two environmental impact studies in order to determine at the time of the studies the prevailing situation relating to the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or neighbouring areas; and to establish the likely effect on the environment human beings and local communities the flora and fauna in the Contract Area and in the adjoining or neighbouring areas in consequence of the relevant phase of Petroleum Operations to be conducted under this Contract and to submit for consideration by the Parties methods and measures contemplated in Article 14.4 for minimising Environmental Damage and carrying out Site Restoration activities.

14.5.1 14.5.2 The first of the aforementioned studies shall be carried out in two parts namely a preliminary part which must be concluded before commencement of any field work relating to a seismographic or other survey and a final part relating to drilling in the Exploration Period. The part of the study relating to drilling operations in the Exploration Period shall be approved by Government before the commencement of such drilling operations it being understood that such approval shall not be unreasonably withheld. The second of the aforementioned studies shall be completed before commencement of Development Operations and shall be submitted by the Contractor as part of the Development Plan with specific approval of Government being obtained before commencement of Development Operations it being understood that such approval shall not be unreasonably withheld.

14.5.3 The studies mentioned in Article 14.5 above shall contain proposed environmental guidelines to be followed in order to minimize Environmental Damage and shall include but not be limited to the following to the extent appropriate to the respective study taking into account the phase of operations to which the study relates a proposed access cutting; b clearing and timber salvage; c wildlife and habitat protection; d fuel storage and handling; e use of explosives; f camps and staging; g liquid and solid waste disposal; h cultural and archaeological sites; i selection of drilling sites; j terrain stabilization; k protection of freshwater horizons; l blowout prevention plan; m flaring during completion and testing of Gas and Oil Wells; n abandonment of Wells; o rig

dismantling and site completion;p reclamation for abandonment;q noise control;r debris disposal; and protection of natural drainage and water flow.14.5.4 Subject to the provision of all applicable laws and notifications on protection of environment any new project or expansion or modernization projects for petroleum operations for which a proposal is submitted by the Contractor the Government shall complete the assessment of the project within a period of ninety 90 days from the receipt of the requisite documents and data from the project authorities and completion of public hearing. The decision of the Government on the proposal of the Contractor for environmental clearance shall be conveyed within thirty 30 days thereafter. However wherever forest land is involved; the Contractor user agency shall have to obtain approval of the Central Government through the State Government concerned under the Forest Conservation Act 1980. The decision of the Central Government on such proposal of the contractor user agency shall be taken within sixty 60 days from the date of receipt of proposal of the Contractor user agency from the State Government. The State Government is required to convey its recommendations on the proposal complete in all respect to the Central Government or otherwise within ninety 90 days from the receipt of the same from the applicant.14.6 The Contractor shall ensure that a Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with modern oilfield and petroleum industry practices and that such Petroleum Operations are properly monitored;b the pertinent completed environmental impact studies are made available to its employees and to its contractors and Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and c the contracts entered into between the Contractor and its contractors and Subcontractors relating to its Petroleum Operations shall include the provisions stipulated herein and any established measures and methods for the implementation of the Contractor's obligations in relation to the environment under this Contract. The Contractor shall prior to conducting any drilling activities prepare and submit for review by the Government contingency plans for dealing with Oil spills fires accidents and emergencies designed to achieve rapid and effective emergency response. The plans referred to

above shall be discussed with the Government and concerns expressed shall be taken into account. In the event of an emergency accident Oil spill or fire arising from Petroleum Operations affecting the environment the Contractor shall forthwith notify the Government and shall promptly implement the relevant contingency plan and perform such Site Restoration as may be necessary in accordance with modern oilfield and petroleum industry practices. In the event of any other emergency or accident arising from the Petroleum Operations affecting the environment the Contractor shall take such action as may be prudent and necessary in accordance with modern oilfield and petroleum industry practices in such circumstances. In the event that the Contractor fails to comply with any of the terms contained in Article 14.7 within a period specified by the Government the Government after giving the Contractor reasonable notice in the circumstances may take any action which may be necessary to ensure compliance with such terms and to recover from the Contractor immediately after having taken such action all costs and expenditures incurred in connection with such action together with such interest as may be determined in accordance with Section 1.7 of Appendix C of this Contract.

14.7 14.7.1 14.7.2 14.8 14.9 On expiry or termination of this Contract or relinquishment of part of the Contract Area the Contractor shall subject to Article 27 remove all equipment and installations from the relinquished area or former Contract Area in a manner agreed with the Government pursuant to an abandonment plan; and b perform all necessary Site Restoration in accordance with modern oilfield and petroleum industry practices and take all other action necessary to prevent hazards to human life or to the property of others or the environment.

14.10 14.11 14.12 14.13 The Contractor shall prepare a proposal for the restoration of site including abandonment plan and requirement of funds for this and the annual contribution. This will be submitted along with the annual Budget for the consideration and approval of the Management Committee. The annual contribution shall be deposited by the Contractor in the Site Restoration fund which will be established in accordance with the scheme notified by the Government. Subject to Section 3.2 of Accounting Procedure any Site Restoration fund scheme formulated by Government and subject to provisions of this Contract any and all costs incurred by the Contractor pursuant to this

Article shall be cost recoverable including but not limited to sinking funds established for abandonment and restoration of the Contract Area. In this Article a reference to Government includes the State Government. Where the Contract Area is partly located in areas forming part of certain national parks sanctuaries mangroves wetlands of national importance biosphere reserves and other biologically sensitive areas passage through these areas shall generally not be permitted. However if there is no passage other than through these areas to reach a particular point beyond these areas permission of the appropriate authorities shall be obtained.

14.14 The obligations and liability of the Contractor for the environment hereunder shall be limited to damage to the environment which occurs after the Effective Date; and results from an act or omission of the Contractor.

ARTICLE 15 RECOVERY OF COST PETROLEUM

15.1 15.2 15.3 15.4 15.5 15.6 15.7 15.8 The Contractor shall be entitled to recover Contract Costs out of a percentage of the total value of Petroleum Produced and Saved from the Contract Area in the Year in accordance with the provisions of this Article. Exploration Costs incurred by the Contractor in the Contract Area upto the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover the aggregate of such Exploration Costs out of the Cost Petroleum at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date of such Commercial Production. The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Exploration Costs which it has incurred in any Year after the date of Commercial Production at the rate of one hundred percent 100 per annum of such Exploration Costs beginning from the date such Exploration Costs are incurred. Development Costs incurred by the Contractor in the Contract Area upto the date of first Commercial Production shall be aggregated and the Contractor shall be entitled to recover out of the Cost Petroleum the aggregate of such Development Costs at the rate of one hundred percent 100 per annum of such Development Costs beginning from the date of such Commercial Production. The Contractor shall be entitled to recover out of the Cost Petroleum from the Contract Area the Development Costs which it has incurred after the date of first Commercial Production at the rate of one hundred percent 100 per annum of such Development

Costs beginning from the date such Development Costs are incurred. The Contractor shall be entitled to recover in full during any Year the Production Costs incurred in that Year out of the Cost Petroleum. The Contractor shall be entitled to recover in full during any Year the royalty payments to the Government/State Governments in that Year out of the Cost Petroleum. If during any Year the Cost Petroleum is not sufficient to enable the Contractor to recover in full the Contract Costs due for recovery in that Year in accordance with the provisions of Articles 15.1 to 15.7 then subject to the provisions of Article 15.12a recovery shall first be made of royalty payments; and b recovery shall next be made of the Production Costs; and c recovery shall next be made of the Exploration Costs; and d recovery shall then be made of the Development Costs. The unrecovered portions of Contract Costs shall be carried forward to the following Year and the Contractor shall be entitled to recover such Contract Costs in such Year or the subsequent Years as if such Contract Costs were due for recovery in that Year or the succeeding Years until the unrecovered Contract Costs have been fully recovered out of Cost Petroleum from the Contract Area.

15.9 15.10 15.11 15.12 15.13 The maximum amount of Cost Petroleum to which the Contractor shall be entitled in accordance with the provisions of this Article shall be fifty one percent⁵¹ of the total value of the Petroleum Produced and Saved from the Contract Area. For the purposes of this Article as well as Article 16 costs receipts and income shall be converted into production unit equivalents and vice versa viz both in physical and monetary terms using the relevant prices established pursuant to Article 19 for Crude Oil and Article 21 for Natural Gas. Pending completion of the calculations required to establish definitively the Contractor's entitlement to Cost Petroleum from the Contract Area in any Year the Contractor shall take delivery provisionally of volumes of Crude Oil or Natural Gas representing its estimated Cost Petroleum entitlement calculated with reference to estimated production quantities costs and prices as established by the Contractor and approved by the Management Committee. Such provisional determination of Cost Petroleum shall be made every Quarter on an accumulative basis. Within ninety 90 days of the end of each Year a final calculation of the Contractor's entitlement to Cost Petroleum based on actual production quantities costs and prices for the entire

Year as reflected in audited accounts under Article 25.4.3 shall be undertaken and any necessary adjustments to the Cost Petroleum entitlement shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter. Where more than one Party constitutes the Contractor the percentage of the total Cost Petroleum from the Contract Area which shall be available to each such Party in any Year for recovery of its share of Contract Costs shall be determined on the basis of the respective Participating Interest of each such Party. The Contractor acknowledges that the cost estimates for Minimum Work Programme are the realistic estimate of expenditure. For the purposes of allowing cost recovery under Article 15 herein read with Section 3 of the Accounting Procedure the cost estimates given by the Contractor in the bid documents towards the Minimum Work Programme in both the Exploration Phases shall be taken as Bench Mark. Any material difference over the Bench Mark shall not be allowed for cost recovery unless the Government on the recommendation of the Management Committee agrees that the cost increase is due to change in circumstances after the Contract comes into effect. For the above purpose an itemized breakup of cost estimates given by the Contractor in the bid documents is placed at Appendix H to this Contract.

ARTICLE 16 PRODUCTION SHARING OF PETROLEUM

16.1

16.2.1 16.2.2 16.2.3 16.2.4 16.2.5 The Parties to this Contract shall share in the Profit Petroleum in each Year in accordance with the provisions of this Article. A Party's share of Profit Petroleum in any Year shall be calculated on the basis of the Investment Multiple actually achieved by the Contractor at the end of the preceding Year for the Contract Area as provided in Appendix D. When the Investment Multiple of the Contractor at the end of any Year is less than one and one half 1.5 the Government shall be entitled to take and receive ninety one percent 91 and the Contractor shall be entitled to take and receive nine percent 9 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than one and one half 1.5 but is less than two 2.0 the Government shall be entitled to take and receive sixty nine percent 69 and the Contractor shall be entitled to take and receive thirty one percent 31 of the total Profit Petroleum from the Contract Area

with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than two 2.0 but is less than two and one half 2.5 the Government shall be entitled to take and receive five percent 5 and the Contractor shall be entitled to take and receive ninety five percent 95 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than two and one half 2.5 but is less than three 3.0 the Government shall be entitled to take and receive five percent 5 and the Contractor shall be entitled to take and receive ninety five percent 95 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three 3.0 but is less than three and one half 3.5 the Government shall be entitled to take and receive five percent 5 and the Contractor shall be entitled to take and receive ninety five percent 95 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year.

16.2.6 16.3 16.4.1 16.4.2 When the Investment Multiple of the Contractor at the end of any Year is equal to or more than three and one half 3.5 the Government shall be entitled to take and receive five percent 5 and the Contractor shall be entitled to take and receive ninety five percent 95 of the total Profit Petroleum from the Contract Area with effect from the start of the succeeding Year. Any balance left to the credit of the Parties in any Site Restoration account opened pursuant to the provision of Article 14.10 after Site Restoration has been done by the Contractor in accordance with the provisions of this Contract and the laws in this regard shall be shared between the Government and the Contractor as per the Investment Multiple reached at the time of ceasing of production from the Contract Area. The Government shall have the option to take its entitlement to Profit Petroleum other than ANG or NANG either in cash or in kind in any Year. In case of ANG or NANG as the case may be the Government shall have the option to take its entitlement to Profit Petroleum in cash or in kind and such option shall be exercised at an interval of every five 5 Years from the commencement of first Commercial Production from the Contract Area. In accordance with the Article 16.4.1 The Government shall exercise such option by

giving a written notice to the Contractor not later than thirtieth 30th June in the preceding Year in which the entitlement is due. Once the Government has exercised its option the same shall continue unless the Government informs the Contractor otherwise.

16.4.3 Where the Government has informed the Contractor of its intention to take its share in kind the Parties shall mutually agree on a procedure for delivery of the Government's share of Profit Petroleum and where relevant the composition of the Petroleum which is to be delivered.

16.5 The value of the Contractor's Investment Multiple at the end of any Year in respect of the Contract Area shall be calculated in the manner provided for and on the basis of the net cash flows specified in Appendix D to this Contract. However the amount of Profit Petroleum to be shared between the Government and the Contractor shall be determined for each Quarter on an accumulative basis. Pending finalisation of accounts Profit Petroleum shall be shared between the Government and the Contractor on the basis of provisional estimated figures of Contract Costs production prices receipts income and any other income or allowable deductions and on the basis of the value of the Investment Multiple achieved at the end of the preceding Year. All such provisional estimates shall be approved by the Management Committee. When it is necessary to convert monetary units into physical units of production equivalents or vice versa the price or prices determined pursuant to Articles 19 and 21 for Crude Oil Condensate and Natural Gas respectively shall be used. Within ninety 90 days of the end of each Year a final calculation of Profit Petroleum based on actual costs quantities prices and income for the entire Year shall be completed and any necessary adjustments to the sharing of Petroleum shall be agreed upon between the Government and the Contractor within thirty 30 days and made within thirty 30 days thereafter.

Explanation The Profit Petroleum due to the Government shall be deposited with Pay Accounts officer or its successor Ministry of Petroleum Natural Gas Government of India Shastri Bhavan New Delhi by 10th of the Month following each Quarter.

16.6 The Profit Petroleum due to the Contractor in any Year from the Contract Area shall be divided amongst the Parties constituting the Contractor in proportion to their respective Participating Interest.

ARTICLE 17 TAXES ROYALTIES RENTALS DUTIES ETC.

17.1 17.2 Companies their employees persons providing any

materials supplies services or facilities or supplying any ship aircraft machinery equipment or plant whether by way of sale or hire to the Companies for Petroleum Operations or for any other purpose and the employees of such persons shall be subject to all fiscal legislation in India except where pursuant to any authority granted under any applicable law they are exempted wholly or partly from the application of the provisions of a particular law or as otherwise provided herein. Pursuant to the provisions of section 42 of the Income tax Act 1961 the allowances specified herein shall apply in computing income tax payable by a Company on its profits and gains from the business of Petroleum Operations in lieu of and not in addition to corresponding allowances provided for under the heading Profits and Gains of Business or Profession in the Income tax Act 1961. Any other allowance which are not specified herein shall be treated in accordance with the provisions of Income tax Act 1961.

17.2.1 Subject to the provisions herein below deductions at the rate of one hundred percent 100 per annum shall be allowed for all expenditures both capital and revenue expenditures incurred in respect of Exploration Operations and drilling operations. The expenditure incurred in respect of Development Operations other than drilling operations and Production Operations will be allowable as per the provisions of the Income tax Act 1961. The expenses so incurred are subject to the following a where any expenditure is not solely incurred on Petroleum Operations or is incurred as part of or in conjunction with any other business only that proportion of the total expenditure which can be proved to the assessing officer to represent a fair proportionate part thereof having regard to all relevant facts and circumstances shall be allowed; b sections 40A and 44C of the Income tax Act 1961 shall apply.

17.2.2 A Company shall be entitled for income tax purposes only to deduct all its unsuccessful Exploration Costs in contract areas covered by other contracts from the aggregate value of Petroleum allocable to the Company from any Fields in the Contract Area in the manner as follows a unsuccessful Exploration Costs incurred in contract areas other than the Contract Area where a Commercial Discovery has been made up to the date of commencement of Commercial Production shall be aggregated and 17.2.3 17.2.4 17.2.5 the Company shall be entitled to deduct such costs at the rate of one hundred per cent 100 per annum; b unsuccessful Exploration Costs

incurred in contract areas other than the Contract Area where a Commercial Discovery has been made after the commencement of Commercial Production shall be deductible at the rate of one hundred per cent 100 per annum of such costs beginning from the Year such costs are incurred. All allowable expenditure incurred prior to the Year in which Commercial Production commences shall be aggregated and the assessed loss for that Year as well as the assessed loss if any incurred in the assessment year relevant to the Year in which Commercial Production commences or in any subsequent assessment year shall be carried forward to succeeding assessment years and set off as provided in the Income tax Act 1961. For any or all accumulated expenditures incurred in respect of Exploration Operations and drilling operations prior to the date of commercial production Companies shall have option to amortize such expenditures over a period of ten 10 years from the date of first commercial production. The profits and gains of the business of the Parties comprising the Contractor consisting of Petroleum Operations shall for the purpose of levy of income tax under the Income tax Act 1961 be computed on the basis of the value determined in accordance with Article 19 of its Participating Interest share of Crude Oil produced and saved and sold or otherwise disposed of from the Contract Area and from any revenue realised on the sale of Associated or Non Associated Natural Gas referred to in Article 21 as well as any other gains or receipts from Petroleum Operations as reduced by the deductions as specified herein and except as herein provided all the provisions of the Income tax Act 1961 shall apply.

17.2.6 Companies shall be eligible for benefits available under section 80 IA of the Income tax Act 1961 as applicable from time to time.

17.3 For the purposes of Article 17.2 and section 42 of the Income tax Act 1961

17.3.1 The following terms used in section 42 of the Income tax Act 1961 shall have the meanings corresponding to the terms used in this Contract and defined in Article 1 as follows

a agreement means this Contract as defined in Article 1;

b commercial production shall have the meaning assigned in Article 1.

17.3.2 The terms assessing officer assessed loss and assessment year shall have the meaning as defined in the Income tax Act 1961.

17.3.3 The other terms used herein and defined in Article 1 shall have the meaning therein ascribed.

17.4 17.5 17.6 17.7 17.8 17.9

Companies Lessee shall be required to pay royalty to the Government Lessor for offshore areas at the rate of ten percent 10 of the wellhead value of Crude Oil and Natural Gas. In case of an onshore area Companies shall be required to pay to the State Governments Lessor at the rate of twelve point five zero percent 12.5 of the wellhead value of Crude Oil and ten percent 10 of the wellhead value of Natural Gas. In case of an offshore area falling beyond four hundred 400 metres both the rate of royalty payable by Companies Lessee to the Government Lessor shall be at the rate of five percent 5 of the wellhead value of Crude Oil and Natural Gas for the first seven years from the date of commencement of Commercial Production in the Field. The valuation of Crude Oil and Natural Gas shall be as per the Article 19 and Article 21 respectively. The royalty amount due to Government State Governments shall be payable latest by the end of the succeeding Month. Machinery plant equipment materials and supplies imported by the Contractor and its Subcontractors solely and exclusively for use in Petroleum Operations under this Contract or similar contracts with the Government where customs duty has been exempted by the Government shall be exempt from customs duties and export duties or other charges on reexportation of the said items in accordance with applicable legislation. The Government shall have the right to inspect the records and documents of the physical item or items for which an exemption has been provided pursuant to Article 17.5 to determine that such item or items are being or have been imported solely and exclusively for the purpose for which the exemption was granted. The Government shall also be entitled to inspect such physical items wherever located to ensure that such items are being used for the purpose herein specified and any item not being so used shall immediately become liable to payment of the applicable customs duties. Subject to Article 27 the Contractor and its Subcontractors may sell or otherwise transfer in India all imported items which are no longer required for Petroleum Operations subject to applicable laws including rules regulations procedures notifications etc. governing customs duties and sale or disposal of such items. Any sales tax or tax of similar nature payable on the sales of Petroleum under this Contract shall be borne and reimbursed by the buyers. Subject to the provisions herein above provided the Contractor shall be liable for payment

of a annual license charges and rental fees and other charges under the Rules; b charges payable by specified industries or in connection with Petroleum Operations under applicable legislation; c payments for purchase lease or rental of land or land rights in connection with Petroleum Operations; d taxes fees or charges for specific services rendered on request or to the public generally; e customs duties except for those items subject to exemption as provided in Article 17 applicable at the rates specified from time to time; and f stamp duties registration fees license fees taxes such as taxes on property or assets not calculated by reference to income or otherwise exempted or other levies fees or charges of a nondiscriminatory nature and generally applicable in India or in the State where Petroleum Operations are being conducted.

17.10 If any change in or to any Indian law rule or regulation dealing with income tax or other corporate tax export import tax excise customs duty or any other levies duties or taxes imposed on Petroleum or dependent upon the value of Petroleum results in a material change to the expected economic benefits accruing to any of the Parties after the date of execution of the Contract the Parties shall consult promptly in good faith to make necessary revisions and adjustments to the Contract in order to maintain such expected economic benefits to each of the Parties provided however that the expected economic benefits to the Parties shall not be reduced as a result of the operation of this Article.

ARTICLE 18 DOMESTIC SUPPLY SALE DISPOSAL AND EXPORT OF CRUDE OIL AND CONDENSATE

18.1 18.2 18.3 18.4 Until such time as the total availability to the Government of Crude Oil and Condensate from all Petroleum production activities in India meets the total national demand each Company comprising the Contractor shall be required to sell in the domestic market in India all of the Company's entitlement to Crude Oil and Condensate from the Contract Area in order to assist in satisfying the national demand. If during any Year India attains Self-sufficiency the Government shall promptly thereafter but in no event later than the end of the first Quarter of the following Year advise the Companies by written notice. In such event as from the end of the second Quarter of the following Year or such earlier date as the Parties may mutually agree domestic sale obligation shall be suspended and the Company shall have the right to lift and export

its Participating Interest share of Crude Oil and Condensate until such time if any as Self-sufficiency shall have ceased to exist. If Self-sufficiency ceases to exist during a Year the Government shall recover its position to ask Companies under Article 18.1 in respect of the following Year by giving ninety 90 days notice thereof to the Companies to sell Crude Oil and Condensate in the Indian domestic market. Upon India achieving Self-sufficiency the Companies shall be entitled to freely lift and export any Crude Oil and Condensate pursuant to this Article 18 subject to Governments generally applicable destination restrictions to countries with which the Government for policy reasons has severed or restricted trade. No later than sixty 60 days prior to the commencement of production in a Field and thereafter no less than sixty 60 days before the commencement of each Year the Contractor shall cause to be prepared and submitted to the Parties a production forecast setting out the total quantity of Crude Oil that it estimates can be produced from a Field during the succeeding Year based on a maximum efficient rate of recovery of Crude Oil from that Field in accordance with modern oilfield and petroleum industry practices. No later than thirty 30 days prior to the commencement of each Quarter the Contractor shall inform its estimate of production for the succeeding Quarter and shall endeavour to produce the forecast quantity for each Quarter.

18.5 Each Company comprising the Contractor shall throughout the term of this Contract have the right to separately take in kind and dispose of all its share of Cost Petroleum and Profit Petroleum and shall have the obligation to lift the said Petroleum on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the other Companies.

18.6 18.7 The Government shall throughout the term of this Contract have the right to separately take in kind and dispose of its share of Crude Oil and shall have the obligation to lift the said Oil on a current basis and in such quantities so as not to cause a restriction of production or inconvenience to the Contractor. For the purpose of implementing the provisions of this Article a Crude lifting procedure and Crude sales agreement based on generally acceptable international terms shall be agreed upon by the Contractor with buyers no later than six 6 months or such shorter period as may be mutually agreed between the Contractor and buyers with the consent of Government prior to the

commencement of production in a Field. Such lifting procedure shall be made available to all the Parties to this Contract.

ARTICLE 19 VALUATION OF PETROLEUM

19.1 19.2 19.3 19.3.1 19.4 For the purpose of this Contract the value of Crude Oil Condensate and Natural Gas refer Article 21 shall be based on the price determined as provided herein. A price for Crude Oil shall be determined for each Month or such other period as the Parties may agree hereinafter referred to as the Delivery Period in terms of United States Dollars per Barrel on import parity basis with marine freight being determined on the basis of nearest port to the Contract Area for Crude Oil produced and sold or otherwise disposed of from Contract Area for each Delivery Period in accordance with the appropriate basis for that type of sale or disposal specified below. Subject to the provisions of this Article 19 it is clearly understood that the actual prices received by the Companies from the sales will form the basis for the purposes of cost recovery Profit Petroleum sharing and payment of royalty as provided in the Articles 15 16 and 17 respectively. The basis of valuation given in this Article for the purpose of Article 15 16 and 17 shall apply only where Government is of the view that sale prices realised by the Companies are not consistent with the price realisable at Arms Length Sales. In the event that some or all of a Company's or Contractors total sales of Crude Oil during a Delivery Period are made to third parties at Arms Length Sales all sales so made shall be valued at the weighted average of the prices actually received by a Company calculated by dividing the total receipts from all such sales at the Delivery Point by the total number of Barrels of the Crude Oil sold in such sales. Each Company constituting the Contractor shall separately submit to the designated nominee of the Government within fifteen 15 days of the end of each Delivery Period a report containing the actual prices obtained in their respective Arms Length Sales for any Crude Oil. Such reports shall distinguish between term sales and spot sales and itemize volumes customers prices received and credit terms and a Company shall allow the designated nominees of the Government to examine the relevant sales contracts. For the purpose of determining price at Arms Length Sales the price of the Crude Oil at which sale takes place will generally be based on per Barrel of one or more crude oils which at the time of calculation are being freely and actively traded in the

international market and are similar in characteristics and quality to the Crude Oil in respect of which the price is being determined selling price to be ascertained from Platts Crude Oil Market Wire daily publication Platts or the spot market for the same crude oils ascertained in the same manner whichever price more truly reflects the current value of such crude oils. For any Delivery Period in which sales take place the price shall be the arithmetic average price per Barrel determined by calculating the average for such Delivery Period of the mean of the high and low FOB prices for each day of the crude oils selected for comparison adjusted for differences in the Crude Oil and the crude oils being compared for quality transportation costs delivery time quantity payment terms and other contract terms to the extent known and other relevant factors. In the event that Platts ceases to be published or is not published for a period of thirty 30 consecutive days the Parties shall agree on an alternative daily publication. The Contractor shall make available all the data pertaining to pricing of Crude to enable Government to determine the proposed sale price by the Contractor each constituent of the Contractor reflects a fair market price for the Crude. In the event that at the relevant time no crude oils of similar quality to the Crude Oil to be sold are being actively traded in the international markets where prices can be ascertained by international publication or the official FOB selling prices and the international spot market price vary widely between producers the Parties shall meet in good faith to determine an appropriate pricing basis. The Contractor shall determine the relevant prices in accordance with this Article and the calculation basis of calculation and the price determined shall be supplied to the Government and shall be subject to agreement by the Government. In the event that the Parties fail to reach agreement on any matter concerning selection of the crude oils for comparison the calculation the basis of or mechanism for the calculation of the prices the prices arrived at the adjustment of any price or generally about the manner in which the prices are determined according to the provisions of this Article within thirty 30 days or such longer period as may be mutually agreed between the Parties from the date of commencement of Commercial Production or the end of each Delivery Period thereafter any Party may refer the matter or matters in issue for final determination by a sole expert or arbitrator

appointed as provided in Article 33. If the matter is referred to the sole expert within ten (10) days of the said appointment the Parties shall provide the expert with all information they deem necessary or as the expert may reasonably require. Within fifteen (15) days from the date of his appointment the expert shall report to the Parties on the issues referred to him for determination applying the criteria or mechanism set forth herein and indicate his decision thereon to be applicable for the relevant Delivery Period for Crude Oil and such decision shall be accepted as final and binding by the Parties.

19.4.1 19.5 19.6 19.6.1 19.6.2 19.6.3 Any price or pricing mechanism agreed by the Parties pursuant to the provisions of this Article shall not be changed retroactively.

19.7 19.8 In the event that all sales of Crude Oil in a Delivery Period by a Company constituting the Contractor are to be made to an Affiliate the Parties may agree on an alternative method of valuing the Crude Oil for the purposes of this Contract provided that such alternative method results in an internationally competitive fair market valuation for that Delivery Period. In case of disagreement the decision of the Government on determining a Crude price in case of sales to an Affiliate shall be final and binding. In the event that in any Delivery Period there is more than one type of sales referred to in Articles 19.3 and 19.7 then for the purpose of calculating Cost Petroleum and Profit Petroleum entitlement and royalty payments pursuant to Articles 15, 16 and 17 respectively a single price per Barrel of Crude Oil for all the sales for the relevant Delivery Period shall be used. Such single price shall be the weighted average of the prices determined for each type of sale weighted by the respective volumes of Crude Oil sold in each type of sale in the relevant Delivery Period.

19.9 The provisions specified above for the determination of the price of sales of Crude Oil shall apply mutatis mutandis to Condensates.

19.10 The price of Natural Gas shall be determined as provided in Article 21.

ARTICLE 20 CURRENCY AND EXCHANGE CONTROL PROVISIONS

20.1 Subject to the provisions herein and to compliance with the relevant provisions of the laws of general application in India governing currency and foreign exchange and related administrative instructions and procedures issued thereunder on a non-discriminatory basis each Foreign Company comprising the Contractor shall during the term of this Contract have the right to repatriate abroad in United States Dollars or any

other freely convertible currency acceptable to the Government and the Foreign Company the net proceeds of sales of Petroleum in India; b receive retain and use abroad the proceeds of any export sales of Petroleum under the Contract; c open maintain and operate bank accounts with reputable banks both inside and outside India for the purpose of this Contract; d freely import through normal banking channels funds necessary for carrying out the Petroleum Operations; e convert into foreign exchange and repatriate sums imported pursuant to d above in excess of any of its requirements; and f make payments outside of India for purchases services and loans obtained abroad without the requirement that funds used in making such payments must come from or originate in India. Provided however that repatriation pursuant to subparagraphs a and e and payments pursuant to subparagraph f shall be subject to the provisions of any treaties and bilateral arrangements between the Government and any country with respect to payments to or from that country.

20.2 The rates of exchange for the purchase and sale of currency by the Companies shall be the prevailing rates of general application determined by the Reserve Bank of India or such other financial body as may be mutually agreed by the Parties and for accounting purposes under this Contract these rates shall apply as provided in Section 1.6 of Appendix C.

20.3. A Party other than a Foreign Company comprising the Contractor shall be governed by the relevant currency and foreign exchange laws and related administrative instructions and procedures issued thereunder.

20.4 Indian Companies shall have right to remit their portion of expenditure in foreign currencies in accordance with the exchange control provisions.

ARTICLE 21 NATURAL GAS

21.1 Subject to Article 21.2 the Indian domestic market shall have the first call on the utilisation of Natural Gas discovered and produced from the Contract Area. Accordingly any proposal by the Contractor relating to Discovery and production of Natural Gas from the Contract Area shall be made in the context of the Government's policy for the utilisation of Natural Gas and shall take into account the objectives of the Government to develop its resources in the most efficient manner and to promote conservation measures.

21.2 The Contractor shall have the right to use Natural Gas produced from the Contract Area for the purpose of Petroleum Operations including reinjection for pressure maintenance in Oil Fields gas

lifting and captive power generation required for Petroleum Operations.21.3 For the purpose of sales in the domestic market pursuant to this Article 21 the Contractor shall have freedom to market the Gas and sell its entitlement.21.4 Associated Natural Gas ANG21.4.1 In the event that a Discovery of Crude Oil contains ANG the Contractor shall declare in the proposal for the declaration of the said Discovery as a CommercialDiscovery as specified in Article 10 whether and by what amount the estimated production of ANG is anticipated to exceed the quantities of ANG which will be usedin accordance with Article 21.2 such excess being hereinafter referred to as the Excess ANG. In such an event the Contractor shall indicate whether on the basis ofthe available data and information it has reasonable grounds for believing that the Excess ANG could be commercially exploited in accordance with the terms of thisContract along with the Commercial Production of the Crude Oil from the Contract Area and whether the Contractor intends to so exploit the Excess ANG.21.4.2 Based on the principle of full utilisation and minimum flaring of ANG a proposed development plan for an Oil Discovery shall to the extent practicable include a planfor utilisation of the ANG including estimated quantities to be flared reinjected and to be used for Petroleum Operations; and if the Contractor proposes tocommercially exploit the Excess ANG for sale in the domestic market in accordance with Governments policy or elsewhere the proposed plans for such exploitation.21.4.3 21.4.4 If the Contractor wishes to exploit the Excess ANG subject to Article 21.1 the Contractor shall be free to explore markets for the commercial exploitation of the saidExcess ANG and submit its proposals for such exploitation to the Government in accordance with Article 21.4.2.Where the Contractor is of the view that the Excess ANG cannot be commercially exploited and chooses not to exploit the said Excess ANG or is unable to find a market for the Excess ANG pursuant to Article 21.4.3 the Government shall be entitled to take and utilise such Excess ANG free of any costcharge.21.4.5 If the Government elects to take the Excess ANG as provided in Article 21.4.4a the Contractor shall deliver such Excess ANG to the Government or its nominee free of any costcharge at the downstream flange of the GasOil separationfacilities;b the Contractor shall based on sound petroleum engineering practices install such facilities as would facilitate insofar as

practicable uninterrupted delivery of such Excess ANG to the Government or its nominee; c the cost of all facilities installed pursuant to paragraph b above shall be borne by the Government or its nominee; d the Government or its nominee shall bear all costs including gathering treating processing and transporting costs beyond the downstream flange of the Gas Oil separation facilities; and e the delivery of such Excess ANG shall be subject to procedures to be agreed between the Government or its nominee and the Contractor prior to such delivery such procedures to include matters relating to timing of offtake of such Excess ANG. Parties shall endeavour that such procedures do not restrict Oil production.

21.4.6 The Excess ANG which is not commercially exploited by the Contractor or taken by the Government or its nominee pursuant to this Article 21 shall be returned to the subsurface structure or flared or otherwise disposed off as approved by the Government in the context of the Development Plan provided that flaring will be resorted to only for small quantities and as a last resort.

21.4.7 As soon as practicable after the submission of the proposed development plan the Contractor and the Government or its nominee shall meet to discuss the sale and disposal of any ANG discovered with a view to giving effect to the provisions of this Article 21 in a timely manner.

21.5 Non Associated Natural Gas NANG

21.5.1 In the event of a Discovery of NANG in the Contract Area the Contractor shall promptly report such Discovery to the Management Committee and the

21.5.2 21.5.3 21.5.4 Government and the provisions of Articles 10.1 and 10.2 shall apply. The remaining provisions of Article 10 would apply to the Discovery and development of NANG only insofar as they are not inconsistent with the provisions of this Article. Notwithstanding the provisions of Article 3 the Contractor shall be entitled to retain the Discovery Area subject to the provisions of this Article 21. If pursuant to Article 10.1 the Contractor gives notification that the Discovery is of potential commercial interest the Contractor shall submit to the Management Committee within one 1 year from the date of notification of the above said Discovery the proposed Appraisal Programme including a Work Programme and Budget to carry out an adequate and effective appraisal of such Discovery to determine i without delay whether such Discovery is a Commercial Discovery and ii with reasonable precision the boundaries of the area to

be delineated as the Development Area. Such proposed Appraisal Programme shall be supported by all relevant data such as Well data Contractors best estimate of reserve range and production potential and shall indicate the date of commencement of the proposed Appraisal Programme. The proposed Appraisal Programme together with the Work Programme and Budget referred to in Article 21.5.2 shall be reviewed by the Management Committee within sixty 60 days of its submission by the Contractor. The Management Committee shall offer its comments within the said period. The said Appraisal Programme together with the Work Programme and Budget submitted by the Contractor as revised or modified or amended in light of the Management Committee review and advice shall be adopted as the Appraisal Programme and the Contractor shall promptly proceed with implementation of the said Programme. If on the basis of the results of the Appraisal Programme the Contractor is of the opinion that NANG has been discovered in commercial quantities it shall submit to the Management Committee as soon as practicable but not later than three 3 years from the date of notification of the aforementioned Discovery a proposal for the declaration of the Discovery as a Commercial Discovery. Such proposal shall take into account the Governments policies on Gas utilization and propose alternative options if any for use or consumption of the NANG and be accompanied by a report on the Discovery supported by inter alia technical and economic data evaluations interpretations and analyses of such data and feasibility studies relating to the Discovery prepared by or on behalf of the Contractor and other relevant information. If no proposal is submitted to the Management Committee by the Contractor within three 3 years from the said Discovery the Contractor shall relinquish its rights to develop such Discovery and the area relating to such Discovery shall be excluded from the Contract Area.

21.5.5 21.5.6 21.5.7 Where the Contractor has submitted a proposal for the declaration of a Discovery as a Commercial Discovery the Management Committee shall consider the proposal of the Contractor with reference to commercial utilization or commercial development of the NANG in the domestic market or elsewhere and in the context of Governments policy on Gas utilization and the chain of activities required to bring the NANG from the Delivery Point to potential consumers in the domestic market or elsewhere. The

Management Committee may within eighty five 85 days of the submission of the said proposal request the Contractor to submit any additional information on the Discovery the anticipated markets or any other related matter that may reasonably be required to facilitate a review. The Contractor shall submit therequired information within thirty 30 days of the request by the Management Committee. The Management Committee will advise the Contractor of its review within one hundred and thirty five 135 days from the submission of proposal or within fifty five 55 days from the receipt of additional information as the case may be on the proposal made by the Contractor to declare the Discovery as a Commercial Discovery. If the Contractor declares the Discovery a Commercial Discovery after taking into account the advice of the Management Committee as referred to in the Article 21.5.5 the Contractor shall within one 1 year of the declaration of the Discovery as a Commercial Discovery submit a development plan for the development of the Discovery to the Management Committee for approval. Such plan shall be supported by all relevant information including inter alia the information required in Article 10.7. Unless otherwise agreed by the Management Committee it shall consider the proposed development plan and give their approval within one hundred and sixty five 165 days of submission thereof or eighty five 85 days from the receipt of the clarifications additional information from the Contractor. Any clarification additional information required by the Management Committee shall be asked for within eighty five 85 days of receipt of the proposal from the Contractor. The Contractor shall provide such additional information within thirty 30 days from the receipt of request by the Management Committee. If the Management Committee fails to convey its decision within one hundred and sixty five 165 days from the submission of the development plan or eighty five 85 days from the receipt of the clarifications additional information whichever is later the Contractor may submit the development plan for the approval of the Government. Also where the Management Committee rejects the development plan of the Contractor the Contractor can submit the development plan for the approval of the Government. 21.5.8 Where the development plan is submitted to the Government for approval pursuant to Article 21.5.7 the Government shall convey its decision within one hundred

and fifteen 115 days from the date of receipt of the proposal from the Contractor. Government where it considers necessary may ask for clarifications and additional information from the Contractor within eighty five 85 days and shall convey its decision within fifty five 55 days from the date of receipt of such clarifications and additional information.

21.5.9 If the Government has failed to approve or disapproves the Contractor's proposed development plan within one hundred and fifteen 115 days from receipt or within fifty five 55 days from the receipt of clarifications and information from the Contractor as mentioned in Article 21.5.8 the Government shall advise the Contractor in writing of the reasons for such failure or disapproval and the Government and the Contractor shall meet to discuss the said development plan and the reasons for the said failure to approve or disapproval and use their best efforts to agree on appropriate modifications thereto to meet the Government's concerns or objections. Thereafter the Contractor shall have the right to resubmit within eighty five 85 days of communication from the Government the proposed development plan duly amended to meet the Government's concerns. Such right of resubmission of the proposed development plan shall be exercisable by the Contractor only once. The Government will respond to the resubmitted plan within one hundred and fifteen 115 days. If no such plan is submitted to the Government within the above specified period the Contractor shall relinquish its right to develop such Gas Discovery and such Discovery shall be excluded from the Contract Area.

21.5.10 In the event that the Management Committee or Government as may be the case approves the Contractor's development plan for the development of such Commercial Discovery with such modifications and amendments as the Management Committee or Government as may be the case may approve the said Gas Discovery shall be promptly developed by the Contractor in accordance with the approved plan which shall be the Development Plan.

21.5.11 The Contractor will have a two 2 years period from the date of approval of the Development Plan by the Management Committee or Government to tie up the markets for sale of Non-associated Natural Gas.

21.5.12 In the event the Contractor does not commence development of such Discovery within ten 10 years from the date of the first Discovery Well the Contractor shall relinquish its right to develop such Discovery and the area relating to such

Discovery shall be excluded from the Contract Area.

21.6 Valuation of Natural Gas

21.6.1 21.6.2 The Contractor shall endeavour to sell all Natural Gas produced and saved from the Contract Area at armslength prices to the benefits of Parties to the Contract. Notwithstanding the provision of Article 21.6.1 Natural Gas produced from the Contract Area shall be valued for the purposes of this Contract as follows a Gas which is used as per Article 21.2 or flared with the approval of the Government or reinjected or sold to the Government pursuant to Article 21.4.5 shall be ascribed a zero value; b Gas which is sold to the Government or any other Government nominee shall be valued on the terms and conditions actually obtained including pricing formula and delivery; and Explanation However it is clarified that this provision would apply only when the sale is made to the Government or Government nominee under the provisions of the Contract c Gas which is sold or disposed of otherwise than in accordance with paragraph a or b shall be valued on the basis of competitive arms length sales in the region for similar sales under similar conditions.

21.7 The formula or basis on which the prices shall be determined pursuant to Article 21.6 shall be approved by the Government prior to the sale of Natural Gas to the consumers/buyers within sixty 60 Business Days from the receipt of proposal or from the date of receipt of clarification/additional information where asked for by the Government. For granting this approval Government shall take into account the prevailing policy if any on pricing of Natural Gas including any linkages with traded liquid fuels and it may delegate or assign this function to a regulatory authority as and when such an authority is in existence and in place.

ARTICLE 22 EMPLOYMENT TRAINING AND TRANSFER OF TECHNOLOGY

22.1 22.2 22.3 Without prejudice to the right of the Contractor to select and employ such number of personnel as in the opinion of the Contractor are required for carrying out Petroleum Operations in a safe cost effective and efficient manner the Contractor shall to the maximum extent possible employ and require the Operator and Subcontractors to employ citizens of India having appropriate qualifications and experience taking into account experience required in the level and nature of the Petroleum Operations. The Operator shall offer a mutually agreed number of Indian nationals the opportunity for on the job training and practical experience in Petroleum

Operations during the Exploration Period. Not later than six 6 months after approval of the Development Plan the Operator shall in consultation with the Government establish and implement training programmes for staff positions in each phase and level of Petroleum Operations including skilled technical executive and management positions with a view to ensuring employment of nationals of India and gradual and progressive reduction of foreign personnel. At the request of the Government the Foreign Companies shall separately endeavour to negotiate in good faith technical assistance agreements with the Government or a company nominated by Government for this purpose setting forth the terms by which each Foreign Company constituting the Contractor may render technical assistance and make available commercially proven technical information of a proprietary nature for use in India by the Government or the company nominated by Government. The issues to be addressed in negotiating such technical assistance agreements shall include but not be limited to licensing issues royalty conditions confidentiality restrictions liabilities costs and method of payment.

ARTICLE 23 LOCAL GOODS AND SERVICES

23.1 In the conduct of Petroleum Operations the Contractor shall give preference to the purchase and use of goods manufactured produced or supplied in India provided that such goods are available on terms equal to or better than imported goods with respect to timing of delivery quality and quantity required price and other terms;

b employ Indian Subcontractors having the required skills or expertise to the maximum extent possible insofar as their services are available on comparable standards with those obtained elsewhere and at competitive prices and on competitive terms; provided that where no such Subcontractors are available preference shall be given to non-Indian Subcontractors who utilise Indian goods to the maximum extent possible subject however to the proviso in paragraph a above;

c ensure that provisions in terms of paragraphs a to b above are contained in contracts between the Operator and its Subcontractors.

23.2 Subject to Article 8.3f the Contractor shall establish appropriate procedures including tender procedures for the acquisition of goods and services which shall ensure that suppliers and Subcontractors in India are given adequate opportunity to compete for the supply of goods and services. The tender procedures shall include inter alia the financial

amounts or value of contracts which will be awarded on the basis of selective bidding or open competitive bidding the procedures for such bidding and the exceptions to bidding in cases of emergency and shall be subject to the approval of the Management Committee.

23.3 Within sixty 60 days after the end of each Year the Contractor shall provide the Government with a report outlining its achievements in utilising Indian resources during that Year in accordance with Section 10 of Appendix C to this Contract.

23.4 In this Article goods means equipment materials and supplies.

ARTICLE 24 INSURANCE AND INDEMNIFICATION

24.1 Insurance

24.1.1 The Contractor shall during the term of this Contract maintain and obtain insurance coverage for and in relation to Petroleum Operations for such amounts and against such risks as are customarily or prudently insured in the international petroleum industry in accordance with modern oilfield and petroleum industry practices and shall furnish to the Government certificates evidencing that such coverage is in effect. Such insurance policies shall include the Government as additional insured and shall waive subrogation against the Government. The said insurance shall without prejudice to the generality of the foregoing cover a loss or damage to all installations equipment and other assets for so long as they are used in or in connection with Petroleum Operations; provided however that if for any reason the Contractor fails to insure any such installation equipment or assets it shall replace any loss thereof or repair any damage caused thereto;

b loss damage or injury caused by pollution in the course of or as a result of Petroleum Operations;

c loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor may be liable;

d any claim for which the Government may be liable relating to the loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor is liable to indemnify the Government or the State Government;

e with respect to Petroleum Operations offshore the cost of removing wrecks and cleaning up operations following any accident in the course of or as a result of Petroleum Operations;

and f the Contractor's and/or the Operator's liability to its employees engaged in Petroleum Operations.

24.1.2 The Contractor shall require its Subcontractors to obtain and maintain insurance

against the risks referred to in Article 24.1.1 relating mutatis mutandis to suchSubcontractors.24.2
IndemnitySubject to Article 4.7 the Contractor shall indemnify defend and hold the Government and
the State Government harmless against all claims losses and damages of anynature whatsoever
including without limitation claims for loss or damage to property or injury or death to persons
caused by or resulting from any PetroleumOperations conducted by or on behalf of the
Contractor.ARTICLE 25RECORDS REPORTS ACCOUNTS AND AUDIT25.1 25.2 25.3 25.4.1
25.4.2 25.4.3 25.4.4 25.5 25.6 25.7 The Contractor shall prepare and maintain in original at an office
in India accurate and current books records reports and accounts of its activities for and in
connectionwith Petroleum Operations so as to present a fair clear and accurate record of all its
activities expenditures and receipts.Based on generally accepted and recognised accounting
principles and modern petroleum industry practices record books accounts and accounting
procedures in respectof Petroleum Operations shall be maintained on behalf of the Contractor by
the Operator at its business office in India in accordance with the Accounting Procedure tothis
Contract.The Contractor shall submit to the Government regular Statements and reports relating to
Petroleum Operations as provided in AppendixC.The annual audit of accounts shall be carried out
on behalf of the Contractor by a qualified independent firm of recognised chartered accountants
registered inIndia.The appointment of auditor and the scope of audit should have prior approval of
the Management Committee.The Contractor shall submit the audited accounts to the Management
Committee for approval within sixty 60 days from the end of the Year. The ManagementCommittee
shall consider and approve the auditors report within thirty 30 days after the submission of such
report.Copy of the auditors report shall be submitted to the Government within thirty 30 days after
the approval of the Management Committee.The Government shall have the right to audit the
accounting records of the Contractor in respect of Petroleum Operations as provided in the
Accounting Procedure.The accounting and auditing provisions and procedures specified in this
Contract are without prejudice to any other requirements imposed by any statute in Indiaincluding
without limitation any specific requirements of the statutes relating to taxation of Companies.For the

purpose of any audit referred to in Articles 25.5 the Contractor shall make available in original to the auditor all such books records accounts and other documents and information as may be reasonably required by the auditor during normal business hours.

ARTICLE 26 INFORMATION DATA CONFIDENTIALITY INSPECTION AND SECURITY

26.1 26.2 26.3 The Contractor shall promptly after they become available in India provide the Government free of cost with all data obtained as a result of Petroleum Operations under the Contract including but not limited to geological geophysical geochemical petrophysical engineering Well logs maps magnetic tapes cores cuttings and production data as well as all interpretative and derivative data including reports analyses interpretations and evaluation prepared in respect of Petroleum Operations hereinafter referred to as Data. Data shall be the property of the Government provided however that the Contractor shall have the right to make use of such Data free of cost for the purpose of Petroleum Operations under this Contract as provided herein. The Contractor may for use in Petroleum Operations retain copies or samples of material or information constituting the Data and with the approval of the Government original material except that where such material is capable of reproduction and copies have been supplied to the Government the Contractor may subject to the right of inspection by the Government export subject to any applicable regulations samples or other original Data for processing or laboratory examination or analysis provided that representative samples equivalent in quality size and quantity or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Government. The Contractor shall keep the Government currently advised of all developments taking place during the course of Petroleum Operations and shall furnish the Government with full and accurate information and progress reports relating to Petroleum Operations on a daily Monthly Yearly or other periodic basis as Government may reasonably require provided that this obligation shall not extend to proprietary technology. The Contractor shall meet with the Government at a mutually convenient location in India to present the results of all geological and geophysical work carried out as well as the results of all engineering and drilling operations as soon as such Data becomes available to the Contractor.

26.4 All Data

information and reports obtained or prepared by for or on behalf of the Contractor pursuant to this Contract shall be treated as confidential and subject to the provisions herein below the Parties shall not disclose the thereof to any third party without the consent in writing of the other Parties.

26.5 The obligation specified in Article 26.4 shall not operate so as to prevent disclosurea to Affiliates contractors or Subcontractors for the purpose of Petroleum Operations;b to employees professional consultants advisers data processing centres and laboratories where required for the performance of functions in connection withPetroleum Operations for any Party comprising the Contractor;c to banks or other financial institutions in connection with Petroleum Operations;d to bonafide intending assignees or transferees of a Participating Interest of a Party comprising the Contractor or in connection with a sale of the stock or shares of aParty comprising the Contractor;e to the extent required by any applicable law or in connection with any legal proceedings or by the regulations of any stock exchange upon which the shares of aParty comprising the Contractor are quoted;f to Government departments for or in connection with the preparation by or on behalf of the Government of statistical reports with respect to Petroleum Operationsor in connection with the administration of this Contract or any relevant law or for any purpose connected with Petroleum Operations; andg by a Party with respect to any Data or information which without disclosure by such Party is generally known to the public.

26.6 26.7 26.8 Any Data information or reports disclosed by the Parties comprising the Contractor to any other person pursuant to Article 26.5 a to d shall be disclosed on the termsthat such Data information or reports shall be treated as confidential by the recipient. Prompt notice of disclosures made by Companies pursuant to Article 26.5 shall begiven to the Government.Any Data information and reports relating to the Contract Area which in the opinion of the Government might have significance in connection with offers by theGovernment of acreages may be disclosed by the Government for such purpose. Government may also disclose such Data or information for any explorationprogramme to be conducted by a third party in adjoining areas with the consent of the Contractor for better understanding of regional geological setup and suchconsent by the Contractor shall not be unreasonably withheld.Where an area ceases to be part of the

Contract Area the Contractor shall hand over all the originals and copies of the Data and information with respect to that part to the Government within a period of one 1 year from the date of relinquishment or surrender. The Contractor shall however be allowed to retain one copy of the Data in its possession for its own use where required and shall not use the Data for sale or any other purposes. Subject to the provisions of this Article the Contractor shall keep all Data information confidential. Explanatory Note Pursuant to this Article 26 and notwithstanding any provisions in the contract to the contrary the Government shall have the right to disclose and freely use all data and information at its sole discretion except for data of proprietary nature such as interpretation report to any party on or after three 3 Years from acquisition of such data in order to promote exploration and production activities in the country. For any relinquished areas the government shall have the right to disclose and freely use all the data immediately after such relinquishment. 26.9 26.10 26.11 The Government shall at all reasonable times through duly authorised representatives be entitled to observe Petroleum Operations and to inspect all assets books records reports accounts contracts samples and Data kept by the Contractor or the Operator in respect of Petroleum Operations in the Contract Area provided however that the Contractor shall not be required to disclose any proprietary technology. The duly authorised representatives shall be given reasonable assistance by the Contractor for such functions and the Contractor shall afford such representatives reasonable use of all facilities and privileges afforded to its own personnel in the field including the use of office space and housing for a period not exceeding 30 mandays in a Year and thereafter at the cost of Government. The said representatives shall be entitled to make a reasonable number of surveys measurements drawings tests and copies of documents take samples and make reasonable use of the equipment and instruments of the Contractor provided that such functions shall not unduly interfere with the Contractor's Petroleum Operations. The Contractor shall give reasonable advance notice to the Government or to any other authority designated by the Government for such purpose of its programme of conducting surveys by aircraft or by ships indicating inter alia the name of the survey to be conducted approximate extent of the area to be covered the duration of the survey the

commencement date and the name of the airport or port from which the survey aircraft or ship will commence its voyage. The Government or the authority designated by the Government for such purpose shall have the right to inspect any aircraft or ship used by the Contractor or a Subcontractor carrying out any survey or other operations in the Contract Area and shall have the right to put on board such aircraft or ship Government officers in such number as may reasonably be necessary to ensure compliance by the Contractor or the Subcontractor with the security requirements of India.

ARTICLE 27 TITLE TO PETROLEUM DATA AND ASSETS 27.1 27.2 27.3 27.4 27.5 27.6 27.7

The Government is the sole owner of Petroleum underlying the Contract Area and shall remain the sole owner of Petroleum produced pursuant to the provisions of this Contract except as regards that part of Crude Oil Condensate or Gas the title whereof has passed to the Contractor or any other person in accordance with the provisions of this Contract. Title to Petroleum to which the Contractor is entitled under this Contract and title to Petroleum sold by the Companies shall pass to the relevant buyer party at the Delivery Point. The Contractor shall be responsible for all costs and risks prior to and including at the Delivery Point and each buyer party shall be responsible for all costs and risks associated with such buyer party's share after the Delivery Point. Title to all Data specified in Article 26 shall be vested in the Government and the Contractor shall have the right to use thereof as therein provided. Assets purchased by the Contractor for use in Petroleum Operations shall be owned by the Parties comprising the Contractor in proportion to their Participating Interest provided that the Government shall have the right to require vesting of full title and ownership in it free of charge and encumbrances of any or all assets whether fixed or movable acquired and owned by the Contractor for use in Petroleum Operations inside or outside the Contract Area such right to be exercisable at the Government's option upon expiry or earlier termination of the Contract. The Contractor shall be responsible for proper maintenance insurance and safety of all assets acquired for Petroleum Operations and for keeping them in good repair order and working condition at all times and the costs thereof shall be recoverable as Contract Costs in accordance with Appendix C. So long as this Contract remains in force subject to Article 27.5 the Contractor shall free

of any charge for the purpose of carrying out Petroleum Operations hereunder have the exclusive use of assets which have become the property of Government. Equipment and assets no longer required for Petroleum Operations during the term of the Contract shall be sold, exchanged or otherwise disposed of by the Contractor provided however that the proceeds of sale shall be credited to Petroleum Operations as provided in Appendix C provided that prior written consent of the Management Committee shall be obtained for each transaction in excess of US 50000 Fifty thousand United States Dollars or such other value as may be agreed from time to time by the Management Committee. The consent of the Management Committee shall not be unreasonably withheld.

ARTICLE 28 ASSIGNMENT OF PARTICIPATING INTEREST

28.1 Subject to the terms of this Article and other terms of this Contract any Party comprising the Contractor may assign or transfer a part or all of its Participating Interest with the prior written consent of the Government which consent shall not be unreasonably withheld provided that the Government is satisfied that:

- a the prospective assignee or transferee is of good standing, has the capacity and ability to meet its obligations hereunder and is willing to provide an unconditional undertaking to the Government to assume its Participating Interest share of obligations and to provide guarantees in respect thereof as provided in the Contract;
- b the prospective assignee or transferee is not a company incorporated in a country with which the Government for policy reasons has restricted trade or business;
- c the prospective assignor or transferor and assignee or transferee respectively are willing to comply with any reasonable conditions of the Government as may be necessary in the circumstances with a view to ensuring performance under the Contract; and
- d the assignment or transfer will not adversely affect the performance or obligations under this Contract or be contrary to the interests of India.

28.1.1 Subject to Article 28.7 nothing in this Article 28 shall prevent a Party comprising the Contractor from assigning or transferring a part or all of its Participating Interest to an Affiliate with the approval of the Management Committee provided that:

- a the assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided

at Appendix G; b the assignee provides a parent financial and performance guarantee issued by the guarantor which furnished the guarantee pursuant to Article 29 in respect of the assignor Party's obligations under this Contract in favour of the Government of the performance of such Affiliate assignee of its obligations under this Contract; c the prospective Affiliate is not a company incorporated in a country with which the Government for policy reason has restricted trade or business; and d the assignment will not adversely affect the performance or obligations under this Contract or be contrary to the interest of India.

28.2 In case of any change in the status of a Company or its shareholding resulting in a change in the control of the Company; or b its relationship with the companies providing the guarantee under Article 29.1 a and 29.1 b;

28.3 28.4 28.5 28.6 28.7 the Company shall seek the consent of the Government for assigning the Participating Interest under the changed circumstances and the provisions of this Article 28 shall apply mutatis mutandis to be obtaining of such consent. For the purpose of this Article 28.2 control has the same meaning as in Article 1.3. An application for consent to assign or transfer shall be accompanied by all relevant information concerning the proposed assignment or transfer including detailed information on the proposed assignee or transferee and its shareholding and corporate structure as was earlier required from the Companies constituting the Contractor the terms of the proposed assignment or transfer and the unconditional undertaking referred to in Article. The applicant shall also submit such information relating to the prospective assignee or transferee of the assignment or transfer as the Government may reasonably require to enable proper consideration and disposal of the application. No assignment or transfer shall be effective until the approval of the Government is received or deemed to have been received. Approval may be given by the Government on such terms and conditions as it may deem fit. Provided that such terms and conditions may not increase the obligations of the Parties comprising the Contractor. Upon assignment or transfer of its interest in this Contract the assignor or transferor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee or transferee with the approval of the Government. In the event that the Government

does not give its consent or does not respond to a request for assignment or transfer by a Party comprising the Contractor within one hundred and twenty 120 days of such request and receipt of all information referred to in Article 28.3 above consent shall be deemed to have been given by the Government. An assignment or transfer shall not be made where the Participating Interest to be retained by the proposed assignor or the percentage interest of assignee shall be less than ten per cent 10 of the total Participating Interest of all the constituents of the Contractor except where the Government on the recommendations of the Management Committee may in special circumstances so permit.

28.8 Nothing contained in this Article 28 shall prevent a Party comprising the Contractor from mortgaging pledging charging or otherwise encumbering at its own risk and cost all or part of its Participating Interest for the purposes of security relating to finance to the extent required for performing its obligation under the Contract provided that i such Party shall remain solely liable for all its obligations relating to its Participating Interest to the exclusion of the other participants thereto; ii the encumbrance shall be expressly subordinated to the rights of the other Parties under this Contract. The obligations occurring from the said encumbrance shall be the sole responsibility of the original Party and shall in no manner compromise the rights of other Parties to the Contract; iii such Party has given reasonable notice of such encumbrance and furnishes to all other Parties including for the avoidance of doubt the Government a certified copy of the executed instruments evidencing the encumbrances; iv keeping in view the national interest of India prior consent of the Government shall be required which consent shall not be unreasonably withheld of the list of potential lenders with whom such Party can consider hypothecation; v the Party creating the charge shall ensure that such charge shall not in any way affect the interest of other Parties or result in interference with joint operations. In the event of any claims or liabilities imposed on other Parties because of the creation of such charges the Party having created charge on its Participating Interest shall indemnify the other Parties; and vi in case of foreclosure or default by a borrowing Party the mortgagee shall not be deemed to have acquired a right to carry on either by itself or through an agent the Petroleum Operation without the written consent of the Government of India.

28.8.1 28.8.2 The Parties

acknowledge that to obtain financing a Party Borrower will be required to secure for a permitted chargee the right to receive a copy of any notice served on the Borrower and the Parties agree that they shall serve a copy of any such notice on any such permitted chargee in accordance with the provisions of Article 37 at the same time as such notice is served on the Borrower. For the purposes of Article 37 the address for service of notices of the permitted chargee shall be that specified in the instrument or instruments referred to in Article 28.8iii. In case lender elects to participate directly or through a company other than the Borrower under the financing arrangement referred to above the same shall be subject to the rights of Government as contained in Article 28.1 of Contract and the preemptive rights of the Parties as may be contained in Operating Agreement. Any Party which wishes to exercise the said preemptive rights will explicitly assume the obligation on the same terms and conditions as the Borrower.

ARTICLE 29 GUARANTEES

29.1 Each of the Companies constituting the Contractor shall procure and deliver to the Government within thirty 30 days from the Effective Date of this Contract a an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for the amount specified in Article 29.2 in a form provided at Appendix G; b financial and performance guarantee in favour of the Government from a parent company acceptable to the Government in the form and substance set out in Appendix E1 or where there is no such parent company the financial and performance guarantee from the Company itself in the form and substance set out in Appendix E2; c a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the aforesaid guarantees have been duly signed and delivered on behalf of the guarantors with due authority and is legally valid and enforceable and binding upon them;

29.2 The amount of the guarantee referred to in Article 29.1 a above shall be an amount equal to thirty five percent 35 of the Company's Participating Interest share of the total estimated annual expenditure in respect of the Minimum Work Programme to be undertaken by the Contractor in the Contract Area during the relevant Year of a Phase subject to Article 29.3. The total estimated expenditure for the relevant Year for the purpose of furnishing bank guarantee by the Contractor shall be higher of the cost

estimates made by the Directorate General of Hydrocarbons DGH or budget estimates of the Contractor as presented by its to the Management Committee.29.3 The guarantee referred to in Article 29.2 shall provide that;a at the end of each Year it shall be automatically renewed for an amount equal to a Companys Participating Interest share of thirty five percent 35 of the totalestimated expenditure in respect of the Minimum Work Programme to be undertaken for the following Year of an Exploration Phase unless the Contractor has terminated the Contract in accordance with the terms thereof. The guarantee shall be renewed at the end of each Year positively thirty 30 days before the expiry of the guarantee period.b after the completion and due performance of the Minimum Work Programme of a particular Exploration Phase the guarantee will be released in favour of the Company on presentation to the bank of a certificate from the Government that the obligation of the Contractor has been fulfilled and the guarantee may be released subject to Article 29.4. Such certificate shall be provided within thirty 30 days from the completion of the Minimum Work Programme and fulfillment of obligations under the Contract to the satisfaction of the Government.29.4 29.5 29.6 If the Contractor elects to proceed to the second Exploration Phase of the Exploration Period a bank guarantee for the Phase in terms of Articles 29.1 a 29.2 and 29.3 shall be delivered to the Government with the notice of such election and if such guarantee is not so delivered the provisions of Article 29.5 shall apply.If any of the documents referred to in Article 29.1 is not delivered within the period specified herein this Contract may be terminated by the Government upon ninety 90 days written notice of its intention to do so.Subject to Article 29.7 notwithstanding any change in the composition or shareholding of the parent company furnishing a performance guarantee as provided herein it shall not under any circumstances be absolved of its obligations contained in the guarantees provided pursuant to Article 29.1b.29.7 If abcd a Party Assignor assigns all or a part of its Participating Interest to a third party Assignee in accordance with Article 28;the Assignee provides an irrevocable unconditional bank guarantee from a reputed bank of good standing in India acceptable to the Government in favour of the Government for an amount equal to the assignees Participating Interest share of the estimated expenditure of the

Minimum Work Programme of the Exploration Phase current at the Effective Date of the assignment; the Assignee provides performance guarantee and legal opinion in terms of this Article; and the addendum to the Contract giving effect to the assignment of Participating Interest is executed by all Parties; then the Government shall release the guarantee given by the assignor under Article 29.1 a to the extent of the amount of the guarantee provided by the assignee and where relevant the guarantee under Article 29.1 b.

ARTICLE 30 TERM AND TERMINATION OF THE CONTRACT

30.1 30.2 The term of this Contract shall be for the period of the License and any Lease granted thereunder unless the Contract is terminated earlier in accordance with its terms and shall be deemed to have been terminated if for any reason the Contractor ceases to hold such License or Lease. Subject to the provision of Articles 5 14 and 30.6 and without prejudice to the provisions of Article 30.7 or any other provisions of this Contract the Contractor shall have the right to terminate this Contract with respect to any part of the Contract Area other than a Development Area then producing or that prior thereto had produced Petroleum upon giving ninety 90 days written notice of its intention to do so; and b with respect to any Development Area in which Petroleum is being produced or that prior thereto had produced Petroleum upon giving at least one hundred and eighty 180 days written notice of its intention to do so.

30.3 This Contract may subject to the provisions herein below and Article 31 be terminated by the Government upon giving ninety 90 days written notice with reasons to the other Parties of its intention to do so in the following circumstances namely that the Contractor or a Party comprising the Contractor the Defaulting Party a has knowingly submitted any false statement to the Government in any manner which was a material consideration in the execution of this Contract; or b has intentionally and knowingly extracted or authorised the extraction of hydrocarbon not authorized to be extracted by the Contract or without the authority of the Government except such extractions as may be unavoidable as a result of operations conducted hereunder in accordance with generally accepted modern oilfield and petroleum industry practices which when so extracted were immediately notified to the Government or c is adjudged bankrupt by a competent court or enters into or scheme of composition with its creditors or takes advantage of

any law for the benefit of debtors; ord has passed a resolution to apply to a competent court for liquidation of the Company unless the liquidation is for the purpose of amalgamation or reconstruction of which the Government has been given notice and the Government is satisfied that the Companys performance under this Contract would not be adversely affected thereby and has given its approval thereto; ore has assigned any interest in the Contract without the prior consent of the Government as provided in Article 28; orf has failed to make any monetary payment required by law or under this Contract by the due date or within such further period after the due date as may thereafter be specified by the Government; org has failed to comply with or has contravened the provisions of this Contract in a material particular; orh has failed to comply with any final determination or award made by a sole expert or arbitrators subject to Article 33; ori has failed to carry out or observe any of the terms and conditions of the License or Lease or the provisions of the Acts or Rules in force thereunder subject however to Article 31.j on notice of termination as provided in Article 29.5. PROVIDED THAT where the Contractor comprises two or more Parties the Government shall not exercise its rights of termination pursuant to Article 30.3 on the occurrence in relation to one or more but not all of the Parties comprising the Contractor of an event entitling the Government to terminate the Contracta if any other Party or Parties constituting the Contractor the non Defaulting Party or Parties satisfies the Government that it or they isare willing and would be able to carry out the obligations of the Contractor.b where the non Defaulting Party or Parties with the consent of the Government has have acquired the Participating Interest of the Defaulting Party pursuant to the provisions of the Operating Agreement and has have procured and delivered to the Government a guarantee or guarantees as referred to in Article 29.1 in respect of the Participating Interest of the Defaulting Party acquired by the non Defaulting Party or Parties.30.4 30.5 This Contract may also be terminated by the Government on giving the requisite notice specified above if the events specified in Article 30.3 c and d occur with respect to a company which has given a performance guarantee pursuant to Article 29 subject however to Article 30.5. If the circumstance or circumstances that give rise to the right of termination under Article 30.3f or g or i or Article 30.4 are

remedied whether by the Defaulting Company or by another Party or Parties in its behalf within the ninety 90 day period or such extended period as may be granted by the Government following the notice of the Governments intention to terminate the Contract as aforesaid such termination shall not become effective.

30.6 On termination of this Contract for any reason whatsoever the rights and obligations of the Contractor shall cease but such termination shall not affect any rights of any Party which may have accrued or any obligations undertaken or incurred including obligations under Article 5.6 by the Contractor or any Party comprising the Contractor and not discharged prior to the date of termination.

30.7 In the event of termination pursuant to Articles 30.2 30.3 or 30.4a the Government may require the Contractor for a period not exceeding one eighty 180 days from the date of termination to continue for the account and at the cost of the Government Crude Oil or Natural Gas production activities until the right to continue such production has been transferred to another entity; a Foreign Company which is a constituent of the Contractor shall have to remove and export all its property subject to Article 27 and the provisions hereof provided that in the event that ownership of any property is in doubt or disputed such property shall not be exported unless and until the doubt or dispute has been settled in favour of the Foreign Company.

30.8 Within ninety 90 days after the termination of this Contract pursuant to Article 30.2 30.3 or 30.4 or such longer period as the Government may agree the Contractor shall comply with Article 14.9 and any reasonably necessary action as directed by the Government to avoid Environmental Damage or hazards to human life or to the property of others.

ARTICLE 31 FORCE MAJEURE

31.1 31.2 31.3 31.4 31.5 Any nonperformance or delay in performance by any Party hereto of any of its obligations under this Contract or in fulfilling any condition of any License or Lease granted to such Party or in meeting any requirement of the Act the Rules or any License or Lease shall except for the payment of monies due under this Contract or under the Act and the Rules or any law be excused if and to the extent that such nonperformance or delay in performance under this Contract is caused by Force Majeure as defined in this Article. For the purpose of this Contract the term Force Majeure means any cause or event other than the unavailability of funds whether similar to or different from those enumerated

herein lying beyond the reasonable control of and unanticipated or unforeseeable by and not brought about at the instance of the Party claiming to be affected by such event or which if anticipated or foreseeable could not be avoided or provided for and which has caused the nonperformance or delay in performance. Without limitation to the generality of the foregoing the term Force Majeure shall include natural phenomena or calamities earthquakes typhoons fires wars declared or undeclared hostilities invasions blockades riots strikes insurrection and civil disturbances but shall not include the unavailability of funds. Where a Party is claiming suspension of its obligations on account of Force Majeure it shall promptly but in no case later than seven (7) days after the occurrence of the event of Force Majeure notify the Management Committee in writing giving full particulars of the Force Majeure the estimated duration thereof the obligations affected and the reasons for its suspension. A Party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the effects thereof on the performance of its obligations under this Contract. The Party affected shall promptly notify the Management Committee as soon as the Force Majeure event has been removed and no longer prevents it from complying with the obligations which have been suspended and shall thereafter resume compliance with such obligations as soon as possible. The Party asserting the claim of Force Majeure shall have the burden of proving that the circumstances constitute valid grounds of Force Majeure under this Article and that such Party has exercised reasonable diligence and efforts to remedy the cause of any alleged Force Majeure.

31.6 31.7 Where a Party is prevented from exercising any rights or performing any obligations under this Contract due to Force Majeure the time for the performance of the obligations affected thereby and for performance of any obligation or the exercise of any right dependent thereon and the term of any Exploration Phase of the Exploration Period or this Contract may be extended to the extent of Force Majeure period or by such period as may be agreed by the Management Committee. Notwithstanding anything contained herein above if an event of Force Majeure occurs and is likely to continue for a period in excess of thirty (30) days the Parties shall meet to discuss the consequences of the Force Majeure and the course of action to be taken to mitigate

the effects thereof or to be adopted in the circumstances.

ARTICLE 32 APPLICABLE LAW AND LANGUAGE OF THE CONTRACT

32.1 32.2 32.3 This Contract shall be governed and interpreted in accordance with the laws of India. Nothing in this Contract shall entitle the Contractor to exercise the rights privileges and powers conferred upon it by this Contract in a manner which will contravene the laws of India. The English language shall be the language of this Contract and shall be used in arbitral proceedings. All communications hearing or visual materials or documents relating to this Contract shall be written or prepared in English.

32.4 The laws will also include amendments revisions modifications etc.

ARTICLE 33 SOLE EXPERT CONCILIATION AND ARBITRATION

33.1 33.2 33.3 33.4 33.5 The Parties shall use their best efforts to settle amicably all disputes differences or claims arising out of or in connection with any of the terms and conditions of this Contract or concerning the interpretation or performance thereof. Matters which by the terms of this Contract the Parties have agreed to refer to a sole expert and any other matter which the Parties may agree to so refer may be referred to a sole expert who shall be an independent and impartial person of international standing with relevant qualifications and experience appointed by a written agreement between the Parties and who shall not by virtue of nationality personal connection or commercial interest have a conflict between his/her own interest and his/her duty as a sole expert. In the event that the Parties fail or are unable to agree on a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the sole expert shall be appointed by a body or an institution or an agency or a person mutually agreed by Parties. In case there is no agreement on the body or an institution or an agency or a person for appointing sole expert or such institution or agency or body fails to appoint a sole expert within thirty 30 days or such longer period as may be mutually agreed by Parties the matter shall be referred to arbitration. Any sole expert appointed shall be acting as an expert and not as an arbitrator and the decision of the sole expert on matters referred to him/her shall be final and binding on the Parties and shall not be subject to arbitration. Subject to the provisions of this Contract the Parties hereby agree that any controversy difference disagreement or claim for damages compensation or otherwise hereinafter in this Clause

referred to as a dispute arising between the Parties which cannot be settled amicably within ninety 90 days after the dispute arises may except for those referred to in Article 33.2 which may be referred to a sole expert be submitted to conciliation or an arbitral tribunal for final decision as hereinafter provided. The arbitral tribunal shall consist of three arbitrators. Each Party to the dispute shall appoint one arbitrator and the Party or Parties shall so advise the other Parties. The two arbitrators appointed by the Parties shall appoint the third arbitrator. Any Party may after appointing an arbitrator request the other Parties in writing to appoint the second arbitrator. If such other Party fails to appoint an arbitrator within thirty 30 days of receipt of the written request to do so such arbitrator may at the request of the first Party be appointed in accordance with Arbitration and Conciliation Act 1996. 33.6 33.7 33.8 33.9 If the two arbitrators appointed by or on behalf of the Parties fail to agree on the appointment of the third arbitrator within thirty 30 days of the appointment of the second arbitrator and if the Parties do not otherwise agree at the request of either Party the third arbitrator shall be appointed in accordance with Arbitration and Conciliation Act 1996. If any of the arbitrators fails or is unable to act his successor shall be appointed by the Party or person who originally appointed such in the manner set out in this Article as if he was the first appointment. The decision of the arbitral tribunal shall be pronounced within four 4 months unless otherwise extended by the Parties and in case of difference among the arbitrators the decision of the majority shall be final and binding on the Parties. The arbitration agreement contained in this Article 33 shall be governed by the Arbitration and Conciliation Act 1996 Arbitration Act. Arbitration proceedings shall be conducted in accordance with the rules for arbitration provided in Arbitration Act. 33.10 The right to arbitrate disputes under this Contract shall survive expiry or the termination of this Contract. 33.11 33.12 33.13 33.14 Prior to submitting a dispute to arbitration the Parties may by mutual agreement submit the matter for conciliation in accordance with Part III of the Arbitration and Conciliation Act 1996. No arbitration proceedings shall be instituted while conciliation proceedings are pending provided that a Party may initiate arbitration proceedings in the event that dispute has not been resolved by conciliation within sixty 60 days of the date of agreement by the

Parties to submit such dispute to conciliation. The venue of the sole expert conciliation or arbitration proceedings pursuant to this Article unless the Parties agree otherwise shall be New Delhi India and shall be conducted in the English language. Insofar as practicable the Parties shall continue to implement the terms of this Contract notwithstanding the initiation of proceedings before a sole expert conciliator or arbitral tribunal and any pending claim or dispute. The fees and expenses of a sole expert or conciliator appointed by the Parties shall be borne equally by the Parties. The cost and expenses of arbitrator appointed by a Party in accordance with the provision of this Article shall be borne by the respective Party and the cost and expenses of third arbitrator and other incidental expenditure in relation to arbitration and liability thereof shall be at the discretion of the arbitrators. Notwithstanding anything contrary contained herein above in the event of dispute among Government Companies and with the Government such disputes shall be settled in accordance with guidelines issued on the subject by Government from time to time.

ARTICLE 34 CHANGE OF STATUS OF COMPANIES

34.1 The Parties comprising the Contractor shall notify the Government of any change in the management or control of a Company or the relationship with any guarantor of the Companies.

ARTICLE 35 ENTIRE AGREEMENT AMENDMENTS WAIVER AND MISCELLANEOUS

35.1 35.2 35.3 35.4 35.5 35.6 35.7 35.8 This Contract supersedes and replaces any previous agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the execution date of this Contract. This Contract shall not be amended modified varied or supplemented in any respect except by an instrument in writing signed by all the Parties which shall state the date upon which the amendment or modification shall become effective. No waiver by any Party of any one or more obligations or defaults by any other Party in the performance of this Contract shall operate or be construed as a waiver of any other obligations or defaults whether of a like or of a different character. The provisions of this Contract shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest. In the event of any conflict between any provisions in the main body of this Contract and any provision in the Appendices the provision in the main body shall prevail. The headings of this Contract are for

convenience of reference only and shall not be taken into account in interpreting the terms of this Contract. Reference to any law or regulation having the force of law includes a reference to that law or regulation as from time to time may be amended extended or reenacted. A reference in this Contract to the word including shall also mean including but not limited to.

ARTICLE 36 CERTIFICATES

36.1 A Company shall furnish prior to execution of this Contract a duly authorised copy of a resolution properly and legally passed by the Board of Directors of the Company authorising its President or any Vice President or any other representative to execute this Contract along with a certificate duly signed by the Secretary or an Assistant Secretary of the Company under its seal in this regard and to the effect that the Company has the power and authority to enter into this Contract and to perform its obligations thereunder and has taken all necessary action to authorise the execution delivery and performance of the Contract.

37.1 All notices statements and other communications to be given submitted or made hereunder by any Party to another shall be sufficiently given if given in writing in English language and sent by registered post postage paid or by telegram telex facsimile radio or cable to the address or addresses of the other Party or Parties as follows:

ARTICLE 37 NOTICES

a If to the Government Secretary to the Government of India Ministry of Petroleum and Natural Gas Shastri Bhavan Dr. Rajendra Prasad Marg New Delhi 110001 INDIA Facsimile No. 91 11 23383585

b Mr. M.R. Pasrija Chairman and Managing Director Oil India Ltd. 5 Sikandra Road New Delhi 110001 Facsimile No. Telephone No. 011 23074252 011 23074250 23074251

c Mr. Jean Paul Roy Geo Global Resources Barbados Inc. Co 310 605 1st Street SW Calgary Alberta Canada T2P 0J9 Facsimile No. Telephone No. 1 403 77791991 403 77792503

37.2 Notices when given in terms of Article 37.1 shall be effective when delivered if offered at the address of the other Parties as under Article 37.1 during business hours on working days and if received outside business hours on the next following working day.

37.3 Any Party may by reasonable notice as provided hereunder to the other Parties change its address and other particulars for notice purpose.

IN WITNESS WHEREOF the representatives of the Parties to this Contract being duly authorised have hereunto set their hands and have executed these presents

this 2nd day of March 2007. Signed for and on behalf of the President of India In presence of By s s
Signed for and on behalf of OIL In presence of s Signed for and on behalf of GGRB In presence of s
By s By s APPENDIX A DESCRIPTION OF THE CONTRACT AREA The area comprising
approximately 2196 Sq. Km. Onshore India identified as Block RJONN20042 described herein and
shown on the map attached as Appendix B. Longitude and Latitude measurements commencing at
points A to J to A are given below
Pt. Deg. Min. Longitude ABCDEFGHIJA 71 17 17 27 27 27 27 27 27 15 58 57 01 42 23 14 01 05 58 Coordinate
s Sec. 24. 009. 009. 0035. 0040. 0030. 0030. 000. 000. 0048. 0024. 00 Deg. 27 27 28 28 28 28 27 27 27 Latit
ude Min. 52 56 21 60 81 55 43 48 52 52 Sec. 8. 0012. 0057. 0050. 0010. 000. 000. 0045. 0030. 0028. 008. 00

Appendix B Map of Contract Area APPENDIX C ACCOUNTING PROCEDURE TO THE
CONTRACT BETWEEN THE GOVERNMENT OF INDIA AND OIL INDIA LTD. AND GEO GLOBAL
RESOURCES BARBADOS INC. WITH RESPECT TO CONTRACT AREA IDENTIFIED AS BLOCK
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Rights Labour and Associated Labour Costs Transportation Costs Charges for Services i Third
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General Warranty Value of Materials charged to the accounts under the Contract 3.1.9 3.1.10 3.1.11
3.1.12 3.1.13 Duties fees and other charges Insurance and Losses Legal expenses Training
costs General and Administrative Costs 3.1.14 Royalty License fee surface rentals etc. Costs not

recoverable and not allowable under the Contract. Other Costs recoverable and allowable only with Management Committee approval. Rental income and credits. Nonduplication of charges and credits.

3.2 3.3 3.4 3.5 Section 4 Records and Inventories of Assets 4.1 4.2
Records Inventories Section 5 Production Statement Section 6 Value of Production and Pricing Statement Section 7 Statement of Costs Expenditures and Receipts Section 8 Cost Recovery Statement Section 9 Profit Sharing Statement Section 10 Local Procurement Statement Section 11 End of Year Statement Section 12 Budget Statement

ACCOUNTING PROCEDURE SECTION 1

GENERAL PROVISIONS 1.1 Purpose

Generally the purpose of this Accounting Procedure is to set out principles and procedures of accounting which will enable the Government of India to monitor effectively the Contractor's costs expenditures production and income so that the Government's entitlement to Profit Petroleum can be accurately determined pursuant to the terms of the Contract. More specifically the purpose of the Accounting Procedure is to classify costs and expenditures and to define which costs and expenditures shall be allowable for cost recovery and profit sharing and participation purposes; specify the manner in which the Contractor's accounts shall be prepared and approved; and address numerous other accounting related matters. This Accounting Procedure is intended to apply to the provisions of the Contract and is without prejudice to the computation of income tax under applicable provisions of the Income Tax Act 1961 as amended.

1.2 Definitions

For purposes of this Accounting Procedure the terms used herein which are defined in the Contract shall have the same meaning when used in this Accounting Procedure.

1.3 Inconsistency

In the event of any inconsistency or conflict between the provisions of this Accounting Procedure and the other provisions of the Contract the other provisions of the Contract shall prevail.

Documentation and Statements to be submitted by the Contractor

Within ninety 90 days of the Effective Date of the Contract the Contractor shall submit to and discuss with the Government a proposed outline of charts of accounts operating records and reports which outline shall reflect each of the categories and subcategories of costs and income specified in Sections 2 and 31.4 1.4.1 and shall be in accordance with generally accepted standards and recognized accounting systems and consistent

with normal petroleum industry practice and procedures for joint venture operations. Within ninety 90 days of receiving the above submission the Government shall either provide written notification of its approval of the proposal or request in writing revisions to the proposal. Within one hundred and eighty 180 days from the Effective Date of the Contract the Contractor and the Government shall agree on the outline of charts of accounts records and reports which shall also describe the basis of the accounting system and procedures to be developed and used under this Contract. Following such agreement the Contractor shall expeditiously prepare and provide the Government with formal copies of the comprehensive charts of accounts records and reports and allow the Government to examine the manuals and to review procedures which are and shall be observed under the Contract.

1.4.2 Notwithstanding the generality of the foregoing the Contractor shall make regular Statements relating to the Petroleum Operations as follows:

- i Production Statement see Section 5 of this Accounting Procedure.
- ii Value of Production and Pricing Statement see Section 6 of this Accounting Procedure.
- iii Statement of Costs Expenditures and Receipts see Section 7 of this Accounting Procedure.
- iv Cost Recovery Statement see Section 8 of this Accounting Procedure.
- v Profit Sharing Statement see Section 9 of this Accounting Procedure.
- vi Local Procurement Statement see Section 10 of this Accounting Procedure.
- vii End of Year Statement see Section 11 of this Accounting Procedure.
- viii Budget Statement see Section 12 of this Accounting Procedure.

1.4.3 All reports and Statements shall be prepared in accordance with the Contract and the laws of India and where there are no relevant provisions in either of these in accordance with generally accepted practices in the international petroleum industry.

1.4.4 Each of the entities constituting the Contractor shall be responsible for maintaining its own accounting records in order to comply with all legal requirements and to support all returns or any other accounting reports required by any Government authority in relation to the Petroleum Operations. However for the purposes of giving effect to this Accounting Procedure the Party constituting the Contractor who is the Operator shall be responsible for maintaining at its business office in India on behalf of the Contractor all the accounts of the Petroleum Operations in accordance with the provisions of the Accounting Procedure and the

Contract.1.5 Language and Units of AccountAll accounts records books reports and Statements shall be maintained and prepared in the English language using mercantile basis of accounting. The accounts shall be maintained in United States Dollars which shall be the controlling currency of account for cost recovery and profit sharing purposes. Metric units and Barrels shall be employed for measurements required under the Contract. Where necessary for clarification the Contractor may also maintain accounts and records in other languages currencies and units.1.6 Currency Exchange Rates1.6.1 For conversion purposes between United States Dollars and Indian Rupees or any other currency the monthly average of the daily mean of the buying and selling rates of exchange as quoted by the Reserve Bank of India or any other financial body as may be mutually agreed by the Parties for the Month in which the revenues costsexpenditures receipts or income are recorded shall be used. However in the case of any single nonUS Dollar transaction in excess of the equivalent of fifty thousand50000 US Dollars the conversion into US Dollars shall be performed on the basis of the average of the applicable exchange rates for the day on which the transaction occurred.1.6.2 Any realized or unrealized gains or losses from the exchange of currency in respect of Petroleum Operations shall be credited or charged to the accounts. A record of the exchange rates used in converting Indian Rupees or any other currencies into United States Dollars as specified in Section 1.6.1 shall be maintained by the Contractor and shall be identified in the relevant Statements required to be submitted by the Contractor in accordance with Section 1.4.2.1.7 Payments 1.7.1 1.7.2 1.7.3 Subject to Article 20.3 of the Contract and the foreign exchange laws and regulations prevailing from time to time all payments between the Parties shall unless otherwise agreed be in United States Dollars and shall be made through a bank designated by each receiving Party. Unless otherwise specified all sums due under the Contract shall be paid within forty five 45 days from the date on which the obligation to pay was incurred. All sums due by one Party to the other under the Contract during any Month shall for each day such sums are overdue during such Month bear interest compounded daily at the applicable LIBOR plus two 2 percentage points.1.8 Arms Length Transactions1.9 1.9.1 1.9.2 1.9.3 Unless otherwise specifically provided for in the Contract all

transactions giving rise to revenues costs or expenditures which will be credited or charged to the accounts prepared maintained or submitted hereunder shall be conducted at arms length or on such a basis as will assure that all such revenues costs or expenditures will not be lower or higher as the case may be than would result from a transaction conducted at arms length on a competitive basis with third parties.

Audit and Inspection Rights of the Government Without prejudice to statutory rights the Government upon at least twenty (20) Business Days advance written notice to the Contractor shall have the right to inspect and audit during normal business hours all records and documents supporting costs expenditures expenses receipts and income such as the Contractor's accounts books records invoices cash vouchers debit notes price lists or similar documentation with respect to the Petroleum Operations conducted hereunder in each Year within two (2) years or such longer period as may be required in exceptional circumstances from the end of such Year. The Government may undertake the conduct of the audit either through its own representatives or through a qualified firm of recognised chartered accountants registered in India or a reputed consulting firm appointed for the purpose by the Government and the costs of audit in case of Government auditors shall be borne by the Government where as for outside auditors this shall be borne by the Contractor as a General and Administrative Cost. In conducting the audit the Government or its auditors shall be entitled to examine and verify at reasonable times all charges and credits relating to the Contractor's activities under the Contract and all books of account accounting entries material records and inventories vouchers payrolls invoices and any other documents correspondence and records considered necessary by the Government to audit and verify the charges and credits. The auditors shall also have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the Contractor directly or indirectly serving the Petroleum Operations and to physically examine other property facilities and stocks used in Petroleum Operations wherever located and to question personnel associated with those operations. Where the Government requires verification of charges made by an Affiliate the Government shall have the right to obtain an audit certificate from an internationally recognized firm of public accountants

acceptable to both the Government and the Contractor which may be the Contractor's statutory auditor. Submission of the audit certificate shall in no way relieve or diminish the responsibility of the Contractor for the compliance with the obligations under the Contract.

1.9.4 1.9.5 1.9.6 1.9.7 1.9.8 Any audit exceptions shall be made by the Government in writing and notified to the Contractor within one hundred and twenty 120 days following completion of the audit in question. The Contractor shall answer any notice of exception under Section 1.9.4 within one hundred and twenty 120 days of the receipt of such notice. Where the Contractor has after the said one hundred and twenty 120 days failed to answer a notice of exception the exception shall prevail and deemed to have been agreed to by the Contractor. All agreed adjustments resulting from an audit and all adjustments required by prevailing exceptions under Section 1.9.5 shall be promptly made in the Contractor's accounts and any consequential adjustments to the Government's entitlement to Petroleum shall be made within thirty 30 days therefrom. Notwithstanding any reference to a Sole Expert or Arbitration in accordance with the provisions of the Contract in case any amount is claimed as due to the Government resulting from the audit exception but not accepted or settled by the Contractor then the Contractor shall deposit such claimed amount in an escrow account to be opened with a financial institution failing mutually agreed agreement with State Bank of India within thirty 30 days from the date when the amount is disputed by the Contractor. The amount in escrow account along with any interest accumulated thereon shall be appropriated or adjusted in accordance with the decision or award of the Sole Expert or Arbitral Tribunal as may be or otherwise as mutually agreed to between the Parties. If the Contractor and the Government are unable to reach final agreement on proposed audit adjustments either Party may refer any dispute thereon to a sole expert as provided for in the Contract. So long as any issues are outstanding with respect to an audit the Contractor shall maintain the relevant documents and permit inspection thereof until the issue is resolved.

1.10 Revision of the Accounting Procedure By mutual agreement between the Government and the Contractor this Accounting Procedure may be revised from time to time in writing signed by the Parties stating the date upon which the amendments shall become effective.

SECTION 2 CLASSIFICATION DEFINITION AND ALLOCATION OF COSTS AND

EXPENDITURES 2.1 Segregation of Costs Costs shall be segregated in accordance with the

purposes for which such expenditures are made. All costs and expenditures allowable under Section 3 relating to Petroleum Operations shall be classified defined and allocated as set out below in this

Section. 2.2 Exploration Costs Exploration Costs are all direct and allocated indirect expenditures incurred in the search for Petroleum in an area which is or was at the time when such costs

were incurred part of the Contract Area including expenditures incurred in respect of Aerial geophysical geochemical palaeontological geological topographical and seismic surveys analysis

and studies and their interpretation. Core hole drilling and water Well drilling. Labour materials supplies and services used in drilling Wells with the object of finding Petroleum or in drilling

Appraisal Wells provided that if such Wells are completed as producing Wells or injection Well for enhancing Oil recovery the costs of completion thereof shall be classified as Development

Costs. Facilities used solely in support of the purposes described in Sections 2.2.1 2.2.2 and 2.2.3 above including access roads all separately identified. Any Service Costs and General and

Administrative Costs directly incurred on exploration activities and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to Exploration

Operations determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Exploration Costs. Geological

and geophysical information purchased or acquired in connection with Exploration Operations. Any other expenditures incurred in the search for Petroleum not covered under Sections 2.3 or 2.4. 2.2.1

2.2.2 2.2.3 2.2.4 2.2.5 2.2.6 2.2.7 2.3 Development Costs 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5 2.3.6 Development Costs are all direct and allocated indirect expenditures incurred with respect to the

development of discoveries within the Contract Area including expenditures incurred on account of Geological and Geophysical information acquired in connection with Development

Operations. Drilling Development Wells whether these Wells are dry or producing and drilling Wells for the injection of water or Gas to enhance recovery of Petroleum. Completing of Exploration Wells

by way of installation of casing or equipment or otherwise or for the purpose of bringing a Well into use as a producing Well or as a Well for the injection of water or Gas to enhance recovery of Petroleum. Purchase installation or construction of production transport and storage facilities for production of Petroleum such as pipelines flow lines production and treatment units wellhead equipment subsurface equipment enhanced recovery systems offshore and onshore platforms export terminals and piers harbours and related facilities and access roads for production activities. Engineering and design studies for facilities referred to in Section 2.3.3. Any Service Costs and General and Administrative Costs directly incurred in Development Operations and identifiable as such and a portion of the remaining Service Costs and General and Administrative Costs allocated to development activities determined by the proportionate share of total Contract Costs excluding General and Administrative Costs and Service Costs represented by all other Development Costs.

2.4 Production Costs Production Costs are expenditures incurred on Production Operations after the start of production from the Field which are other than Exploration and Development Costs. The balance of General and Administrative Costs and Service Costs not allocated to Exploration Costs or Development Costs shall be allocated to Production Costs.

2.5 Service Costs Service Costs are direct and indirect expenditures incurred in support of Petroleum Operations in the Contract Area including expenditures on warehouses piers marine vessels vehicles motorized rolling equipment aircraft fire and security stations workshops water and sewerage plants power plants housing community and recreational facilities and furniture and tools and equipment used in these activities. Service Costs in any Year shall include the costs incurred in such Year to purchase and/or construct the said facilities as well as the annual costs of maintaining and operating the same each to be identified separately. All Service Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.5 and 2.4 to Exploration Costs Development Costs and Production Costs and shall be separately shown under each of these categories. Where Service Costs are made in respect of shared facilities the basis of allocation of costs to Petroleum Operations hereunder shall be specified.

2.6 General and Administrative Costs

2.6.1 2.6.2 General and Administrative Costs are

expenditures incurred on general administration and management primarily and principally related to Petroleum Operations in or in connection with the Contract Area and shall include Main office field office and general administrative expenditures in India including supervisory accounting and employee relations services; An annual overhead charge for services rendered by the parent company or an Affiliate to support and manage Petroleum Operations under the Contract and for staff advice and assistance including financial legal accounting and employee relations services but excluding any remuneration for services charged separately under this Accounting Procedure provided that i for the period from the Effective Date until the date on which the first Development Plan under the Contract is approved by the Government this annual charge shall be the Contractor's verifiable expenditure but shall in no event be greater than the following percentages of the total Contract Costs incurred during the Contract Year in or in connection with the Contract Area and qualifying for recovery pursuant to Section 3 Contract year in million US Contract costs in any Annual overhead charge

Contract Costs in excess of US	Overhead charge (%)
250,000	23
600,000	2
2 million	0
5 million	5
12,000,000	1

Costs in excess of US 5 million ii from the date on which the first Development Plan is approved the charge shall be at an amount or rate to be agreed on between the Parties and stated in the Development Plan.

2.6.3 All General and Administrative Costs shall be regularly allocated as specified in Sections 2.2.5 2.3.5 and 2.4 to Exploration Costs Development Costs and Production Costs respectively and shall be separately shown under each of these cost categories.

SECTION 3 COSTS EXPENSES EXPENDITURES AND INCIDENTAL INCOME OF THE CONTRACTOR

3.1 Costs Recoverable and Allowable Without Further Approval of the Government Costs incurred by the Contractor on Petroleum Operations as per reviewed or approved Work Programme and Budget by the Management Committee as the case may be pursuant to the Contract as classified under the headings referred to in Section 2 shall be allowable for the purposes of the Contract except to the extent provided in Section 3.2 or elsewhere in this Accounting Procedure and subject to audit as referred to in Articles 25.4.1 to 25.4.4 and Article 25.5 as provided for herein. Further in case of variation in costs over the reviewed approved Work Programme and

Budget as the case may be or reappropriation of costs shall be submitted to the Management Committee for review and approval as the case may be within thirty (30) days from end of the relevant Financial Year and subject to the audit and other provisions of the Contract such costs shall be allowable for the purposes of the Contract.

3.1.1 Surface Rights All direct costs necessary for the acquisition, renewal or relinquishment of surface rights acquired and maintained in force for the purposes of the Contract except as provided in Section 3.1.9.

3.1.2 Labour and Associated Labour Costs a) Contractors locally recruited employees based in India: Costs of all the Contractors locally recruited employees who are directly engaged in the conduct of Petroleum Operations under the Contract in India. Such costs shall include the costs of employee benefits and Government benefits for employees and levies imposed on the Contractor as an employer, transportation and relocation costs within India of the employee and such members of the employee's family as per the personnel policy of the employer as required by law or customary practice in India. If such employees are engaged in other activities in India in addition to Petroleum Operations the cost of such employees shall be apportioned on a time sheet basis according to sound and acceptable accounting principles.

b) **Assigned Personnel** Costs of salaries and wages including bonuses of the Contractor's employees directly and necessarily engaged in the conduct of the Petroleum Operations under the Contract whether temporarily or permanently assigned irrespective of the location of such employees it being understood that in the case of those personnel only a portion of whose time is wholly dedicated to Petroleum Operations under the Contract only that pro rata portion of applicable salaries, wages and other costs as specified in Sections 3.1.2c, d, e, f and g shall be charged and the basis of such pro rata allocation shall be specified.

c) The Contractor's costs regarding holiday, vacation, sickness and disability benefits and living and housing and other customary allowances applicable to the salaries and wages chargeable under Section 3.1.2b above.

d) Expenses or contributions made pursuant to assessments or obligations imposed under the laws of India which are applicable to the Contractor's cost of salaries and wages chargeable under Section 3.1.2b above.

e) The Contractor's cost of established plans for employees' group life insurance, hospitalization

pension retirement and other benefit plans of a like nature customarily granted to the Contractors employees provided however that such costs are in accordance with generally accepted standards in the international petroleum industry applicable to salaries and wages chargeable to Petroleum Operations under Section 3.1.2b above.

f Personal income taxes where and when they are paid by the Contractor to the Government of India for the employee in accordance with the Contractors standard personnel policies.

g Reasonable transportation and travel expenses of employees of the Contractor including those made for travel and relocation of the expatriate employees including their dependent family and personal effects assigned to India whose salaries and wages are chargeable to Petroleum Operations under Section 3.1.2b above.

Transportation cost as used in this Section shall mean the cost of freight and passenger service and any accountable incidental expenditures related to transfer travel and authorized under the Contractors standard personnel policies. The Contractor shall ensure that all expenditures related to transportation costs are equitably allocated to the activities which have benefited from the personnel concerned.

3.1.3 Transportation Costs

The reasonable cost of transportation of equipment materials and supplies within India and from outside India to India necessary for the conduct of Petroleum Operations under the Contract including directly related costs such as unloading charges dock fees and inland and ocean freight charges.

3.1.4 Charges for Services

i Third Parties

The actual costs of contract services services of professional consultants utilities and other services necessary for the conduct of Petroleum Operations under the Contract performed by third parties other than an Affiliate of the Contractor provided that the transactions resulting in such costs are undertaken pursuant to Section 1.8 of this Accounting Procedure.

ii Affiliates of Contractor

a Professional and Administrative Services and Expenses

Cost of professional and administrative services provided by any Affiliate for the direct benefit of Petroleum Operations including but not limited to services provided by the production exploration legal financial insurance accounting and computer services divisions other than those covered by Section 3.1.4 iib which the Contractor may use in lieu of having its own employees. Charges shall be equal to the actual cost of providing their services shall not include any element of

profit and shall not be any higher than the most favourable prices charged by the Affiliate to third parties for comparable services under similar terms and conditions elsewhere and will be fair and reasonable in the light of prevailing modern oilfield and petroleum industry practices.

b Scientific or Technical Personnel Cost of scientific or technical personnel services provided by any Affiliate of the Contractor for the direct benefit of Petroleum Operations which cost shall be charged on a cost of service basis. Charges therefor shall not exceed charges for comparable services currently provided by outside technical service organizations of comparable qualifications. Unless the work to be done by such personnel is covered by an Approved Budget and Work Programme the Contractor shall not authorize work by such personnel without approval of the Management Committee.

c Equipment facilities and property owned and furnished by the Contractors Affiliates at rates commensurate with the cost of ownership and operation provided however that such rates shall not exceed those currently prevailing for the supply of like equipment facilities and property on comparable terms in the area where the Petroleum Operations are being conducted. The equipment and facilities referred to herein shall exclude major investment items such as but not limited to drilling rigs producing platforms oil treating facilities oil and gas loading and transportation systems storage and terminal facilities and other major facilities rates for which shall be subject to separate agreement with the Government.

3.1.5 Communications Cost of acquiring leasing installing operating repairing and maintaining communication systems including radio satellite link and microwave facilities between the Contract Area and the Contractor's nearest base facility.

3.1.6 Office Shore Bases and Miscellaneous Facilities Net cost to the Contractor of establishing maintaining and operating any office suboffice shore base facility warehouse housing or other facility directly serving the Petroleum Operations. If any such facility services contract areas other than the Contract Area or any business other than Petroleum Operations the net costs thereof shall be allocated on an equitable and consistent basis.

3.1.7 Environmental Studies and Protection Costs incurred in conducting the environmental impact assessment studies for the Contract Area and in taking environmental protection measures including abandonment cost or contribution to abandonment funds as may be

created for abandonment and Site Restoration pursuant to the terms of the Contract.

3.1.8 Materials and equipment

General

So far as is practicable and consistent with efficient and economical operation only such material shall be purchased or furnished by the Contractor for use in the Petroleum Operations as may be required for use in the reasonably foreseeable future and the accumulation of surplus stocks shall be avoided. Material and equipment held in inventory shall only be charged to the accounts when such material is removed from inventory and used in Petroleum Operations. Costs shall be charged to the accounting records and books based on the First in First out method.

ii Warranty

In the case of defective material or equipment any adjustment received by the Contractor from the suppliers or manufacturers or their agents in respect of any warranty on material or equipment shall be credited to the accounts under the Contract.

iii Value of materials charged to the accounts under the Contract

a Except as otherwise provided in subparagraph b below materials purchased by the Contractor for use in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts if any purchase and procurement fees plus freight and forwarding charges between point of supply and point of shipment freight to port of destination insurance taxes custom duties consular fees other items chargeable against imported material and where applicable handling and transportation costs from point of importation to warehouse or operating site and these costs shall not exceed those currently prevailing in normal arms length transactions on the open market.

b Material purchased from or sold to Affiliates or transferred to or from activities of the Contractor other than Petroleum Operations under the Contract

a a new material hereinafter referred to as condition A shall be valued at the current international price which shall not exceed the price prevailing in normal arms length transactions on the open market;

b b used material which is in sound and serviceable condition and is suitable for reuse without reconditioning hereinafter referred to as condition B shall be priced at not more than seventy five per cent 75 of the current price of the above mentioned new materials;

c c used material which cannot be classified as condition B but which after reconditioning will be further serviceable for original function as good secondhand condition B material or is serviceable for original function but substantially not suitable

for reconditioning hereinafter referred to as condition C shall be priced at not more than fifty per cent 50 of the current price of the new material referred to above as condition A. The cost of reconditioning shall be charged to the reconditioned material provided that the condition C material value plus the cost of reconditioning does not exceed the value of condition B material. Material which cannot be classified as condition B or condition C shall be priced at a value commensurate with its use. Material involving erection expenditure shall be charged at the applicable condition percentage referred to above of the current knocked down price of new material referred to above as condition A. When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price in relation to materials referred to above as conditions B and C such material shall be priced on a basis that will result in a net charge to the accounts under the Contract consistent with the value of the service rendered.

3.1.9 Duties Fees and Other Charges Any duties levies fees charges and any other assessments levied by any governmental or taxing authority in connection with the Contractor's activities under the Contract and paid directly by the Contractor except corporate income tax payable by the constituents of the Contractor.

3.1.10 Insurance and Losses Insurance premia and costs incurred for insurance pursuant to Article 24 of the Contract provided that such insurance is customary affords prudent protection against risk and is at a premium no higher than that charged on a competitive basis by insurance companies which are not Affiliates. Except as provided in Sections 3.2 ix Section 3.2x and Section 3.2xi actual costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs may include but are not limited to repair and replacement of property in the Contract Area resulting from damages or losses incurred by fire flood storm theft accident or such other cause.

3.1.11 Legal Expenses All reasonable costs and expenses except Section 3.2 xi resulting from the handling investigating asserting defending or settling of any claim or legal action necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of Petroleum Operations under the Contract or sums paid in respect of legal services necessary for the protection

of the joint interest of Government and the Contractor shall be allowable. Such expenditures shall include attorneys fees court costs costs of investigation and procurement of evidence and amounts paid in settlement or satisfaction of any such litigation and claims provided such costs are not covered elsewhere in the Accounting Procedure. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliate such compensation shall be included instead under Section 3.1.2 or 3.1.4 ii above as applicable.

3.1.12 Training Costs All costs and expenses incurred by the Contractor in training as is required under Article 22 of the Contract.

3.1.13 General and Administrative Costs The costs described in Section 2.6.1 and the charge described in Section 2.6.2 of this Accounting Procedure.

3.1.14 Royalty License fee surface rentals etc. Royalty License fee surface rentals dead rents and other levies and taxes paid to the Government of India or State Government or local Government bodies or authority or agency except income tax paid to the Government.

3.2 Costs not recoverable and not allowable under the Contract The following costs and expenses shall not be recoverable or allowable whether directly as such or indirectly as part of any other charges or expense for cost recovery and profit sharing purposes under the Contract i costs and charges incurred before the Effective Date including costs in respect of preparation signature or ratification of this Contract; **Explanatory Note** It is clarified that costs and expenditures incurred prior to the Effective Date but after the execution of the Contract for making statutory payments in connection with the Petroleum Operations such as Petroleum Exploration License PEL fee and application fee shall be allowed as Contract Cost and shall be cost recoverable. ii expenditures in respect of any financial transaction to negotiate float or otherwise obtain or secure funds for Petroleum Operations including but not limited to interest commission brokerage and fees related to such transactions as well as exchange losses on loans or other financing whether between Affiliates or otherwise; iii costs of marketing or transportation of Petroleum beyond the Delivery Point; iv expenditures incurred in obtaining furnishing and maintaining the guarantees required under the Contract and any other amounts spent on indemnities with regard to nonfulfillment of contractual obligations; v attorneys fees and other costs and charges in connection

with arbitration proceedings and sole expert determination pursuant to the Contract;vi fines interest and penalties imposed by Courts of law of the Republic of India;vii donations and contributions;viii expenditures on creation of any partnership or joint venture arrangement;ix amounts paid with respect to nonfulfillment of contractual obligations;x costs incurred as a result of failure to insure where insurance is required pursuant to the Contract or of failure to follow procedures laid down by an insurance policy or where the Contractor has elected to self insure or has underinsured;xi costs and expenditures incurred as a result of misconduct or negligence of the Contractor; andxii expenses of the members of the Management Committee as per Article 6.12.3.3 3.4 Other costs recoverable and allowable only with Management Committee approvalAny other costs and expenditures not included in Section 3.1 or 3.2 of this Accounting Procedure but which have been incurred by the Contractor for the necessaryand proper conduct of Petroleum Operations shall be allowed to be recovered only with the express prior approval in writing of the Management Committee.Inental Income and CreditsAll inental income and proceeds received from Petroleum Operations under the Contract including but not limited to the items listed below shall be credited to theaccounts under the Contract and shall be taken into account for cost recovery and Profit Petroleum sharing purposes in the manner described in Articles 15 and 16 of theContracti The proceeds of any insurance or claim or judicial awards in connection with Petroleum Operations under the Contract or any assets charged to the accounts underthe Contract where such operations or assets have been insured and the premia charged to the accounts under the Contract;ii Revenue received from third parties for the use of property or assets the cost of which has been charged to the accounts under the Contract;iii Any adjustment received by the Contractor from the suppliersmanufacturers or their agents in connection with defective material the cost of which was previouslycharged by the Contractor to the accounts under the Contract;iv Rentals refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Contract;v Prices originally charged to the accounts under the Contract for materials subsequently exported from the Republic of India without being used in PetroleumOperations under

the Contract;vi Proceeds from the sale or exchange by the Contractor of assets plant or facilities the acquisition costs of which have been charged to the accounts under theContract;vii Legal costs charged to the accounts under Section 3.1.11 of this Accounting Procedure and subsequently recovered by the Contractor.3.5 NonDuplication of Charges and Credits Notwithstanding any provision to the contrary in this Accounting Procedure it is the objective of the Parties that there shall be no duplication of charges or credits to theaccounts under the Contract.

SECTION 4RECORDS AND INVENTORIES OF ASSETS

4.1 4.1.1 4.2 4.2.1 4.2.2 4.2.3 4.2.4 Records

The Contractor shall keep and maintain detailed records of property and assets in use for or in connection with Petroleum Operations under the Contract inaccordance with normal practices in exploration and production activities of the international petroleum industry. Such records shall include information on quantitieslocation and condition of such property and assets and whether such property or assets are leased or owned.

Inventories

The Contractor shalla not less than once every twelve 12 Months with respect to movable assets; andb not less than once every three 3 Years with respect to immovable assetstake an inventory of the assets used for or in connection with Petroleum Operations in terms of the Contract and address and deliver such inventory to the Governmenttogether with a written statement of the principles upon which valuation of the assets mentioned in such inventory has been based.The Contractor shall give the Government at least thirty 30 days notice in writing in the manner provided for in the Contract of its intention to take the inventoryreferred to in Section 4.2.1 and the Government shall have the right to be represented when such inventory is taken.When an assignment of rights under the Contract takes place a special inventory shall be taken by the Contractor at the request of the assignee provided that thecost of such inventory is borne by the assignee and paid to the Contractor.In order to give effect to Article 27 of the Contract the Contractor shall provide the Government with a comprehensive list of all relevant assets when requested bythe Government to do so.

SECTION 5PRODUCTION STATEMENT

From the date of first production of Petroleum from the Contract Area the Contractor shall submit a monthly Production Statement to Government showing thefollowing information

separately of each producing Field and in aggregate for the Contract AreaThe quantity of Crude Oil and Condensate produced and saved.The quality and characteristics of such Crude Oil and Condensate produced and saved.The quantity of Associated Natural Gas and Non Associated Natural Gas produced and saved.The quality characteristics and composition of such Natural Gas produced and saved separately.The quantities of Crude Oil Condensate and Natural Gas used for the purposes of carrying on drilling and production operations and pumping to field storage aswell as quantities reinjected.The quantities of Crude Oil Condensate and Natural Gas unavoidably lost.The quantities of Natural Gas flared and vented.The size of Petroleum stocks held on the first day of the Month in question.The size of Petroleum stocks held on the last day of the Month in question.The quantities of Natural Gas reinjected into the Petroleum Reservoir.The number of days in the Month during which Petroleum was produced from each Field.The GasOil ratio for each Reservoir and Field for the relevant Month.Water production water injection and Reservoir pressure data for each Reservoir and Field.5.1 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 5.1.6 5.1.7 5.1.8 5.1.9 5.1.10 5.1.11 5.1.12 5.1.13 5.2 5.3 5.4 5.5 All quantities shown in this Statement shall be expressed in both volumetric terms barrels of Oil and cubic metres of Gas and in the case of Oil in weight metrictonnes.For the purpose of reporting Field production quantities pursuant to this Section the Contractor shall agree with the Management Committee on the exact area to be designated as Development Area.The Government may direct in writing that the Contractor include other reasonable particulars relating to the production of Petroleum in its monthly ProductionStatement and the Contractor shall comply with such direction.The Production Statement for each Month shall be submitted to Government no later than fifteen 15 days after the end of such Month. SECTION 6VALUE OF PRODUCTION AND PRICING STATEMENT6.1 6.1.1 6.1.2 6.1.3 6.1.4 6.1.5 6.1.6 6.1.7 6.2 The Contractor shall for the purposes of Article 19 of the Contract prepare a Statement providing calculations of the value of Crude Oil and Condensate producedand saved during each Month. This Statement shall contain the following informationThe quantities prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate to third parties

made during the Month in question. The quantities, prices and receipts realised therefor by the Contractor as a result of sales of Crude Oil and Condensate made during the Month in question other than to third parties if any. The quantities of Crude Oil and Condensate appropriated by the Contractor to refining or other processing without otherwise being disposed of in the form of Crude Oil or Condensate. The value of stocks of Crude Oil and Condensate on the first day of the Month in question. The value of stocks of Crude Oil and Condensate on the last day of the Month in question. The percentage volume of total sales of Crude Oil and Condensate made by the Contractor during the Month that are Arms Length Sales to third parties. Information available to the Contractor insofar as required for the purposes of Article 19 of the Contract concerning the prices of competitive crude oils produced by the main petroleum producing and exporting countries including contract prices, discounts and premia and prices obtained on the spot markets. The Contractor shall for the purpose of Article 21 of the Contract prepare a Statement providing calculations of the value of Associated Natural Gas and Non-Associated Natural Gas produced, flared internally, used, saved and sold during each Month. This Statement shall contain all information of the type specified in Section 6.1 for Crude Oil as is applicable to Gas and such other relevant information as may be required by Government. 6.3 6.4 The Statements required pursuant to Sections 6.1 and 6.2 shall include a detailed breakdown of the calculation of the prices of Crude Oil, Condensate, Associated Natural Gas and Non-Associated Natural Gas pursuant to the provisions of Articles 19 and 21. The Value of Production and Pricing Statement for each Month shall be submitted to Government not later than thirty (30) days after the end of such Month.

SECTION 7 STATEMENT OF COSTS, EXPENDITURES AND RECEIPTS

7.1 7.1.1 7.1.2 7.1.3 7.1.4 7.2 The Contractor shall prepare with respect to each Quarter a Statement of Costs, Expenditures and Receipts under the Contract using mercantile basis of accounting. The Statement shall distinguish between Exploration Costs, Development Costs and Production Costs and shall separately identify all significant items of costs and expenditure as itemised in Section 3 of this Accounting Procedure within these categories. The Statement of receipts shall distinguish between income from the sale of Petroleum and internal

income of the sort itemised in Section 3.4 of this Accounting Procedure. If the Government is not satisfied with the degree of disaggregation within the categories it shall be entitled to request a more detailed breakdown. The Statement shall show the following:

- Actual costs, expenditures and receipts for the Quarter in question.
- Cumulative costs, expenditures and receipts for the Year in question.
- Latest forecast of cumulative costs, expenditures and receipts at the Year end.
- Variations between budget forecast and latest forecast and explanations thereof.

The Statement of Costs, Expenditures and Receipts of each Quarter shall be submitted to Government not later than thirty (30) days after the end of such Quarter.

SECTION 8: COST RECOVERY STATEMENT

8.1

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8.2

The Contractor shall prepare with respect to each Calendar Quarter a Cost Recovery Statement containing the following information:

- Unrecovered Contract Costs carried forward from the previous Quarter if any.
- Contract Costs for the Quarter in question.
- Total Contract Costs for the Quarter in question: Section 8.1.1 plus Section 8.1.2.
- Quantity and value of Cost Petroleum taken and disposed of by the Contractor for the Quarter in question.
- Contract Costs recovered during the Quarter in question as per Article 15.
- Total cumulative amount of Contract Costs recovered up to the end of the Quarter in question.
- Amount of Contract Costs to be carried forward into the next Quarter.

The Cost Recovery Statement for each Quarter shall be submitted to Government not later than thirty (30) days after the end of such Quarter.

SECTION 9: PROFIT SHARING STATEMENT

9.1

9.1.1

9.1.2

9.1.3

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9.1.7

The Contractor shall prepare with respect to each Quarter a Profit Sharing Statement containing the following information:

- The calculation of the applicable net cash flows as defined in Appendix D for the Quarter in question.
- The value of the Investment Multiple applicable in the Quarter in question.
- Based on Section 9.1.2 and Article 16, the appropriate percentages of Profit Petroleum for the Government and the Contractor in the Quarter in question.
- The total amount of Profit Petroleum to be shared between the Government and the Contractor in the Quarter in question.
- Based on Sections 9.1.3 and 9.1.4, the amount of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor in the Quarter in question.
- The actual amounts of Petroleum taken or payment received by

Government and the Contractor as well as by each constituent of the Contractor during the Quarter in question to satisfy their entitlements pursuant to Section 9.1.5. Adjustments to be made if any in future Quarters in the respective amounts of Profit Petroleum due to the Government and the Contractor as well as to each constituent of the Contractor on account of any differences between the amounts specified in Sections 9.1.5 and 9.1.6 as well as any cumulative adjustments outstanding from previous Quarters.

9.2 The Profit Sharing Statement shall be submitted to Government not later than thirty 30 days after the end of such Quarter. Any amount due or adjustment required in profit sharing among the Parties shall be made within thirty 30 days from the submission of the Statement to the Government.

SECTION 10 LOCAL PROCUREMENT STATEMENT

10.1 In furtherance of the obligation in Article 23 of the Contract for the Contractor to give preference to the procurement of Indian goods and services the Contractor shall prepare in respect of each Year a local procurement statement containing the following information:

- a The amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on goods supplied produced or manufactured in India;
- b the amount of expenditure incurred by the Contractor directly or indirectly through its Subcontractors on services provided by Indian entities;
- c the respective percentages that the expenditures recorded under items a and b above represent of the Contractor's total expenditures;
- d a detailed description of the procedures adopted during the Year to identify and purchase goods and services from Indian suppliers; and
- e a detailed exposition of how the local purchases for the Year as recorded under items a and b above compared with the projected purchases included in the budget statement for that Year pursuant to Section 12.1.3 with explanations for any significant variations;

10.2 The local procurement statement shall be submitted to the Government within sixty 60 days after the end of each Year.

SECTION 11 END OF YEAR STATEMENT

11.1 The Contractor shall prepare a definitive End of Year Statement. The Statement shall contain aggregated information in the same format as required in the Production Statement Value of Production and Pricing Statement Statement of Costs Expenditures and Receipts Cost Recovery Statement and Profit Sharing Statement but shall be based on actual quantities of

Petroleum produced income received and costs and expenditures incurred. Based upon this Statement any adjustments that are necessary shall be made to the transactions concerned under the Contract. [Explanation End of year Statement shall further contain the item wise justification for the variation between the actual costs and expenditure incurred and included in the statement of costs expenditure and receipts visvis the Budgets for corresponding line items.] 11.2 The End of Year Statement for each Year shall be submitted to Government within ninety 90 days of the end of such Year.

SECTION 12 BUDGET STATEMENT

12.1 12.1.1 12.1.2 12.1.3 12.2 The Contractor shall prepare a Budget Statement for each Year. This Statement shall distinguish between budgeted Exploration Costs Development Costs and Production Costs and shall show the following Forecast costs expenditures and receipts for the Year in question. A schedule showing the most important individual items of total costs expenditures and receipts for the said Year. Estimated amounts to be spent in the Year on procuring goods and services in India. The Budget Statement shall be submitted to Government with respect to each Year not less than ninety 90 days before the start of the said Year provided that in the case of the Year in which the Effective Date falls the Budget Statement shall be submitted within ninety 90 days of the Effective Date.

APPENDIX D CALCULATION OF THE INVESTMENT MULTIPLE FOR PRODUCTION SHARING PURPOSES

1. 2. In accordance with the provisions of Article 16 the share of the Government and the Contractor respectively of Profit Petroleum from the Contract Area in any Year shall be determined by the Investment Multiple earned by the Contractor from the then Petroleum Operations at the end of the preceding Year. These measures of profitability shall be calculated on the basis of the appropriate net cash flows as specified in this Appendix D. The Net Cash Income of the Contractor from their Petroleum Operations in any particular Year is the aggregate value for the Year of the following:

- i Cost Petroleum entitlement of the Contractor as provided in Article 15;
- plus ii Profit Petroleum entitlement of the Contractor as provided in Article 16;
- plus iii the Contractors all inental income of the type specified in section 3.4 of the Accounting Procedure arising from Petroleum Operations;
- less iv the Contractors Production Costs and royalty payments Article 17

incurred on or in the Contract Area;3. The Investment made by the Contractor in the Contract Area in any particular Year is the aggregate value for the Year of the Contractors Exploration Costs incurred on or in the Contract Area pursuant to Article 15 plus ii the Contractors Development Costs incurred on or in the Contract Area.4. For the purposes of the calculation of the Investment Multiple costs or expenditures which are not allowable as provided in the Accounting Procedure shall be excluded from Contract Costs and be disregarded. 5. 6. The Investment Multiple ratio earned by the Contractor as at the end of any Year shall be calculated by dividing the aggregate value of the addition of each of the annual Net Cash Incomes accumulated without interest up to and including that Year starting from the Year in which Production Costs were first incurred or Production first arose by the aggregate value of the addition of each of the annual Investments accumulated without interest up to and including that Year starting from the Year in which Exploration and Development Costs were first incurred. Profit Petroleum from the Contract Area in any Year shall be shared between the Government and the Contractor in accordance with the value of the Investment Multiple earned by the Contractor as at the end of the previous Year pursuant to Articles 16.2 to 16.5.

APPENDIX E1 FORM OF PARENT COMPANY FINANCIAL AND PERFORMANCE GUARANTEE to be furnished pursuant to Article 29.1 b of the Contract

WHEREAS a company duly organised and existing under the laws of having its registered office at hereinafter referred to as the Guarantor which expression shall include its successors and assigns is [the indirect owner of one hundred percent 100 of the capital stock of XYZ Company and direct owner of its parent company;] and WHEREAS XYZ Company identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as XYZ which expression shall include its successors and permitted assigns; and to a Production Sharing Contract respect of an onshore area is signatory offshore in WHEREAS the Guarantor wishes to guarantee the performance of XYZ Company or its Affiliate Assignee under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows

1. 2. 3. The Guarantor hereby unconditionally and irrevocably guarantees to the

Government that it will make available or cause to be made available to XYZ Company or any other directly or indirectly owned Affiliate of XYZ Company to which any part or all of XYZ Company's rights or interest under the Contract may subsequently be assigned. Affiliate Assignee financial technical and other resources required to ensure that XYZ Company or any Affiliate Assignee can carry out its obligations set forth in the Contract. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by XYZ Company or any Affiliate Assignee of any obligations of XYZ Company or any Affiliate Assignee under the Contract. The Guarantor hereby undertakes to the Government that if XYZ Company or any Affiliate Assignee shall in any respect fail to perform its obligations under the Contract or commit any breach of such obligations then the Guarantor shall fulfil or cause to be fulfilled the said obligations in place of XYZ Company or any Affiliate Assignee and will indemnify the Government against all losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on the part of XYZ Company. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company or its Affiliate Assignee under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or the Guarantor or in any instrument establishing the Company or Guarantor. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity; or d the dissolution amalgamation reconstruction or reorganisation of XYZ Company. This guarantee shall be governed by and construed in accordance with the laws of India.

4. 5. 6. 7. IN WITNESS WHEREOF the Guarantor through its duly authorised representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200.

APPENDIX E2 FORM OF COMPANY FINANCIAL AND PERFORMANCE GUARANTEE to be

furnished pursuant to Article 29.1 b of the Contract WHEREAS XYZ Company duly organised and existing under the laws of having its registered office at hereinafter referred to as the Guarantor which expression shall include its successors and assigns is signatory to a Production Sharing Contract in respect of an offshore onshore area identified as Block hereinafter referred to as the Contract made between the Government of India hereinafter referred to as the Government and XYZ Company hereinafter referred to as XYZ which expressions shall include its successors and permitted assigns; and WHEREAS the Guarantor wishes to guarantee its performance under the Contract as required by the terms of the Contract; NOW THEREFORE this Deed hereby provides as follows

1. 2. 3. 4. The Guarantor hereby unconditionally and irrevocably guarantees to the Government that it will make available or cause to be made available financial technical and other resources required to ensure that XYZ Company can carry out its obligations as set forth in the Contract. The Guarantor further unconditionally and irrevocably guarantees to the Government the due and punctual compliance by it of any obligations under the Contract. The Guarantor hereby undertakes to the Government that it shall fulfill or cause to be fulfilled all its obligations under the Contract and if it fails to perform its obligations under the Contract or commits any breach of such obligations then it shall indemnify the Government against all losses damages costs expenses or otherwise which may result directly from such failure to perform or breach on its part. This guarantee shall take effect from the Effective Date and shall remain in full force and effect for the duration of the said Contract and thereafter until no sum remains payable by XYZ Company under the Contract or as a result of any decision or award made by any expert or arbitral tribunal thereunder.

5. 6. 7. This guarantee shall not be affected by any change in the articles of association and byelaws of XYZ Company or in any instrument establishing the Company. The liabilities of the Guarantor shall not be discharged or affected by a any time indulgence waiver or consent given to XYZ Company; b any amendment to the Contract or to any security or other guarantee or indemnity to which XYZ Company has agreed; c the enforcement or waiver of any terms of the Contract or of any security other guarantee or indemnity. This guarantee shall be governed by and construed in

accordance with the laws of India. IN WITNESS WHEREOF the Guarantor through its duly authorised representatives has caused its seal to be duly affixed hereto and this guarantee to be duly executed the day of 200.

APPENDIX F PROCEDURE FOR ACQUISITION OF GOODS AND SERVICES

I OBJECTIVES

a ensure that the goods and services acquired by the Operator for carrying out the Petroleum Operations are acquired at the optimum cost taking into consideration all relevant factors including price quality delivery time and the reliability of potential suppliers. b ensure that goods and services are delivered in a timely manner taking into consideration the consequences of delays in the acquisition of these goods and services on the The objectives of these procedures are to project as a whole. c ensure that the provisions of Article 23 of the Contract are implemented.

II PRINCIPLES

The principles upon which these procedures are based are a The Parties must be satisfied that the Operator is working to an agreed procedure for acquiring goods and services which is auditable and in accordance with the provisions of the Contract. b The Operator must have the ability to acquire goods and services expeditiously so that the project schedules in respect of Approved Work Programmes are maintained.

III PROCEDURE

The procedures to be adopted by the Operator for the acquisition of goods and services shall be as follows

Applicable to	Procedure
Exploration Appraisal Development and Production operations	Procedure A 50000 to less than 200000
	Procedure B 200000 to less than 500000
	Procedure C Equal to or more than 500000

For contracts valued at less than US 5000 The Operator will be at liberty to determine the procurement procedures and methods to procure goods and services valued at less than US Dollars five thousand US 5000. For Contracts valued at US 5000 and above but less than US 50000 The Operator will be at liberty to determine the preferred method of acquiring goods and services valued at US Dollars five thousand US 5000 and above but less than US Dollars fifty thousand US 50000 provided that at least three 3 quotations from selected suppliers including at least one 1 Indian supplier will be obtained. For items valued at greater than US Dollars twenty thousand US 20000 Operator is required to report to the Operating Committee if the quote accepted exceed the lowest quote by more than twenty 20 percent. Operator will promptly report to the Operating Committee the

Operator shall provide the constituents of the Contractor with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender;

2 add to such list the entities whom other Party requests for adding within five (5) Business Days on receipt of such lists;

3 if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix F IV to perform under the contract;

4 complete the tendering process within a reasonable period of time;

5 circulate to all constituents of the Contractor a comparative bid analysis stating Operator's choice of the entity for award of contract. Provide also reasons for such choice in case entity chosen is not the lowest bidder;

6 inform all the constituents of the Contractor of the entities to whom the contract has been awarded; and

7 upon the request of a Party provide such Party with a copy of the final version of the contract awarded.

Procedure B Operator shall

1 provide the Parties with a list of all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender;

2 add to such list the entities whom a Party requests for adding within five (5) Business Days on receipt of such list;

3 if and when any Party so requests Operator shall evaluate any entity listed in 1 and 2 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix F IV to perform under the contract;

4 complete the tendering procedure within a reasonable period of time;

5 circulate to all constituents of the Contractor a comparative bid analysis stating Operator's choice of the entity for award of contract. Provide also reasons for such choice in case the entity chosen is not the lowest bidder. If the bid selected is not the lowest bid obtain prior approval of the Operating Committee for award of contract;

6 award the contract accordingly and inform all the members of the Management Committee of the entities to whom the contract has been awarded; and

7 upon the request of a Party provide such Party with a copy of the final version of the contract awarded.

Procedure C Operator shall

1 publish invitations for parties to prequalify for the

proposed contract in at least three 3 daily national Indian newspaper. Provide to NonOperating Companies a list of responding parties and an analysis of their qualifications for the contract being contemplated to be awarded. Include those who qualify as per the prequalification criteria approved as per Appendix F IV in the list of entities from whom Operator proposes to invite tender for the said contract; 2 provide the members of the Management Committee with a total list of all the entities selected as 1 above and all the entities approved by the Operating Committee as per Appendix F V for the applicable category of the contract along with other entities if any from whom the Operator proposes to invite tender; 3 add to such entities whom a Party requests for adding within five 5 Business Days on receipt of such list; 4 if and when any Party so requests Operator shall evaluate any entity listed in 2 and 3 above to assure that entity is qualified as based on the qualification criteria agreed in accordance with Appendix F IV to perform under the contract; 5 prepare and dispatch the tender documents to the entities as finally listed and to Parties; 6 after the expiration of the period allowed for tendering consider and analyse the details of all bids received; 7 prepare and circulate to the constituents of the Contractor a comparative bid analysis stating Operator's recommendation as to the entity to whom the contract should be awarded the reasons therefor and the technical commercial and contractual terms to be agreed upon; 8 obtain the approval of the Operating Committee to the recommended bid. However failing Operating Committee approval any Company may refer the issue to the Management Committee for decision; and 9 award the contract accordingly and upon the request of a Party provide such Party with a copy of the final version of the contract; IV. A set of vendor qualifications criteria for each major category contract supply shall be proposed by the Operator and approved by the Operating Committee within thirty 30 days of its submission. In the event the Operating Committee fails to approve vendor qualification criteria within thirty 30 days of the date the same is first submitted by the Operator the matter shall be referred to the Management Committee for decision. The Operating Committee may revise the qualification criteria. V. It is anticipated that in order to expedite joint operations contracts will be awarded to qualified vendors/contractors who are identified as approved vendors for the specified activities. A list of such

approved vendors shall first be established as follows Operator shall¹ provide the constituents of the Contractor with a list of the entities from whom Operator proposes to invite tender for contracts; and² add to such list entities whom a Company requests for adding within fourteen 14 days on receipt of such list; and³ obtain approval of the Operating Committee. Such list shall thereafter be maintained by the Operator. The Operating Committee may add to or delete vendors from such list.

APPENDIX G PERFORMA OF BANK GUARANTEE TO BE PROVIDED PURSUANT TO ARTICLE 291. In consideration of Government of India hereinafter referred to as Government having entered into a Production Sharing Contract for the block dated hereinafter referred to as Contract which expression shall include all the amendments agreed to between the Government and the Contractor thereto with Ms having its registered office at hereinafter referred to as which expression unless repugnant to the context or meaning thereof include all its successors administrators executors and assigns which is a constituent of the Contractor and the Government have agreed that the Company shall furnish to Government a bank guarantee hereinafter referred to as Guarantee towards its obligations as provided in the Contract for US for Foreign Companies US equivalent in Indian Rupees for Indian Companies for the performance of its obligations under the Contract.

2. We name of the Bank registered under the Law of and having its registered office at hereinafter referred to as the Bank which expression shall unless repugnant to the context or meaning thereof includes all its successors administrators executors and assigns do hereby guarantee and undertake to pay immediately on the first demand in writing and any all moneys to the extent of Indian Rupees US in figures and Indian Rupees US in words without any demur reservation contest or protest and or without any reference to the Company. Any such demand made by Government on the Bank by serving a written notice shall be conclusive and binding without any proof on the Bank as regards the amount due and payable notwithstanding any dispute pending before any court tribunal arbitrator sole expert conciliator or any other authority and or any other matter or thing whatsoever as liability under these presents being absolute and unequivocal. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable

until it is discharged by Government in writing. This Guarantee shall not be determined discharged or affected by the liquidation winding up dissolution or insolvency of the Contractor and shall remain valid binding and operative against the Bank.³ The Bank also agree that Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor in the first instance without proceeding against the Company and notwithstanding any security or other guarantee that Government may have in relation to the Company's liabilities.^{4. 5. 6. 7. 8. 9.} The Bank further agree that Government shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Company from time to time or to postpone for any time or from time to time exercise of any of the powers vested in Government against the said Company and to forebear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Company or for any forbearance act or omission on the part of Government or any indulgence by Government to the said Company or any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us. The Bank further agree that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the Contract and all dues of Government under or by virtue of this Contract have been fully paid and its claim satisfied or discharged or till Government discharges this Guarantee in writing whichever is earlier. This Guarantee shall not be discharged by any change in our constitution in the constitution of Company or that of the Contractor. The Bank confirm that this Guarantee has been issued with observance of appropriate laws of the country of issue. The Bank also agree that this Guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian courts at India. Notwithstanding any thing contained herein above our liabilities under this Guarantee is limited to Indian Rupees US in figures Indian Rupees US in words and our Guarantee shall remain in force upto and including sixty 60 days after the expiry date extended date. Any claim under this Guarantee must be received before the expiry of sixty 60

days or before the expiry of sixty 60 days from the extended date if any. If no such claim has been received by us within sixty 60 days after the said date extended date the Governments right under this will cease. However if such a claim has been received by us within and upto sixty 60 days after the said date extended date all the Governments rights under this Guarantee shall be valid and shall not cease until we have satisfied that claim. In witness whereof the Bank through its authorised officers has set its hand and stamp on this day of 200 at . The seal of was hereto duly affixed by this day of 200 in accordance with its byelaws and this Guarantee was duly signed by and as required by the said byelaws. Secretary President Director Witness Appendix H Cost Estimates Page 1 Appendix H Cost Estimates Page 2 Appendix H Cost Estimates Page 3 Appendix H Cost Estimates Page 4 Appendix H Cost Estimates Page 5 EX10.4 8 a0666461ex10d4.htm EX10 EXHIBIT 10.4 EXPLORATION PERMIT 408 DATED JULY 2 1997 STATE OF WESTERN AUSTRALIA DEPARTMENT OF MINERALS AND ENERGY Petroleum Act 1967 EXPLORATION PERMIT FOR PETROLEUM NO. EP408 I NORMAN MOORE Minister for Mines in the State of Western Australia in response to the acceptance of offer numbered 15195 grant to GEOPETRO COMPANY of Suite 700 1 Maritime Plaza San Francisco California USA 94111; SEVEN SEAS PETROLEUM AUSTRALIA INC. of Suite 305 Reunion Centre Building Nine East Fourth Tulsa Oklahoma USA 74103; AMITY OIL NL of Level 2. 18 Richardson Street WEST PERTH WA 6005 an exploration permit for petroleum in respect of each of the blocks described in Schedule 1 that at the date of this permit is constituted by a graticular section or by part of a graticular section described hereunder and where at any time during the term of this permit a graticular section or a part of a graticular section so described constitutes a block in respect of each block so constituted; and b subject to the conditions set out in Schedule 2. This permit has effect for a period of six 6 years from and including the date hereof Dated at Perth this 2nd day of July 1997. Made under the Petroleum Act 1967 of the State of Western Australia. MINISTER FOR MINES 1 INTERPRETATION In this permit the Act means the Act under which this permit is granted and includes any Act with which that Act is incorporated and words used in this permit have the same respective meanings as in the

Act.SCHEDULE 1DESCRIPTIONSA. BLOCKSThe references hereunder are to the names of map sheets of the 11 000 000 series published by theMinister for Mines and to the numbers of graticular sections shown thereonALBANY MAP SHEETBlock No.63146384Block No.Block No.Block No.631563856316638663836387

638864586528653266026456646065306600645765276531660164556459652965996603Assessed to contain 26 blocks2SCHEDULE 2SUMMARY OF CONDITIONS1.1Subject to subclause 2 during a

year of the term of the permit set out in the first column of the following table thepermitteeabcshall carry out in or in relation to the permit area to a standard acceptable to the Minister for Mines thework specified in the minimum work requirements set out opposite that year in the second column of thetable;may carry out in or in relation to the permit area to a standard acceptable to the Minister for Mines all orpart of the work specified in the minimum work requirements of a subsequent year or years of that term setout opposite that year or those years in the second column of the table; andmay carry out in or in relation to the permit area to a standard acceptable to the Minister for Mines work inaddition to the work specified in the minimum work requirements set out opposite that year and in thesubsequent year or years if any of that term in the second column of the table.23The permittee shall not commence any works or petroleum exploration operations in the permit area except with andin accordance with the approval in writing of the Minister for Mines or of a person authorised by the Minister forMines to give that approval.For the purposes of this clause any work carried out in accordance with paragraph 1b shall if the Minister forMines in his discretion by instrument in writing so approves be treated as if it had been carried out in the subsequentyear or years of the term of the permit specified by the Minister for Mines in that instrument.STATE OF

WESTERN AUSTRALIAPETROLEUM ACT 1967SECTION 97VARIATION No. 8989I WILLIAM LEE TINAPPLE Director Petroleum Operations Division in the Department of Minerals and Energy for the State ofWestern Australia being the officer for the time being holding certain powers and functions of the Minister by virtue of aninstrument of delegation dated 4 June 1998 and published in the Government Gazette of Western Australia on 16 June 1998HEREBY VARY pursuant to the

provision of Section 97 of the Petroleum Act 1967 Condition I of the Exploration Permit EP 408as follows

Year of TermOf Permit	First	Second	Third	Minimum WorkRequirements	One 1 WellData Review	80km Seismic Survey	Estimated Expenditurein Constant Dollarsindicative
only180000005000004000000	Dated this 12th day of November 1998.	MADE UNDER THE PETROLEUM ACT 1967.	DIRECTOR PETROLEUM OPERATIONS DIVISION3	Minimum WorkRequirements	Data Review80km Seismic SurveyOne 1 WellData ReviewOne 1 WellData Review	Estimated Expenditurein Constant Dollarsindicative	only5000004000000180000005000001.8000000500000

Year of Termof PermitFirstSecondThirdFourthFifthSixthSee Variation 8989 above

2. The permittee shall not recover any petroleum from the permit area except as a result of production testing of a well.

3. The permittee shalla pay to the Minister for Mines in respect of petroleum recovered by the permittee in the permit area royalty at the rate thatis for the time being the prescribed rate in respect of that petroleum;b in respect of each royalty period furnish to the Minister for Mines in such form as the Minister for Mines may from timeto time require full particulars of the quantity of petroleum recovered by the permittee and full particulars of matters relevant toascertaining the value at the wellhead of that petroleum; andc permit a person authorised in writing for the purpose by the Minister for Mines or an inspector to test or examine anymeasuring device installed that has been is being or is to be used by the permittee to measure the quantity of any petroleumrecovered in the permit area.

4. The permittee shall not construct any installation or install any equipment in the permit area except with and inaccordance with the approval in writing of the Minister for Mines or a person authorised in writing by the Minister for Mines to give that approval.

5. The permittee shall not abandon suspend or complete any well except with and in accordance with the approval of theMinister for Mines or of a person authorised by the Minister for Mines to give that approval.

6. The permittee shall at all times comply witha the provisions of the Act and of any regulations for the time being in force under the Act; andb all directions given to him under the Act or the regulations for the time being in force under the Act.

7. In carrying out its operations in the permit area the permittee

shall take adequate measures for the protection of the environment and shall comply with all Directions of the Minister for Mines in relation thereto.⁴

ENDORSEMENTS¹. In addition to any specific conditions that are endorsed on this instrument the holder in exercising the rights granted herein must first ensure that all necessary consents and permissions have been obtained and applicable compensation has been agreed to or determined and that consultation has occurred where the lawful rights of other land users and occupiers are not interfered with to a greater extent than is necessary for the reasonable exercise of the rights and performance of the duties of the holder of this exploration permit.²

The permittees attention is drawn to the provisions of the Aboriginal Heritage Act 1972.⁵

MINING CONVENTION Between THE REPUBLIC OF CAMEROON And GEOVIC CAMEROON S.A. P.O. Box 5839 DOUALA CAMEROON

2 THIS MINING CONVENTION IS CONCLUDED BETWEEN On the one hand The Government of the Republic of Cameroon hereinafter referred to as the State represented by the Minister in charge of mines and geology AND on the other hand GEOVIC Cameroon S.A. P.O Box 5839 Douala Cameroon a company incorporated in Cameroon hereinafter referred to as GEOVIC represented by its President Both of the above referred to as the Parties. Acting within the framework of the Mining Code and subsequent instruments as well as the Investments Code in force in Cameroon at the date of signature of this Convention Considering the importance of the mining sector in the economic and social development of Cameroon Considering the economic liberalisation option of the State Considering that the Government of Cameroon in its mineral resource development programme financed the inventory of mining shows leading to the discovery of nickel and cobalt deposits in the southeastern part of the country Considering that GEOVIC Cameroon S.A. has discovered more extensive deposits of nickel and cobalt as part of its exploration operations Considering that GEOVIC Ltd which participates in the share capital of GEOVIC Cameroon S.A. has developed an appropriate processing method whereby the nickel and cobalt deposits that had hitherto been unprofitable can be converted into mineral deposits likely to be exploited Considering the technical and financial capacities of GEOVIC Ltd the main shareholder of GEOVIC Cameroon S.A. and its

wish to carry out through the latter mining operations within the boundaries of exploration permit No. 67 the subject of Decree No. 9914PR of 27 January 1999 It has been drawn up and agreed as follows

PART I GENERAL PROVISIONS

ARTICLE 1 PURPOSE 3This Convention supplemented by its Annexes which are part and parcel thereof lays down the reciprocal rights and obligations of the Parties. It defines the general legal financial tax economic administrative customs social land and environmental conditions under which GEOVIC or any other person to whom GEOVIC may transfer all or part of the rights and obligations granted to it under this Convention shall undertake the mining of cobalt nickel and their associated substances whose exploitation area is outlined in the abovementioned exploration permit. Furthermore the Convention shall cover installations and infrastructures required by GEOVIC to pursue its activities as well as all operations regarding the mining processing loading transportation storage and delivery for sale of minerals and metals.

ARTICLE 2 DEFINITIONS References in parentheses refer to definitions of the same terms in the French version of this Convention.

1. 33 Ad Valorem Tax shall mean the tax levied in proportion to the value of saleable products extracted as defined by law.

2. 2 Affiliate shall mean a Person controlling controlled by or under the same control as a Shareholder. For the purpose of this definition control shall mean direct or indirect ownership of fifty percent 50 or more of the voting rights of the controlled Person.

3. 3 Agent Any public or private natural person or corporate body called upon to execute on behalf of either party missions defined within the framework of this Convention

4. 5 Allotment Leaseholds shall mean the rights granted to GEOVIC according to procedures defined in Annex IV

5. 20 Ancillary Facilities shall mean facilities even temporary facilities situated in or out of the mining site including in particular living quarters power stations landing strips landing pads support facilities hospitals stores sawmills and quarries that are owned by GEOVIC and are likely to contribute to the smooth operation of a Plant a Plant Site or a Mining Site.

6. 29 Ancillary Facilities Site shall mean a site containing Ancillary Facilities which site may either be part of or situated near a Plant Site or Mining Site.

7 4 Annex shall mean the following annexes Environmental impact study and management plan Feasibility study Annex I Annex II

Annex III Exclusive Mining Zones Annex IV Allotment Leasehold. 48. 32 Associated substances shall mean substances associated with nickel and cobalt resulting from mining operations pursuant to this Convention. 9. 19 CFA Franc shall mean the legal currency of the Republic of Cameroon. 10. 9 Commencement of Operations shall mean the date on which the first commercial shipment of Product leaves the production site. 11.17 Commercial Operations shall mean mining operations producing commercial shipments of Product. 12. 7 Contractors shall mean Persons including Shareholders and Affiliates but excluding Lenders who within the scope of a contract signed with GEOVIC supply services or tangible or intangible property relating to the activities undertaken under this Convention. 13. 8 Convention shall mean this Mining Convention and its Annexes plus any renewal extension substitution or amendment of this Convention as mutually agreed upon by the Parties. 14.11 Dollar shall mean the legal currency of the United States of America. 15.10 Effective Date shall mean the date of signature of the Convention by the parties. 16.14 Environmental impact Study and management plan shall mean the impact study and environmental management plan for the project carried out in accordance with the legislation and regulations in force. 17.38 Exclusive Mining Exploitation Zone shall designate those areas identified at Annex III that have been exclusively reserved for mining activity. 18 15 Fiscal Year shall mean the period of twelve 12 months running from January 1 to December 31 of the same calendar year. 19.25 Installation phase shall mean all activities between the date the Mining Permit was granted and the Commencement of Operations. 2034 Lands shall mean parcels of land needed for the Mining Sites the Ancillary Facilities Sites the social facilities the Plant Sites and other facilities indicated below. 2127 Lender shall mean the Person or Persons participating in the financing or refinancing of GEOVICs exploration and/or mining activities excluding contributions to GEOVICs share capital including any guarantor or credit insurer of the loans required for such financing or refinancing and any assignee representative trustee or Affiliate of such Persons. 22 22 Minerals shall mean nickel cobalt and associated substances. 236 Mining Code shall mean Law No. 1 of 16 April 2001 on the Mining Code. 24 18 Mining operations shall mean mining processing conveyance storage sale of minerals.

525 28 . Mining Site shall mean areas where ore or ore minerals are extracted from the ground and any other contingent land necessary to accomplish this function. 26 36 . Mining Title shall mean the exploration permit and the mining permit in accordance with the Mining Code in force. 27 12 National Land shall mean the national land as defined in the land tenure law of Cameroon. 2826 Operational Phase shall mean the period after the Commencement of Operations. 29 23 Party shall mean individually the Republic of Cameroon or GEOVIC its successors or assignees. 3024 Person shall mean any natural person and any private or public body corporate. 3137 Plant shall mean any chemical or metallurgical separation or processing facility. 32.30 Plant Site shall mean any area containing a Plant. 3321 Product shall refer to the concentrate or intermediate product resulting from the minerals extracted at the mining site. 341 Shareholder shall mean any Person who holds one or more shares in GEOVIC to the exclusion of any Person who only holds a qualifying share or who holds obligations or debt convertible into GEOVIC shares. 3516 Shipper shall mean any Person who causes Minerals or Product to be transported using the Cameroon transportation infrastructure. 3631 Subcontractor shall mean a Person including Shareholders and Affiliates but excluding a Lender who by virtue of a contract entered into with a Contractor or with another Subcontractor of an annual value in excess of fifty thousand Dollars 50000 undertakes works supplies goods or services relating to activities undertaken pursuant to this Convention. 3713 Substituted Entity shall mean any Person that is substituted for GEOVIC in its rights and obligations pursuant to this Convention. A Substituted Entity shall be designated and controlled by the Lender pursuant to its agreements with GEOVIC. 3835 Third Party Beneficiaries shall refer to the Shareholders Affiliates Contractors Subcontractors Shippers or Lenders individually or collectively. PART II RIGHTS AND OBLIGATIONS OF THE PARTIES 6ARTICLE 3 MUTUAL OBLIGATIONS The State and GEOVIC hereby undertake to cooperate in order to perform the purpose of this Convention. Each Party shall be obliged to comply with the commitments responsibilities and obligations incumbent on it under this Mining Convention its annexes and its additional clauses in accordance with the legislation and regulations in force with the exception of the specific provisions of this Convention relating to the

simplification and alleviation of customs and administrative procedures.

SUBPART I RIGHTS AND OBLIGATIONS OF GEOVIC

ARTICLE 4 RIGHT OF ACCESS TO LANDS This Convention shall grant to GEOVIC the right to the allotment leasehold of the land needed to perform the purpose of the convention. The land shall be subject to prior classification under the private property of the State pursuant to the Land Tenure and State Land Law in force and the Mining Code and under the conditions laid down in Annex IV relating to the allotment leasehold.

ARTICLE 5 OBLIGATION TO PRODUCE FEASIBILITY STUDIES The mining permit application file shall include the feasibility study carried out in accordance with Sections 16 and 46 of the Mining Code and appended as Annex II of this Convention.

ARTICLE 6 OBLIGATION TO COMPLY WITH TECHNICAL AND SAFETY STANDARDS RELATING TO THE MANAGEMENT AND PROTECTION OF THE ENVIRONMENT AND THE POPULATION

6.1 GEOVIC shall undertake to carry out operations of mining transportation and storage of Products and Minerals according to the international technical and safety standards prevailing in the mining industry the Mining Code and Cameroons legislation relating to the protection of the environment and the population on the one hand and in accordance with the terms laid down in Annex I concerning the Environmental Impact Study and Management Plan approved before hand by the State on the other.

6.2 With effect from the Commencement of Operations GEOVIC shall undertake to furnish the guarantees necessary to ensure the rehabilitation of the site in accordance with the conditions provided for in the Environmental Management Plan.

6.3 If Mining operations should at any time whatsoever come to an end the Parties shall review the status of rehabilitation in order to determine whether any rehabilitation remains to be done following the initial programme. Where necessary the guarantee shall be applied to this end upon mutual agreement of the parties. In the event that the guarantee is in the form of a bank account the balance of the account shall be returned to GEOVIC once the work has been accepted by the State according to applicable legislation.

ARTICLE 7 OBLIGATION TO SUBMIT TO ADMINISTRATIVE MONITORING AND TECHNICAL INSPECTIONS

7.1 During the mining phase GEOVIC shall be subject to administrative monitoring and technical inspections relating to safety and standards as

well as to the protection of the environment and the population provided for by Cameroon legislation.

7.2 The State shall designate specifically for this purpose three (3) of its agents, be they civil servants or not, to carry out without negative impact on GEOVICs operations all monitoring and inspection operations and to witness the trials and tests enumerated below. Such personnel in this capacity shall have access to all the works, installations and sites targeted by their inspection. It shall be their mission to verify compliance of GEOVICs activities with safety provisions of the regulations in particular:

- a To verify twice yearly the reports established following the inspections carried out by GEOVIC and to initial the registers instituted for such inspections;
- b To witness at least once a year or according to the frequency of the operations if they are carried out at intervals of more than one (1) year the inspections carried out by GEOVIC or on behalf of GEOVIC by third parties chosen by GEOVIC among bodies approved by the State and competent to carry out the following operations:
 - Inspection of the condition of safety valves and protection systems;
 - Corrosion management;
 - Inspection of tests of firefighting equipment;
 - Analysis of effluents;
 - Testing of pressure vessels;
 - Quality assurance;
 - Solid waste management;
 - Other tests and inspections as mutually agreed to by the Parties.

7.3 Within the framework of administrative monitoring GEOVIC shall be bound to send to the Minister in charge of mines and geology not later than the fifteenth (15th) of each month a copy of the bills of lading for all shipments of Product during the preceding month.

7.4 In addition prior to 31 March of each year GEOVIC shall provide to the Ministers in charge of mines and geology, industry and the environment respectively a progress report for the previous Fiscal Year. Such report shall contain in particular:

- a The quantities and qualities of Products shipped;
- b A list of GEOVICs personnel by category;
- c A list of lost time accidents and significant incidents relating to the protection of the environment specifying their characteristics as well as the steps taken to prevent a recurrence or to limit the consequences thereof;
- d Information on the major works carried out and the measures taken to reinforce safety and the protection of the environment;
- e The balance sheet certified by a chartered accountant;
- f The state of implementation of the Environmental Management Plan provided for in Article 6 above.

ARTICLE 8. OBLIGATION TO EMPLOY AND

TRAIN CAMEROONIAN PERSONNEL 8.1 Subject to the implementation of the training programme referred to below GEOVIC shall be free to select and employ personnel irrespective of nationality and to terminate the employment of such personnel in accordance with the labour legislation in Cameroon. However in cases of equal competence GEOVIC shall give priority to the recruitment of Cameroonian personnel and shall undertake to include in its contracts with its Contractors a similar provision including a requirement that the Contractors shall include a similar provision in their contracts with Subcontractors. Within the year following the Commencement of Operations GEOVIC shall submit to the State a training programme to ensure the professional and technical training of its Cameroonian personnel in order to allow engineers managers technicians workers and administrative employees access to all positions for which they are qualified. 8.2 GEOVIC shall undertake not to engage in any discrimination of whatever nature whether on the basis of race sex religion or nationality and shall agree to include in its contracts with its Contractors a similar provision including a requirement that the Contractor shall include a similar provision in their contracts with Subcontractors. ARTICLE 9. SOCIAL INFRASTRUCTURE Within the framework of its mining GEOVIC shall undertake to build appropriate housing medical educational sports and recreational facilities for its employees. At the request of the State GEOVIC may place at the disposal of neighbouring establishments or of the public telecommunications facilities electric lines water supply and the health school sports and recreational facilities that it has established provided that use of such facilities shall cause no detriment to GEOVIC. ARTICLE 10. OTHER INFRASTRUCTURE 10.1 By this Convention the Republic of Cameroon hereby grants to GEOVIC the right to a Build and use its own roads connecting the Plant Sites the Mining Sites the Ancillary Facilities Sites any social infrastructure facilities or other facilities to existing roads. Furthermore GEOVIC is entitled to use existing roads in the Republic of Cameroon in accordance with the legislation in force. b Build and use private railroad spurs connecting the Plant Sites the Mining Sites the Ancillary Facilities Sites any social infrastructure facilities or other facilities to any future railroad lines that may be constructed in the vicinity of such sites and facilities. 9c Build use and improve

other infrastructure facilities notably electric lines pipelines drains channels river ports and landing strips for the needs of the Plant Sites the Mining Sites and the Ancillary Facilities Sites. 10.2 If any infrastructure other than as provided in this Convention shall be necessary GEOVIC may request authorization from the Minister in charge of mines and geology who shall be required to take a decision relative to GEOVICs request within a maximum of two 2 months. 10.3 If the State has not responded to GEOVICs request within two 2 months from the date it receives a request for authorization the Republic of Cameroon shall be deemed to have given its approval. ARTICLE 11.

USE OF EQUIPMENT AND MATERIALS PRODUCED IN CAMEROON AND SERVICES RENDERED BY LOCAL BUSINESSES GEOVIC Contractors and Subcontractors shall be free to choose suppliers Contractors and Subcontractors irrespective of their nationality in order to obtain goods and services of good quality in relation to their activities. However GEOVIC shall give priority to the use of equipment and materials available in Cameroon as well as to the services of businesses established in the Republic of Cameroon provided that their services and equipment are comparable to equipment materials and services of foreign origin with regard to price quality reliability availability and delivery terms. GEOVIC shall undertake to include in its contracts with its Contractors a similar provision including an undertaking on their part that its Contractors shall include a similar provision in their contracts with Subcontractors. ARTICLE 12 INSURANCE 12.1

GEOVIC and all Third Party Beneficiaries shall subscribe to any insurance coverage for mining activities in compliance with the Cameroon legislation in force. Within this context such Persons shall have the right to freely negotiate and agree a with insurers of their choice as to i applicable coverage ii policy wording iii premiums and other insurance costs the procedure for paying such costs and the bank accounts and currencies used for such payments iv claim settlement procedures and the bank accounts and currencies used for such payments v conditions of reinsurance and vi any other insurance terms provided such insurers are legally established in Cameroon or represented by a duly approved insurance company incorporated in Cameroon. b with reinsurers of their choice outside Cameroon on all aspects of the reinsurance selected in support of the insurance

coverage placed in accordance with this Article subject to part of the reinsurance being reserved for reinsurance companies incorporated in Cameroon and duly approved in accordance with the Cameroon legislation in force. GEOVIC and the Third Party Beneficiaries shall not be otherwise restricted with respect to i reinsurance coverage ii the currency or currencies in which such reinsurance coverage is denominated and claims paid iii reinsurance premiums and other reinsurance costs iv the currency or currencies in which reinsurance premiums and other reinsurance costs are denominated and paid v the procedures and bank accounts used for premium 10payments claim settlements or other payments between the Parties relating to reinsurance vi policy wording or language vii any other terms applicable to such reinsurance agreements and the administration of such agreements. 12.2 Pursuant to Section 3 of the CIMA Code and Article 72 of Ordinance No. 853 of 31 August 1985 the State hereby gives its consent that GEOVIC and the Third Party Beneficiaries shall be authorised to take out insurance policies denominated in foreign currency. 12.3 Notwithstanding Article 12.1 GEOVIC and the Third Party Beneficiaries shall be exempted for activities undertaken under this Convention from the provisions of Ordinance No. 853 of 31 August 1985 relating to the limitation on the transfer of risk and insurance premiums outside Cameroon.

SUBPART II COMMITMENTS OF THE STATE ARTICLE 13 GENERAL GUARANTEES 13.1 In accordance with the provisions of Section 15 of the Mining Code the State shall undertake not to introduce any restriction or modification to a The free implementation of the Articles of Association of GEOVIC where they are not repugnant to the laws in force in Cameroon b GEOVICs unlimited right to select its Shareholders c The rights attached to shares by virtue of law d GEOVICs right to select the Persons in charge of the management or control of GEOVIC President Board members General Manager Financial Commercial Administrative and Technical Managers Auditors Commissaires aux Comptes e GEOVICs right to decide the means of organizing its operation especially the increase and decrease of capital the distribution or capitalization of profits or reserves and the use of its assets and all income the disposition of payments; f The regime applicable to the relationships between GEOVIC and its Shareholders g The freedom of decisions made technical

administrative commercial or financial management of GEOVIC without prejudice to the legislative provisions on the environment for h The freedom of GEOVIC to hire promote and fire its personnel to fix their salaries and other benefits and to fix the number of employees in accordance with the laws in force i The freedom of GEOVIC to import aircraft planes and helicopters and telecommunications equipment for land or satellite communication in accordance with the laws in force j The freedom of GEOVIC to borrow or lend funds in accordance with its Articles of Association. 13.2 Notwithstanding the provisions of Article 13.1 above the Republic of Cameroon hereby guarantees to GEOVIC the Third Party Beneficiaries and to the Persons normally employed by them 11a b c d The freedom of choice of suppliers of goods and providers of services; The free choice and free movement of personnel the issue of visas and work permits to expatriate personnel in accordance with the regulations in force and the provisions relating to public order and subject to Article 8; The grant and renewal of the Mining Titles required for the conduct of the activities of GEOVIC according to the Mining Code and the provisions of this Convention; The freedom to conduct their affairs in accordance with their criteria for mining so long as their actions do not contravene applicable laws and regulations of the Republic of Cameroon. 13.3 The State shall undertake not to object to the decisions of GEOVIC regarding any distribution of its profits in the form of dividends and insofar as allowed by any Lender any cash in excess of the routine needs of GEOVIC but which cannot be distributed in the form of dividends to the Shareholders in proportion to their participation in the share capital in the form of interestfree loans in reduction of capital or advance reimbursement of Shareholder or Affiliate loans or any other method deed on by GEOVIC. 13.4 The State shall guarantee to GEOVIC the Contractors SubContractors Lenders and Shippers registration on the list of importers and exporters as provided for by applicable regulations. 13.5 The Republic of Cameroon shall guarantee that it has obtained from the CEMAC Executive Council in the appropriate form and for the period of validity of this Convention the approval of the legal tax customs and exchange control regime applicable to the activities undertaken under this Convention.

ARTICLE 14 STABILITY OF LEGAL AND TAX REGIME 14.1 In implementation of Section 99 of the

Mining Code the State hereby guarantees a b c the stability of the rates and bases for assessment of taxes duties and fees applicable to GEOVIC under this Convention. the stability of the legal tax customs and exchange control regime as provided for in Article 17 below applicable to the activities undertaken by GEOVIC. The stability of the terms and conditions of the present Convention. 14.2 With regard to the activities undertaken under this Convention the Republic of Cameroon shall not modify the legal fiscal and customs regimes currently in force in such a way as to adversely affect the rights and obligations of GEOVIC or the Third Party Beneficiaries arising from this Convention and no legislative regulatory or administrative measure contrary to the provisions of this Convention shall apply to GEOVIC or the Third Party Beneficiaries without GEOVICs prior written consent. 14.3 a Notwithstanding the terms of Article 14.2 above if GEOVIC believes that any legislation regulation or administrative measure of the State produces an unfavourable effect on the rights and obligations resulting from this Convention for GEOVIC or the Third Party 12Beneficiaries GEOVIC shall have the right to request that such measure not be applied to itself or to the Third Party Beneficiaries. To this end GEOVIC shall address to the Minister in charge of mines and geology a petition stating the reasons for its opinion. Within two 2 months from the date GEOVICs petition is received the Minister in charge of mines and geology may either reject GEOVICs petition in which case GEOVIC may resort to arbitration in accordance with the terms of the present Convention or accept the petition and take the steps necessary to ensure that the measure in question is not applicable to GEOVIC or to the Third Party Beneficiaries. b The introduction of the procedure provided for in paragraph a above shall entail suspension of the application of the measures to GEOVIC and the Third Party Beneficiaries from the date the measures takes effect. The contested measure shall only apply if i GEOVICs petition shall have been rejected and ii GEOVIC has not filed a request for arbitration within two 2 months or iii an arbitration award shall have confirmed the rejection of the petition. 14.4 The Republic of Cameroon shall undertake no nationalization or expropriation affecting the assets of GEOVIC or the Third Party Beneficiaries. ARTICLE 15 NONDISCRIMINATION AND CONFIDENTIALITY 15.1 If during the term of this Convention a mining company operating in

Cameroon benefits from one or more conditions which taken as a whole are considered by GEOVIC to be more favourable than those provided for in this Convention the benefit of such condition or conditions shall apply to GEOVIC at its request. 15.2 The guarantees granted by this Convention to GEOVIC and the Third Party Beneficiaries shall remain valid irrespective of other less favourable conditions applicable to other companies carrying out similar activities even as a result of modifications in Cameroon legislation. 15.3 Any provision of Cameroonian legislation and any modification that comes into effect following the date of signature of the present Convention which are likely to entail more favourable conditions than those provided for in the present Convention shall apply to GEOVIC and the Third Party Beneficiaries as of right. 1315.4 The Republic of Cameroon hereby acknowledges that all reports results of analyses logs geophysical data maps and any other information received from GEOVIC whether by way of inspection or other means constitute Industrial Secrets. The State shall guarantee to GEOVIC that neither the Republic of Cameroon nor any of its agents or officials shall communicate such Industrial Secrets to third parties without the prior and written approval of GEOVIC. GEOVIC shall be entitled to reparation of the prejudice caused by the nonrespect by the State of its commitment not to divulge the Industrial Secrets. ARTICLE 16 FOREIGN CURRENCY AND BANKING OPERATIONS 16.1 For the purposes of the activities carried out under this Convention GEOVIC shall have the right to freely carry out the following operations a b c d e To open maintain operate and close bank accounts including foreign currency bank accounts both outside and within Cameroon To receive in keep in and disburse from such bank accounts funds in foreign currency or local currency in particular for the payment of dividends goods and services interest and principal on loans repatriation of capital advances to Shareholders and taxes To withdraw such funds or to transfer them to another account whether outside or within Cameroon To convert such funds from foreign currency into local currency from local currency into foreign currency and from one foreign currency to any other foreign currency all at rates applicable to general commercial transactions To repatriate invested capital and transfer profits subject to respect of the legislation in force. The rights provided for in this Article shall also

extend to the Third Party Beneficiaries acting within the scope of this Convention. Such Third Party Beneficiaries shall be subject to the rules of applicable ordinary law regarding exchange control. Any Lender may freely transfer abroad all proceeds from foreclosures on secured interests. 16.2 GEOVIC shall at the beginning of each Fiscal Year submit to the Republic of Cameroon an estimate of its foreign currency needs in exchange for local currency indicating however the use intended for such currency. 16.3 Without prejudice to the rights granted by this Article GEOVIC shall comply with administrative formalities relating to the exchange regulations applicable in Cameroon for general commercial transactions. 16.4 In the event of any changes in the present monetary system of the Republic of Cameroon the State shall guarantee maintenance of the rights created under this Article in favour of GEOVIC the Third Party Beneficiaries Lenders and Persons engaged in the marketing of the Product as well as for regular employees of GEOVIC. 14PART III LEGAL AND TAX PROVISIONS ARTICLE 17 LEGAL TAX CUSTOMS AND EXCHANGE CONTROL REGIME 17.1. The legal tax customs and exchange control regime applicable to activities undertaken under this Convention is defined by the following instruments with respect to those of their provisions which are not contrary to or inconsistent with the provisions of this Convention a Act of the Organisation for the Harmonisation of Business Law in Africa OHADA; b Regulation No. 200CEMACUMACCM to harmonise exchange in member States of CEMAC; c the Customs Code in force; d e g the General Tax Code as applicable on the date of entry into force of this Convention; all Finance Laws as applicable on the date of entry into force of this Convention; Law No. 634 of 19 June 1963 to implement the regulations of the Franc Zone throughout the territory of the Republic of Cameroon; the Mining Code in force; Law No. 20024 of 19 April 2002 the Investment Charter of the Republic of Cameroon; Law No. 67LF22 of 12 June 1967 relating to the financial relations between Cameroon and foreign countries; k Law No 9514 of 8 August 1995 to establish the form of accounts kept in US Dollars US ; h i j 17.2 GEOVIC shall benefit from the privileges of the Regime for Strategic Enterprises as defined in the Investments Code under the conditions provided for in Section 43 of Law No. 20024 of 19 April 2002 the Investment Charter for the Republic of Cameroon. 17.3

GEOVIC shall benefit from alleviation of customs operations by systematic application on the basis of a duly reasoned request of simplified procedures such as removal of goods before payment of duty and waiver of monitoring of import inspections nothing to declare lane of onsite visits and of the creation of a customs office at the entrance of the mining complex or of any other procedure provided for by applicable regulation. 17.4 Furthermore all laws of the Republic of Cameroon that are not contrary to or incompatible with the provisions of the present Convention shall apply to the activities undertaken under this Convention. 17.5 GEOVIC shall pay an Ad Valorem Tax on the basis of the market value of the Minerals in accordance with the Finance Law and the Mining Code. 15a 17.6 Nonresident GEOVIC expatriate personnel originating from a country that has no bilateral income tax convention with the Republic of Cameroon who are present in Cameroon for a total of less than one hundred and eighty 180 days during a given Fiscal Year may elect to be taxed on a prorata temporis basis. b The terms of any applicable bilateral income tax convention shall apply to taxation of the income of nonresident expatriate personnel originating from a country that has entered into such a bilateral convention with the Republic of Cameroon. ARTICLE 18. MINING TITLES Within fifteen 15 days following signature of this Convention the Minister in charge of mines and geology shall commence the procedure for delivery of the Mining Permit which shall be granted to GEOVIC within not less than ninety 90 days. ARTICLE 19. MODE OF PAYMENT OF FIXED FEES AND ROYALTIES The conditions according to which GEOVIC shall pay the fixed fees and royalties provided for in the Mining Code shall be those established by regulation. ARTICLE 20. ACCOUNTING PROVISIONS 20.1 GEOVICs accounting shall be kept in accordance with the provisions of General Tax Code this Convention as well as the OHADA Accounting Plan standards. GEOVIC shall be authorized to use the Dollar to keep its accounts to carry out all related accounting operations and to denominate its share capital in such currency. 20.2 The exchange rate to be applied for conversion of operations carried out in a currency other than the Dollar shall be the rate published under the heading exchange cross rates in the London Financial Times in effect on the day of the operation. If the currency is not listed in the exchange cross rates or if the London

Financial Times is unavailable exchange rates taken from another internationally recognized source published in London or New York shall be used. If no published rate can be obtained the rate to be applied shall be the mathematical average of the exchange rates of each business day for the month in question for which the rate is available from any of the sources referred to in this Article

20.2. PART IV MISCELLANEOUS AND FINAL PROVISIONS ARTICLE 21. TERM OF THE

CONVENTION 21.1 This Convention shall take effect from the date of its signature and remain in

force for an initial period of twentyfive 25 years from the Commencement of Operations. It shall be

renewable by mutual agreement following a request for renewal duly made at the latest 2 two years

before the expiry of the initial period. 21.2 Notwithstanding Article 21.1 above this Convention may

be terminated prior to its term only in the following three 3 cases 16a b c By agreement of the

Parties By GEOVICs renunciation in accordance with the nonrenewal clauses and the clauses

concerning the termination of operations below; or By the State in accordance with the conditions for

withdrawal renunciation or invalidity of this Convention. SCOPE OF THE CONVENTION ARTICLE

22. . 22.1 This Convention shall apply principally to GEOVIC and to any Person to which GEOVIC

may assign all or part of the rights and obligations granted to it under the conditions of this

Convention 22.2 The Shareholders the Affiliates the Contractors the SubContractors the Shippers

and Lenders and other Third Party Beneficiaries shall benefit from the rights and guarantees

granted to them respectively under this Convention with respect to activities related to the mining

and processing of the Minerals and to production of the Product in Cameroon. 22.3 The suspension

of rights and benefits granted to GEOVIC by this Convention in application of the terms hereof shall

as of right entail suspension under the same conditions of the extension to the Third Party

Beneficiaries of the same rights and benefits. ARTICLE 23. APPLICABLE STANDARDS The mining

standards applicable under this Convention shall be World Bank standards or standards that can be

demonstrated as generally applicable in the international mining industry or if none the standards

established by applicable legislation in Cameroon. ARTICLE 24. ASSIGNMENT AND TRANSFER

OF RIGHTS SUBSTITUTION OF LENDERS 24.1 The rights and obligations resulting from this

Convention may be assigned including by way of security pledged or transferred in whole or in part by GEOVIC to any Lender or other creditor as well as to its successors and assignees. Any assignment realization of a pledge or transfer of rights arising under this Convention shall automatically entail unless otherwise provided by the assignment pledge or transfer deed the transfer of constructions structures and facilities of any kind belonging to GEOVIC as well as of the benefit of the granting of rights of access to lands as defined in the Mining Code and the terms of the present Convention. Except for constructions structures and facilities of any kind belonging to GEOVIC which may not be the object of a mortgage or other security nor of any attachment or legal process GEOVIC may grant any security including transfer by way of security over its other property or assets including its goodwill its intellectual property rights and its bank accounts. A pledge of the goodwill shall include unless otherwise provided by the pledge deed the rights resulting from this Convention when such pledge is granted for the benefit of the Lender. Any pledge or assignment made by way of security for several creditors may be granted to one of them or to a representative or fiduciary for the common account of all the creditors in question. GEOVIC must notify the Minister in charge of mines and geology for information purposes only of any transfer of the rights 17granted by this Convention or any pledge of GEOVIC shares resulting from an assignment by way of security or from the realization of a security for the benefit of a Lender. 24.2 The State hereby agrees that a Lender or GEOVIC may substitute a Substituted Entity for GEOVIC. With effect from the date of entry into force of such substitution the Substituted Entity shall benefit from all the rights and shall assume all the obligations conferred on GEOVIC by this Convention. However and notwithstanding the foregoing no Substituted Entity shall have the right to agree to amendments or modifications of this Convention. Such substitutions shall entail the vesting in the Substituted Entity of the said rights and obligations as well as GEOVICs rights in constructions structures and facilities of any kind and the benefit of enjoyment of the rights of access to the lands notwithstanding any act or ruling of third parties to the contrary in particular in the event of bankruptcy or court liquidation of GEOVIC. When the principal interest and all other amounts due by GEOVIC under its contracts with

the Lender shall have been paid to the Lender or at the election of GEOVIC if it has named a Substituted Entity the substitution referred to in this Article shall terminate and GEOVIC shall resume its rights and obligations conferred by the present Convention. The conditions and implementation terms of the substitution shall be defined by and between the Parties and the Lender as the case may be. The Parties shall notify the Minister in charge of mines and geology of any such substitution within thirty 30 days of agreement to the terms of the substitution. 24.3 The notarising of all deeds relating to security assignment or transfer or other loan documents related to activities undertaken under this Convention shall be exempt from the special tariffs defined in the Tariff Table appended to Decree No. 9538 of 28 February 1995 setting tariffs for authenticated deeds. All legalization shall be subject to charges and fees to be fixed by amicable agreement between the notary public and the signatories of the said deeds.

ARTICLE 25. SUSPENSION OF RIGHTS AND BENEFITS GRANTED BY THE CONVENTION WITHDRAWAL OF MINING PERMIT TERMINATION AND INVALIDITY OF THE CONVENTION

25.1 OPPORTUNITY TO CURE DEFICIENCIES Whenever the Republic of Cameroon determines that performance by GEOVIC of any of its obligations under this Convention is insufficient the Republic of Cameroon shall provide written notice of the insufficiency with a statement of the reasons therefor and indication of the time period within which GEOVIC is expected to remedy such insufficiency unless a specific time period is stated in this Convention for such opportunity to remedy deficiencies. In any case GEOVIC shall be allowed a reasonably sufficient time under the circumstances to comply.

25.2 The State may in the following cases suspend the rights and benefits granted to GEOVIC by this Convention. Consequently the State may then withdraw the Mining Permit and terminate this Convention under the conditions provided for in Article 27

18a nonpayment within the deadline of all taxes duties royalties and fees after a formal notice in accordance with the General Tax Code and under the conditions laid down in this Convention

b non respect of the clauses concerning environmental management.

25.3 Suspension of rights and benefits may only occur after notification of an official statement in lieu of formal warning. Such suspension may take effect no sooner than fortyfive 45

days after notice to GEOVIC. 25.4 If a dispute relative to suspension is submitted to arbitration such suspension shall be stayed temporarily during the arbitration proceedings. If the dispute relates to amounts due as Ad Valorem Tax or an element of computation of such tax GEOVIC shall pay the uncontested portion. This suspension shall not be stayed if GEOVIC fails to pay such uncontested amount at least sixty 60 days after notice without cure. 25.5 If the issue that motivated the suspension of the Mining Permit has not been cured after thirty 30 days and an arbitration procedure has not been commenced GEOVIC shall be considered as not having performed its obligations under the rights conferred by the Mining Permit which shall be withdrawn and the present Convention terminated. 25.6 Any notice of default given pursuant to this Article shall be cancelled immediately and any suspension that has taken effect shall be lifted when the default has been cured and any applicable penalties paid. 25.7 When pursuant to Article 25.2 the State notes a case of violation and the default has not been cured in the time periods provided for above the rights and benefits referred to in Article 25.2 shall be suspended for a period of no more than one hundred eighty 180 days from the notification of such action to GEOVIC. Such suspension of rights and benefits shall terminate prior to the expiry of the one hundred eighty 180 day period if the State takes note that the default has been cured and that where applicable penalties provided for in the present Convention have been paid. During the period of suspension of rights and benefits activities undertaken under this Convention shall proceed in accordance with its terms and with the legislation in force. 25.8 If at the expiry of the suspension period either a the dispute has not been resolved by arbitration or b the defaults have not been cured and penalties provided for by this Convention have not been paid the Mining Permit may be withdrawn and this Convention terminated with effect from the date of notification of such termination to GEOVIC by the State. 25.9 Suspension of the rights and benefits as well as withdrawal of the Mining Permit and if applicable termination of this Convention shall not release the Parties from their legal and contractual obligations accrued as of the effective date of such measure. ARTICLE 26. RENUNCIATION OF THE MINING PERMIT NONRENEWAL OF THE CONVENTION END OF MINING 19GEOVIC may before or at the expiry

of the term of the Mining Permit renounce the operation of all or part of the said Permit. In the event of a renunciation before the Commencement of Operations GEOVIC shall inform the Minister in charge of mines and geology without any prior notice being required. In the event of a renunciation after the Commencement of Operations GEOVIC shall specify the effective date of its renunciation which shall not be less than twelve 12 months from the date of notice as to a portion of the Mining Permit and twentyfour 24 months for the entire Permit from the date of notice. In addition for information purposes GEOVIC shall give the Republic of Cameroon the reasons for such renunciation and shall stop mining works and rehabilitate the Mining Sites pursuant to the specifications and the Environmental Management Plan. Within two 2 months from the notice the Minister in charge of mines and geology shall officially acknowledge GEOVICs decision. If the renunciation bears on a portion of the Mining Permit only the Minister in charge of mines and geology shall indicate the States position as to acceptance of the conditions for renunciation within two 2 months. This time period shall be extended to six 6 months if the renunciation bears on the entire Mining Permit. The renunciation shall not become effective until after the Republic of Cameroon and GEOVIC have jointly signed a memorandum in which the Republic of Cameroon and GEOVIC shall acknowledge that the terms of withdrawal defined herein have been complied with. The renunciation shall be confirmed by decree. The decree shall recall the terms of the decree granting the Mining Permit and the decree granting allotment leaseholds. It shall discharge GEOVIC from its undertakings under the present Convention as of the date of signature. However if for any reason whatsoever the decree is not published within thirty 30 days following signature of the memorandum referred to above GEOVIC shall be deemed to have been released from the said undertakings.

ARTICLE 27. RIGHTS AND OBLIGATIONS AT THE END OF THE CONVENTION

At the end of the Convention whether at its expiry or by virtue of its invalidity as defined herein a b c d GEOVIC shall be bound to implement and complete work pursuant to the Environmental Management Plan; GEOVIC its Contractors and Subcontractors shall dispose of all equipment and materials situated anywhere within any Mining Site. GEOVIC its Contractors and Subcontractors

shall be entitled to export all such materials under conditions laid down by the legislation in force; The social infrastructure created by GEOVIC shall become the property of the State; Expatriate employees residing in the Republic of Cameroon for the purpose of employment with GEOVIC its Contractors and Subcontractors shall be entitled to export all personal belongings free of export taxes or duties. The 20e Republic of Cameroon shall grant promptly all tax exemptions or other exit documents required to expedite the departure of the said expatriate employees; Neither Party shall be entitled to any compensation or damages by reason of the end of the Convention except in the case of a violation of the provisions of Article 15.4 against revealing Industrial Secrets. ARTICLE 28 FORCE MAJEURE 28.1. The intention of the parties is that the term Force majeure shall receive the interpretation which is the most compliant with the principles and usage of international law. 28.2. According to this convention force majeure shall refer to but not be limited to all events beyond the control of a party and which prevent it from fulfilling its obligations such as earthquakes and natural disasters riots insurrections civil strife acts of war or conditions caused by war. Notwithstanding the foregoing it shall be expressly outlined that force majeure shall be understood as all events beyond the control of GEOVIC and likely to impede either the construction or the development of its mining or plant sites or the production transportation or marketing of its products. However the technical and commercial hazards of the company as well as the general economic situation may not be considered as cases of force majeure. 28.3. The Party that cannot comply with its obligations due to a Force Majeure event shall notify the other Party and shall provide all the details on the Force Majeure event. In all cases the Party that is the victim of a Force Majeure event shall take all appropriate steps in order to perform the obligations affected by the Force Majeure event. A Force Majeure event affecting Contractors and Subcontractors shall be considered as a Force Majeure event affecting GEOVIC insofar as this Force Majeure event affects GEOVICs activities in Cameroon. 28.4. If in case of Force Majeure performance of any of the obligations provided for in this Convention is suspended the period of suspension of the obligation and the time necessary for the Party that is the victim of the Force Majeure event to repair the damages caused by the Force

Majeure event as well as the damages caused during this period of suspension shall be added to any time period provided by this Convention for the performance of such an obligation and any other time period in this Convention shall be extended by an equal amount of time. ARTICLE 29 SETTLEMENT OF DISPUTES 29.1 The Parties shall agree that any dispute arising between the State and GEOVIC from this Convention including its validity shall be the subject of attempts at amicable settlement. In the event of failure to reach an amicable settlement such disputes shall be settled following the arbitration procedure set forth in this article. 2129.2 Any dispute as to interpretation as between the English and French versions shall be resolved pursuant to this article. However if the parties agree that the dispute does not warrant application of the full arbitration procedure they shall designate a neutral bilingual third party who is knowledgeable in the application of international contracts generally. The decision of the party so designated as to the proper interpretation of the disputed clauses shall be binding on the parties. If the parties cannot agree on the third party to be designated they shall agree to submit an application to the International Chamber of Commerce for the designation of such third party. The parties shall agree to accept the party so designated. 29.3. Except as specifically stated elsewhere in this Convention all disputes arising in connection with this Convention shall be finally settled under the Rules of Conciliation and Arbitration of the International Chamber of Commerce ICC by three arbitrators appointed in accordance with the said Rules the Rules. The Parties shall agree that any arbitration under this arbitration provision shall be an international arbitration subject to the New York Convention on the Recognition and Enforcement of Foreign Arbitration Awards of 1958. An arbitration tribunal constituted in accordance with this Convention shall be composed of three 3 arbitrators selected as indicated below. The arbitrators shall have the powers of compounders. 29.4. If a Party is of the opinion that a dispute will not be resolved amicably it shall notify the other Party of its decision to resort to arbitration by means of a Request for Arbitration notified to the other party in accordance with conditions laid down in this Convention and communicated to the ICC. The Request for Arbitration shall be drafted in accordance with the Rules and shall indicate the name qualifications

and domicile of the Claimants selected arbitrator. The Defendant shall file its Answer with the ICC and shall notify it to the Claimant within thirty 30 days of the Defendants receipt of the Request for Arbitration. The Answer shall designate the Defendants choice of arbitrator indicating the arbitrators name qualifications and domicile. The two designated arbitrators shall designate the third arbitrator within thirty 30 days of the receipt by the Claimant of the Defendants Answer. They shall jointly communicate the name qualifications and domicile of the third arbitrator to the ICC. Failure to designate within a deadline of thirty30 days with effect from the date of designation of an arbitrator by either of the parties or if the two designated arbitrators fail to designate a third arbitrator as provided above the unnamed arbitrators shall be appointed by the ICC. 29.5. The Parties shall agree to pay advances and costs of arbitration as provided for in the Rules. The Award shall allocate final responsibility for costs and fees of the arbitration. 29.6. The Parties obligations arising from this Convention shall remain in force and the Parties shall not be released therefrom during the course of any arbitration proceeding 22provided however that the commencement of an arbitration procedure shall suspend execution of the disputed measure during the course of such arbitration unless the designated arbitrators dee otherwise at the request of one of the Parties and as a measure to prevent significant economic loss to either Party or to third parties to protect the environment or for any reason justifying emergency measures. 29.7. The award rendered by the arbitration tribunal shall be final and irrevocable. It shall be binding on the Parties and shall be enforceable in accordance with ICC Rules and applicable laws in the Republic of Cameroon. The Parties shall renounce formally and without reservation any right to challenge said award to oppose its execution by any means or to resort to any other jurisdiction whatsoever for resolution of the same dispute or any part of it. The Republic of Cameroon within the context of arbitration hereby waives its right to invoke immunity from execution of the arbitration award and if necessary from any judgment for enforcement of the arbitration award. 29.8. If an arbitration award orders one of the Parties to pay sums of money to the other Party the Parties shall undertake to agree on the terms of payment of such amounts within thirty 30 days from the date of notification of the award. The

arbitration tribunal shall not close its proceedings until the earlier of i thirty 30 days after notification of the award or ii receipt from either Party of a request that the arbitrators draw a schedule for payment of any award as an adjunct to the award and in aid of enforcement of its award on the merits. If the negotiations fail if no request is made to the arbitrators for the scheduling of payments or if an award is not satisfied in full pursuant to an agreement of the Parties or in accordance with an award in aid of enforcement the Parties agree that the Party in whose favour the award on the merits has been made shall be entitled to set off all or any part of the award against any amounts owing by that Party to the other Party including but not limited to any award in favour of the other Party by the arbitration tribunal any taxes or fees including but not limited to Ad Valorem Taxes owed by GEOVIC to the State or any amounts owed by the State to GEOVIC. Neither the rate of the Ad Valorem Tax nor the obligation of GEOVIC to pay such tax shall be affected by such setoff rights and GEOVIC shall continue to file declarations of the Ad Valorem Tax claiming any setoff. Where no setoffs are available the Party against which an award has been rendered shall make quarterly payments on the award amounting to a minimum of twentyfive percent 25 of the amount of the award until the award is paid in full. If after 12twelve months of the award on the merits said award has not been paid in full if either of the Parties has breached its agreement on the schedule to pay the award or if the arbitrators award as to payment terms has not been complied with the Parties shall be entitled to pursue the enforcement of the arbitration award by any other means which are legal in the jurisdiction where enforcement is sought without restriction. The provisions of this Article shall be enforceable in any case where an arbitration award establishes that in breach of the provisions of this Convention in respect of the stability of the legal and tax regime a legislative administrative or regulatory measure entailing a payment to the State was enforced against Third Party Beneficiaries to the extent GEOVIC is contractually bound to reimburse such payment to such Persons. 23The Parties may agree that this Article shall apply to the payment of sums of money required from either Party as a result of the amicable settlement of a dispute. 29.9. In the event of a dispute between the State and any Third Party Beneficiary arising out of this Convention these

provisions shall be applicable under the following conditions the State accepts the terms of this article pursuant to its obligations under this Convention. A Third Party Beneficiary shall be deemed to have ratified this article when it i initiates arbitration by filing a Request for Arbitration or ii agrees to arbitration by filing an Answer to a demand.

ARTICLE 30 PLACE AND LANGUAGE OF ARBITRATION The arbitration shall be conducted in English or in French or in both languages and shall take place in Paris France. The arbitrators selected shall dee any questions as to use of language during the proceedings on the basis of fairness to the Parties and in the interest of promoting the efficiency of the proceedings.

ARTICLE 31 APPLICABLE LAW Cameroon law the terms and conditions of this Convention the general principles of international law and common practices widely used in the international mining industry shall govern this Convention. In case of conflict among these common practices which can be established as being widely used in the international mining industry shall take precedence.

ARTICLE 32 ENTIRE AGREEMENT This Convention shall set forth the entire understanding of the Parties thereto and shall supersede any and all prior agreements arrangements and understandings relating to the subject matter hereof. The Parties shall declare that no representation promise or statement of intent made by either Party has been left out of this Convention. However no Party shall be bound by or be liable for any alleged representation promise or statement of intent not embodied or incorporated herein unless same shall have been made contemporaneously herewith and put in writing and signed by both Parties.

ARTICLE 33 NONWAIVER The failure of either Party to insist upon strict performance by the other Party of the terms and conditions of this Convention or its failure to take the necessary measures at its disposal to ensure their performance shall not be considered as a waiver of any of its rights granted by this Convention. Each Party shall be under obligation to observe the covenants responsibilities and duties imposed upon it by the terms of this Convention and its riders. The Parties shall be bound to perform in strict accordance with the terms hereof despite the possible inaction of any of the Parties.

ARTICLE 34 SEVERABILITY 24Each and every guarantee undertaking and agreement contained in this Convention is and shall be construed to be a separate

and independent guarantee undertaking and agreement. If any term or provision of this Convention or the application thereof to any Party or in any circumstance shall to any extent be declared invalid and/or unenforceable by an arbitrator or by a court of competent jurisdiction the remainder of this Convention or the application of such term or provision to Parties or circumstances other than those as to which it is invalid or unenforceable shall not be affected thereby.

ARTICLE 35 NOTICES All notices and other communication required by this Convention or any notices which the Parties may give to each other shall be written in English or in French and shall be considered as having been validly given when they are delivered in person to and signed for by a representative of the recipient Party duly designated for this purpose or sent by registered mail with acknowledgement of receipt telegram cable facsimile or telex or by any other electronic means after prior agreement of the Parties to the address of the recipient Party as indicated below or to any other addresses of which either of the Parties may notify the other Party in writing. A Party shall not give notice by facsimile or by electronic transmission without the prior agreement of the other Party. If notice is given by facsimile the effective date of notice shall be the date of receipt of the facsimile. Addresses

REPUBLIC OF CAMEROON co The Minister in charge of mines and geology Telex 8504 KN Yaounde Republic of Cameroon Telephone 237 222 17 23 Facsimile 237 222 17 23 GEOVIC CAMEROON S.A Attention The General Manager Boulevard de la Rpublique du Cameroun Douala Republic of Cameroon Telephone 237 340.75.35 Facsimile 237 340.90.49 With copies to William A. Buckovic President Geovic Ltd. 743 Horizon Ct. Suite 300A Grand Junction CO 81506 USA Telephone 1 970 2569681 Facsimile 1 970 2569241 25 And to Pierre Christian NSEGBE Advocate of the Cameroon Bar P.O. Box 7619 Nlongkak opposite Pharmacie des Lumieres Yaounde Telephone 237 221 00 85 Cell phones 237 770 95 10 Facsimile 237 954 32 39 237 221 00 85

ARTICLE 36 MODIFICATION This Convention shall be modified and shall be subject to any riders following the written agreement of the Parties duly signed by their duly authorised agents.

ARTICLE 37 SIGNATURES This Convention shall be signed in four 4 originals in English and four 4 originals in French both versions being equally enforceable and authentic. Done in Yaounde Republic of

Cameroon on GEOVIC CAMEROON S.A REPUBLIC OF CAMEROON BY BY Original document
initialled signed and stamped by William A. Buckovic President for Geovic Cameroon S.A. and
Jacques Yves Mbelle Ndob Ministry of Mines Water and Power for the Republic of Cameroon on
July 31 2002. Appendices available via public record in Cameroon. Western Australia Iron Ore Robe
River Agreement Act 1964 As at 03 Jan 2014 Version 02a005 Published on
www.legislation.wa.gov.au Western Australia Iron Ore Robe River Agreement Act 1964 1 1 2 2 2 2 3
3 3 4 5 5 5 6 1. 2. 2A. 3. 3A. 3B. 3C. 3D. 3E. 4A. 4B. 4C. 4D. 4. Short title Terms used Repeal of Act
No. 79 of 1969 and Act and variation agreement declared inoperative Approval of Agreement First
variation agreement Second variation agreement Third variation agreement Fourth variation
agreement Fifth variation agreement Variation of Agreement to increase rates of royalty Sixth
variation agreement State empowered under clause 9D9a Seventh variation agreement Declaration
as to entry on Crown lands First Schedule Iron Ore Robe River Agreement Second Schedule First
variation agreement Third Schedule Second variation agreement Fourth Schedule Third variation
agreement As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page i Iron
Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement Sixth Schedule
Fifth variation agreement Seventh Schedule Sixth variation agreement Eighth Schedule Seventh
variation agreement Notes Compilation table 203 page ii Version 02a005 Published on
www.legislation.wa.gov.au As at 03 Jan 2014 Western Australia Iron Ore Robe River Agreement Act
1964 An Act relating to an Agreement between the State of Western Australia and Basic Materials
Pty. Limited with respect to certain iron ore deposits and for other purposes. 1. Short title This Act
may be cited as the Iron Ore Robe River Agreement Act 1964 1. [Section 1 amended No. 87 of
1987 s. 4.] 2. Terms used In this Act unless the contrary intention appears Agreement means the
agreement a copy of which is set out in the First Schedule to this Act and except in section 3
includes that agreement as so altered from time to time in accordance with its provisions or by any
agreement between the parties thereto approved by an Act; Company has the same meaning as it
has in the Agreement; fifth variation agreement means the agreement a copy of which is set forth in

the Sixth Schedule to this Act; first variation agreement means the agreement a copy of which is set forth in the Second Schedule to this Act; fourth variation agreement means the agreement a copy of which is set forth in the Fifth Schedule to this Act; second variation agreement means the agreement which is executed under the authority of section 3B of this Act; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 1 Iron Ore Robe River Agreement Act 1964 s. 2A seventh variation agreement means the agreement a copy of which is set forth in the Eighth Schedule to this Act; sixth variation agreement means the agreement a copy of which is set forth in the Seventh Schedule to this Act; third variation agreement means the agreement of which a copy is set forth in the Fourth Schedule to this Act. [Section 2 amended No. 35 of 1970 s. 3; No. 68 of 1973 s. 3; No. 37 of 1984 s. 2; No. 95 of 1985 s. 3; No. 87 of 1987 s. 5; No. 61 of 2010 s. 8; No. 61 of 2011 s. 8.] 2A. Repeal of Act No. 79 of 1969 and Act and variation agreement declared inoperative 1 The Iron Ore ClevelandCliffs Agreement Act Amendment 1 is hereby repealed and shall be deemed never to Act 1969 have come into operation. 2 The variation agreement set forth in that Act is hereby declared never to have had any force or effect. [Section 2A inserted No. 35 of 1970 s. 2.] 3. Approval of Agreement The Agreement is approved. 3A. First variation agreement The first variation agreement is approved on and from 31 December 1970 or on and from the 60th day after the commencement date referred to in clause 73 of the agreement whichever day is the earlier. [Section 3A inserted No. 35 of 1970 s. 4; amended No. 68 of 1973 s. 4.] 3B. Second variation agreement The execution by the Premier of the State of Western Australia acting for and on behalf of the State of an agreement in or substantially in accordance with the form set out in the Third page 2 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 s. 3C Schedule to this Act is authorised and when so executed is approved. [Section 3B inserted No. 68 of 1973 s. 5.] 3C. Third variation agreement 1 The third variation agreement is ratified. 2 The implementation of the third variation agreement is authorised. 3 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the third variation agreement shall operate and take effect notwithstanding any other Act or law. [Section 3C

inserted No. 37 of 1984 s. 3.] 3D. Fourth variation agreement 1 The fourth variation agreement is approved and ratified. 2 The implementation of the fourth variation agreement is authorised. 3 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the fourth variation agreement shall operate and take effect notwithstanding any other Act or law. [Section 3D inserted No. 95 of 1985 s. 4.] 3E. Fifth variation agreement 1 The fifth variation agreement is approved and ratified. 2 The implementation of the fifth variation agreement is authorised. 3 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the fifth variation agreement As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 3 Iron Ore Robe River Agreement Act 1964 s. 4A shall operate and take effect notwithstanding any other Act or law. [Section 3E inserted No. 87 of 1987 s. 6.] 4A. Variation of Agreement to increase rates of royalty 1 In this section Agreement means the agreement a copy of which is set out in the First Schedule a b as varied from time to time in accordance with its provisions; and as varied by these agreements i ii iii iv v the first variation agreement; the second variation agreement; the third variation agreement; the fourth variation agreement; the fifth variation agreement. 2 Clause 92j of the Agreement is varied a in subparagraph ii by deleting three and three quarter per centum 3 and inserting 5.625 b in subparagraph iii by deleting aforesaid; and inserting aforesaid until 30 June 2010 and thereafter at the rate of 5.625 of the f.o.b. value computed as aforesaid; c in subparagraph iv by deleting one shilling and sixpence 16d per ton; and inserting page 4 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 s. 4B 5 of the f.o.b. value computed as aforesaid; 3 Clause 92jii iii and iv of the Agreement as varied by subsection 2 operate and take effect despite a b c any other provision of the Agreement; and any other agreement or instrument; and any other Act or law. 4 Nothing in this section affects the amount of royalty payable under clause 9 of the Agreement in respect of any period before the commencement of the Iron Ore Agreements Legislation 1. Amendment Act 2010 Part 10[Section 4A inserted No. 34 of 2010 s. 23.] 4B. Sixth variation agreement 1 The sixth variation agreement is ratified. 2 The implementation of

the sixth variation agreement is authorised. 3 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the sixth variation agreement is to operate and take effect despite any other Act or law. [Section 4B inserted No. 61 of 2010 s. 9.] 4C. State empowered under clause 9D9a The State has power in accordance with clause 9D9a of the Agreement. [Section 4C inserted No. 61 of 2010 s. 9.] 4D. Seventh variation agreement 1 The seventh variation agreement is ratified. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 5 Iron Ore Robe River Agreement Act 1964 s. 4 2 The implementation of the seventh variation agreement is authorised. 3 Without limiting or otherwise affecting the application of the Government Agreements Act 1979 the seventh variation agreement is to operate and take effect despite any other Act or law. [Section 4D inserted No. 61 of 2011 s. 9.] 4. Declaration as to entry on Crown lands It is hereby declared that notwithstanding any other Act or law the Company may b c d 2 does not apply enter upon the Crown lands referred to in clause 2c of the Agreement in accordance with and for the purposes therein mentioned; and section 2775 of the Mining Act 1904 to any renewal of the rights of occupancy granted pursuant to clause 2a of the Agreement; and section 96 of the Public Works Act 1902 does not apply to any railway agreed to be constructed under the Agreement; and the Governor may on the recommendation of the Company make alter and repeal bylaws in accordance with and for the purposes referred to in clause 9 of the Agreement and the bylaws i ii shall be published in the Gazette; shall take effect and have the force of law from the date they are so published or from a later date fixed by the order making the bylaws; iii may prescribe penalties not exceeding 100 for a iv breach of any of the bylaws; are not subject to section 36 of the Interpretation Act 1918 3 page 6 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 s. 4 but shall be laid before each House of Parliament within the 6 sitting days of such House next following the publication of the bylaws in the Gazette. [Section 4 amended No. 113 of 1965 s. 81.] [5. Deleted No. 87 of 1987 s. 7.] As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 7 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement First Schedule Iron Ore Robe

River Agreement [s. 2] [Heading amended No. 19 of 2010 s. 4.] THIS AGREEMENT under seal made the eighteenth day of November One thousand nine hundred and sixtyfour BETWEEN THE HONOURABLE DAVID BRAND M.L.A. Premier and Treasurer of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter called the State of the one part AND BASIC MATERIALS PTY. LIMITED a company incorporated under Companies Act 1961 of the State of Western Australia and having its registered office and principal place of business at 25 William Street Perth in the State of Western Australia hereinafter called the Company which expression will include the successors and assigns the Company including where the context so admits the assignees and appointees of the company under clause 13 hereof of the other part. and WHEREAS a The Company is a wholly owned subsidiary of Cliffs International Inc. a Delaware Corporation registered in Western Australia as a foreign corporation under the provisions of the Companies Act 1961. Cliffs International Inc. is a wholly owned subsidiary of The ClevelandCliffs Iron Company an Ohio Corporation. The Company is the holder of the Mining Areas defined in Clause 1 hereof. b The parties hereto believe that the mining areas contain large deposits of iron ore with an average iron appreciably below 60 and with physical characteristics which render such iron ore unsaleable as direct shipping ore as defined in clause 1 hereof under the quality requirements of the world steel industry. c Attempts were made to improve and upgrade the said iron ore but test work indicated that either such iron ore was not amenable to then known concentrating techniques or the degree of beneficiation was very slight and consequently uneconomic. d Exhaustive research in Western Australia and in the United States of America culminating in full scale pilot plant tests satisfied the Company that iron ore pellets equal to or superior to pellets currently produced in the page 8 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule United States of America could be produced from this iron ore by the Pelletisation process. e The pelletisation process is an advanced treatment process of iron ore and requires considerable technical organisation and skill. As contrasted to mining of direct

shipping ore as defined in clause 1 the process requires extensive additional facilities and utilises a process with vastly increased technical and consumable supply and electric power requirements. The necessary pelletisation plant or plants crushing and fine grinding facilities electric power generating plant petroleum handling and storage facilities represent a very large investment which amounts to approximately one half of the total investment including port railroad mining and other facilities needed to commercially develop the iron ore deposits included in the mining areas to the extent hereinafter mentioned. Power requirements are expected to amount to 75000000 kilo watt f hours per annum for the initial plant and to increase to 225000000 kilo watt hours when the proposed pellet plant capacity is expanded. Fuel oil used as the fuel media for the thermal application portion of the process will amount to approximately 10000000 gallons per annum initially and will increase to 30000000 gallons per annum when the proposed production capacity is installed. Other consumable industrial supplies and materials such as iron steel oil and lubricants will also be used in substantial quantities. g Raymond International Inc. consulting and construction Engineers has made a feasibility study of possible port sites and railroad facilities plant sites townsites and necessary auxiliary facilities. h The Company has informed the State that it is prepared to carry out the works referred to in clause 9 hereof provided that i ii iii contracts satisfactory to the Company are concluded for the sale of not less than 1800000 tons of iron ore pellets during the first two years from the export date as hereinafter defined in clause 1 and not less than 3000000 tons in subsequent years; arrangements satisfactory to the Company are made for financing by any means the works referred to in clause 9 hereof; and a grant is made to the Company of a licence or licences under Commonwealth law for the export of iron ore pellets of not less than 3000000 tons per annum. The State acknowledges that prior to the 22nd day of October 1964 an i agreement was entered into between the Company and the State whereby subject to the provisions of this agreement relating to the submission of As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 9 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement detailed proposals and matters referred to in clause 52

hereof the State had agreed to make the grants of lands referred to in clause 81b of this Agreement and that prior to such date the State had consented to the Company making the improvements set out in clause 9 hereof on the land comprised in any lease granted by the State to the Company pursuant to this Agreement. NOW THIS AGREEMENT WITNESSETH Interpretation 4 1. In this Agreement subject to the context associated company means a any company having a paidup capital of not less than one million pounds 1000000 notified in writing by the Company to the Minister which is incorporated in the United Kingdom the United States of America or the Commonwealth of Australia and which i ii iii iv is a subsidiary of the parent Company within the meaning of the term subsidiary in section 6 of the Companies Act 1961; holds directly or indirectly not less than twenty per cent 20 of the issued ordinary share capital of the Company; is promoted by the parent company or by any company that holds directly or indirectly not less than twenty per cent 20 of the issued ordinary share capital of the parent company for all or any of the purposes of this Agreement and in which the parent company or such other company holds not less than twenty per cent 20 of the issued ordinary share capital; or is related within the meaning of that term in the aforesaid section to the parent company or to any company in which the parent company holds not less than twenty per cent 20 of the issued ordinary share capital and b any company approved in writing by the Minister for the purposes of this Agreement which is associated directly or page 10 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule indirectly with the parent company in its business or operations hereunder; commencement date means the date referred to as the commencement date in clause 73 hereof; Commonwealth means the Commonwealth of Australia and includes the Government for the time being thereof; Companys wharf means the wharf to be constructed by the Company pursuant to this Agreement for the shipment of iron ore from the mineral lease and includes the commercial wharf to be constructed by the Company for the reception of inward cargoes or except for the purposes of definition of harbour other the temporary wharf for the time being approved by the Minister as the Companys wharf for the purposes hereof

during the period to which such approval relates; deposits townsite means the townsite to be established on or near the mining areas pursuant to this Agreement; direct shipping ore means iron ore which has an average pure iron of not less than sixty per cent 60 which will not pass through a one half inch mesh screen and which is sold without concentration or other beneficiation other than crushing and screening; export date means the earlier of the following dates namely a b the date or extended date if any referred to in clause 91 of this Agreement; the date when the Company first exports iron ore or iron ore pellets hereunder other than iron ore shipped solely for testing purposes; financial year means a year commencing on and including the 1st day of July; fine ore means iron ore which has an average pure iron of not less than sixty per cent 60 which will pass through a one half inch mesh screen and which is sold without concentration or other benefaction other than crushing and screening; fines means iron ore not being direct shipping ore or fine ore which will pass through a one half inch mesh screen; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 11 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement f.o.b. revenue means the price for iron ore from the mineral lease the subject of any shipment or sale and payable by the purchaser thereof to the Company or an associated company less all export duties and export taxes payable to the Commonwealth on the export of the iron ore and all costs and charges properly incurred and payable by the Company from the time the ore shall be placed on ship at the Companys wharf to the time the same is delivered and accepted by the purchaser including 1 ocean freight; 2 marine insurance; 3 4 5 6 7 port and handling charges at the port of discharge; all costs properly incurred in delivering the ore from port of discharge to the smelter and evidenced by relevant invoices; all weighing sampling assaying inspection and representation costs; all shipping agency charges after loading on and departure of ship from the Companys wharf; and all import taxes by the country of the port of discharge; harbour means the port or harbour at or near Cape Preston or such other port or place mutually agreed on and serving the Companys wharf; iron ore pellet contracts means the contract or contracts referred to in clause 51 hereof; iron ore pellets means iron ore in pellet or other form produced by

Pelletisation or more advanced reduction or other more advance treatment process from iron bearing material mined from the mining areas. Land Act means the Land Act 1933; mineral lease means the mineral lease referred to in clause 81a hereof and includes any renewal thereof; Mining Act means the Mining Act 1904; mining areas means the areas delineated and coloured red on the Plan marked A initialled by or on behalf of the parties hereto for the purposes of identification; Minister means the Minister in the Government of the said State for the time being responsible under whatsoever title for the page 12 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule administration of the Ratifying Act and pending the passing of that Act means the Minister for the time being designated in a notice from the State to the Company and includes the successors in office of the Minister; month means calendar month; notice means notice in writing; parent company means and includes both Cliffs International Inc. and The ClevelandCliffs Iron Company; person or persons includes bodies corporate; plant site means the area near the harbour at Cape Preston on which the pellet plant or plants crushing and grinding facilities stockpiling yards electric power generating plant petroleum storage and other ancillary facilities there to or such other site as shall be approved by the State shall be situated; port townsite means the townsite to be established pursuant to this Agreement near the harbour; Ratifying Act means the Act to ratify this Agreement and referred to in clause 3 hereof; said State means the State of Western Australia; special lease means a special lease or license to be granted in terms of this Agreement under the Ratifying Act the Land Act or the Jetties Act 1926 and includes any renewal thereof; this Agreement hereof and hereunder include this Agreement as from time to time added to varied or amended; ton means a ton of two thousand two hundred and forty 2240 lbs. net dry weight; townsite in relation to the townsite to be established near the harbour means a townsite whether or not constituted and defined under section 10 of the Land Act primarily to facilitate the Companys operations in and near the harbour and for employees of the Company and in relation to the mining areas means such a townsite or townsites or any other townsite or townsites which is or are established by the Company

for the purposes of its operations and employees on or near the mining areas in lieu of a townsite constituted and defined under section 10 of the Land Act; wharf includes any jetty structure; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 13 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement year 1 means the year next following the export date and year followed immediately by any other numeral has a corresponding meaning; reference in this Agreement to an Act shall include the amendments to such Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and the regulations for the time being in force thereunder; power given under any clause of this Agreement other than clause 17 hereof to extend any period or date shall be without prejudice to the power of the Minister under the said clause 17; marginal notes shall not affect the interpretation or construction hereof 4; the phases in which it is contemplated that this Agreement will operate are as follows a Phase 1 the period from the execution hereof by the parties hereto until the commencement date; and b Phase 2 the period thereafter. Obligations of the State during Phase 1 4 2. The State shall a upon application by the Company at any time prior to the 31st day of March 1965 and surrender of the then existing rights of occupancy already granted in respect of any portions of the mining areas cause to be granted to the Company and to the Company alone rights of occupancy for the purposes of this Agreement including the sole right to search and prospect for iron ore over the whole of the mining areas under section 276 of the Mining Act at a rental at the rate of four pounds 4 per square mile per annum payable quarterly in advance for the period expiring on the 31st December 1965 and shall then and thereafter subject to the continuance of this Agreement cause to be granted to the Company as may be necessary successive renewals of such lastmentioned rights of occupancy each renewal for a period of twelve 12 months at the same rental and on the same terms the last of which renewals notwithstanding its currency shall expire i ii on the date of application for a mineral lease by the Company under clause 81a hereof; at the expiration of one month from the commencement date; page 14 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River

Agreement Act 1964 First Schedule iii iv on the determination of this Agreement pursuant to its terms; or on the day of the receipt by the State of a notice from the Company to the effect that the Company abandons and cancels this Agreement whichever shall first happen; b c introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and endeavour to secure its passage prior to the 30th day of November 1964; to the extent reasonably necessary for the purposes of clause 5 hereof allow the Company to enter upon Crown lands including land the subject of a pastoral lease and survey possible sites for a plant site and harbour wharf railway townsite both in or near the harbour and on or near the mining areas and other areas required for the purposes of this Agreement; and d take the administrative steps set out in Clause 55b hereof.

Ratification and operation 4 3. 1 Clauses 8 9 10 other than paragraphs d and 1 of clause 10 11 15 both inclusive and 17 of this Agreement shall not operate unless and until the Bill to ratify this Agreement as referred to in clause 2b hereof is passed as an Act before the thirtieth day of November 1964 or such later date if any as the parties hereto may mutually agree upon. If the Bill is not so passed before that date or later date as the case may be this Agreement will then cease and determine and neither of the parties hereto will have any claim against the other of them with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement except as hereinafter provided in clause 10d hereof. 2 If the Bill to ratify this Agreement is passed as an Act before the date or later date if any referred to in subclause 1 of this clause the following provisions of this clause shall notwithstanding the provisions of any Act or law thereupon operate and take effect namely a the provisions of subclauses 1 2 3 and 4 of clause 8 the proviso to paragraph a of subclause 2 of clause 9 subclause 3 of clause 9 paragraphs a f g h i k and m of clause 10 and clauses 14 16 17 and 20 shall take effect as though the same had been brought into force and had been enacted by the Ratifying Act; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 15 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement b c d subject to paragraph a of this subclause the State and the Minister respectively shall have all the powers discretions and authorities necessary or requisite to enable

them to carry out and perform the powers discretions authorities and obligations conferred or imposed upon them respectively hereunder; no future Act of the said State will operate to increase the Companys liabilities or obligations hereunder with respect to rents or royalties; and the State may as for a public work under the Public Works Act 1902 resume any land or any estate or interest in land required for the purposes of this Agreement and may lease or otherwise dispose of the same to the Company. The company will actively and conscientiously endeavour to conclude Initial obligations of Company 4 4. the contracts and make the arrangements set out in Clause 51 hereof and will from time to time and on request keep the State informed on these matters. Company to give notice 4 5. give notice to the Minister that 1 At any time prior to the 31st December 1965 the Company may a The Company has entered into or intends to enter into contracts satisfactory to the Company for the sale by the Company of iron ore pellets. b The Company has made or is about make arrangements satisfactory to the Company for financing by any means the works referred to in clause 9 hereof and that the Company proposes to proceed with the works set out in clause 9 hereof. Company to submit proposals 4 2 The Company may at any time and shall as soon as possible after giving the notice referred to in Clause 51 hereof submit to the Minister a to the fullest extent reasonably practicable its detailed proposals including plans where practicable and specifications where reasonably required by the Minister with respect so far as relevant to the mining from the mining areas or so much thereof as shall be comprised within the mineral lease by the Company during the three 3 years next following the commencement of such mining with a view to the transport to the plant site of iron ore the page 16 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule pelletisation and shipment before or after pelletisation of the iron ore mined and its outline proposals with respect to such mining during the next following seven 7 years including the location area layout design number materials and time programme for the commencement and completion of construction or the provision as the case may be of each of the following matters namely i ii iii iv v vi vii the harbour and harbour development including dredging the

depositing of spoil the provision of navigational aids the Companys wharf the plans and specifications for which wharf shall be submitted to and be subject to the approval of the State the berth and swinging basin for the Companys use and harbour installations facilities and services all of which shall permit of adaptation so as to enable the use of the harbour and wharf by vessels having a draught of 42 feet; the railway between the mining areas and the Companys wharf and works ancillary to or connected with the railway and its proposed operation including fencing if any and crossing places; townsites on the mining areas and near the harbour and development services and facilities in relation thereto; housing; water supply; roads including details of roads in respect of which it is not intended that the provisions of clause 92b shall operate; and any other works services or facilities proposed or desired by the Company other than those set out in subparagraph b of this subclause; and b the location and respective production and storage capacities of the pelletisation plant and facilities.

3 a If within one 1 month of the 31st December 1965 the Company gives notice to the Minister that it has been unable to make the contracts and arrangements set out in clause 51 hereof the Minister will grant such extension of time as the Company requests up to the 31st December 1969. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 17 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement b If an extension is granted under paragraph a of this subclause and if within one 1 month of the 31st December 1969 the Company demonstrates to the reasonable satisfaction of the Minister that the Company has duly complied with its other obligations and has genuinely and actively but unsuccessfully endeavoured to make the contracts and arrangements set out in clause 51 hereof and the Company reasonably requires an additional period up to the 31st December 1972 for the purpose of making such contracts and arrangements and has reasonable prospects in that regard if granted an extension the Minister will grant such extension as is warranted in the circumstances up to the 31st December 1972. c If an extension is granted under paragraph b of this subclause then prior to the date such extension expires the Company shall give notice to the Minister whether or not it has concluded the contracts and arrangements set out in clause 51 hereof. If the notice is to the

effect that such matters have been concluded the Company will within twelve 12 months after such notice commence and within four 4 years after commencement complete the works set out in clause 9 hereof and will be ready to commence production therefrom. If the notice is to the effect that such matters have not been concluded then the Minister may at any time after the expiration of the extension granted under paragraph b of this subclause give notice to the Company requiring it within twelve 12 months thereafter to conclude the iron ore pellet contracts and arrangements for finance referred to in clause 51 hereof and to give notice accordingly to the Minister. If the Company gives such notice the Company will within twelve 12 months of the giving of the notice commence and within four 4 years thereafter complete the construction referred to above. If the company fails to give such notice and no other agreement is made between the State and the Company in regard to the matter then at any time after the expiration of twelve 12 months from the giving of the notice by the State either party may by notice to the other terminate this agreement. 4 If the Company fails within the time or extended time as the case may be hereinbefore in this clause mentioned to give the notice referred to in subclause 1 of this clause or to submit the proposals referred to in subclause 2 of this clause or fails duly and punctually to carry out its proposals as agreed or determined hereunder and to remedy the failure within reasonable time after notice specifying the failure is given to the Company by the State or if the alleged failure is contested by the Company and promptly submitted to arbitration within a reasonable time fixed by the arbitration award where the question is deed against the Company the arbitrator finding that there was a bona fide dispute and that the Company had not been dilatory in pursuing the arbitration then subject to the provisions of clause 16 hereof page 18 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule relating to delays the State may by notice to the Company given at any time thereafter determine this Agreement whereupon the rights of the Company hereunder and under any lease licence easement or right granted hereunder or pursuant thereto shall cease and determine but without prejudice to any liability on the part of the Company for any antecedent breach of or liability under

any of the provisions hereof. Reservation of harbour site 4 5 a At any time prior to the 31st December 1965 the Company may give notice to the State that it reasonably requires the reservation until the 31st December 1966 of an area or areas of Crown Land and or land the subject of a pastoral lease at or near Cape Preston for possible development by the Company for the plant site the Companys wharf and harbour and road and rail access thereto from the mining areas. b Until the 31st December 1965 or if such notice is given until the 31st December 1966 the State unless the Company otherwise agrees shall take all practicable administrative steps to prevent any development at Cape Preston which would be likely to interfere with the development by the Company of the plant site wharf harbour and road and rail access thereto under the terms of this Agreement. c If the Company should desire to establish the Companys wharf at Cape Preston it will consult with a company to be nominated by the State hereinafter called the nominated company and will not without the consent of the nominated company submit proposals in regard thereto without providing and ensuring therein i ii iii that a plant site suitable for a pelletising plant and ancillary facilities capable of producing not less than four million 4000000 tons of iron ore pellets for shipment from the Companys wharf remains available to the nominated company; that suitable road and rail access from the nominated companys mining areas to its plant site and from the plant site to the Companys wharf remains available to the nominated company; that the Companys wharf and associated facilities will be so constructed as to cater for the berthing of ships requiring at least fortytwo feet 42 of water and so as to be adequate to handle the outward shipment of an aggregate of at least ten million 10000000 tons of iron ore and iron ore pellets per annum and to make suitable provision for inward cargo As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 19 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement and except with the consent of the Minister the Company in developing the Cape Preston area will ensure that effect is given to the factors in this paragraph mentioned. d If no agreement is reached between the Company and the nominated company and if at any time after the 31st December 1966 the Company has not submitted its own full and acceptable proposals

to the State including the requirements of paragraph c of this subclause and the nominated company submits proposals to the Minister for the construction of a wharf and associated facilities at Cape Preston then subject to the remaining paragraphs of this subclause and provided this Agreement is still in force the Minister shall require that such proposals provide and ensure i ii iii that there remains available to the Company a plant site suitable for a pelletising plant and ancillary facilities capable of producing not less than four million 4000000 tons of iron ore pellets for shipment from the wharf to be constructed by the nominated company; that there remains available to the Company suitable road and rail access from the Companys mining areas to such plant site and from the plant site to the wharf of the nominated company; that the wharf and associated facilities of the nominated company will be so constructed as to cater for the berthing of ships requiring at least fortytwo feet 42 of water and subject to paragraph f of this subclause will be adequate to handle the outward shipment of an aggregate of at least ten million 10000000 tons of iron ore and iron ore pellets per annum and to make suitable provision for inward cargo. e The proposals of the nominated company insofar as they relate to the matters referred to in paragraph d of this subclause shall before approval by the Minister be submitted by him to the Company to enable it to make such representations thereon as it sees fit either to the Minister or to the nominated company as to requiring the nominated company to i extend or enlarge the wharf so as to be adequate to handle a greater capacity than ten million 10000000 tons per annum; ii make provision for the facilities associated with the wharf in excess of the facilities stated by the nominated company in its proposals as desired for its purposes and for the wharf to be so constructed and with such facilities as may be required to handle additional inward cargoes for the Company; page 20 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule but subject to the Company making arrangements which are mutually satisfactory with the nominated company for payment of the cost of such additional work. In the event of the Company and the nominated company being unable to agree on the basis for such payment the Minister shall determine the method of payment and the

necessary security. In the event of a dispute as to the cost of such additional work the matter shall be referred to arbitration. The Minister may require accordingly. f If either company demonstrates to the State that at Cape Preston it would not be reasonably practicable for the proposals to include the matters or all matters referred to in paragraphs c d and e as the case may be of this subclause the Minister shall either waive compliance with the whole or part of the matters or shall submit alternative proposals for an equitable sharing of the harbours capacity by both companies. The nominated company may accept the alternative proposals failing which the nominated company shall refer the matter to arbitration in which event the Company may be joined as a party to the arbitration. g If prior to the 31st December 1966 any company desires to submit proposals to the Minister for the establishment of a wharf at Onslow the Minister shall require it to first consult with the Company and that subject to paragraph j of this subclause such company does not without the consent of the Company submit proposals in regard thereto unless such proposals provide and ensure for the matters set out in paragraph h of this subclause. h If the Company should after the 31st December 1966 desire to establish the Companys wharf at Onslow it will consult with the nominated company and subject to paragraph j of this subclause will not without the consent of the nominated company submit proposals in regard thereto if the nominated company has previously submitted its own full and acceptable proposals to the State pursuant to an agreement with the State relating to the mining within the said State and shipment from Onslow of iron ore. If the nominated company has not so submitted proposals and no agreement is reached between the Company and the nominated company within three 3 months from the commencement of consultations the Company may submit proposals under clause 52 of this Agreement for the construction of a wharf and harbour at Onslow but subject to the remaining subclauses the Minister may require that any such proposals shall provide and ensure i that a plant site suitable for a pelletising plant and ancillary facilities capable of producing not less than four million 4000000 tons of iron ore pellets per annum for shipment from the wharf to be constructed by the Company As at

Agreement Act 1964 First Schedule Iron Ore Robe River Agreement remains available to the nominated company provided that this does not unduly prejudice the selection of a site by the Company; ii iii that suitable road and rail access from the nominated companys mining areas to such plant site and from the plant site to the Companys wharf remains available to the nominated company provided that this does not unduly prejudice the selection of road and rail access by the Company; that the Companys wharf and associated facilities will be so constructed that they will cater for the berthing of ships of forty thousand 40000 tons and also make provision for inward cargo required by the nominated company. i The Minister shall refer the Companys proposals under paragraph h before approval thereof to the nominated company to enable it to make such representations thereon as it sees fit to the Minister as to requiring the Company to i extend or enlarge the wharf; ii make provision for facilities associated with the Companys wharf in excess of the facilities stated by the Company in its proposals as desired by it for its purposes and for the wharf to be so constructed and with such facilities as may be required to handle additional inward cargoes for the nominated company; but subject to the Company making arrangements which are mutually satisfactory with the nominated company for payment for the cost of such additional work. In the event of the Company and the nominated company being unable to agree on the basis for such payment the Minister shall determine the method of payment and the necessary security. In the event of a dispute as to the cost of such additional work the matter shall be referred to arbitration. The Minister may require accordingly. j If either company demonstrates to the State that at Onslow it would not be reasonably practicable for the proposals to include all or any of the matters referred to in paragraphs h and i of this subclause the Minister shall either waive compliance with the whole or part of the matters or shall submit alternative proposals for an equitable sharing of the harbours capacity by both companies. The Company may accept the alternative proposals failing which the Company shall refer the matter to arbitration in which event the nominated company may be joined as a party to the arbitration. page 22 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River

Agreement Act 1964 First Schedule Consideration of other proposals under clause 52 4 6. 1 Within two 2 months after receipt of the detailed proposals of the Company in regard to any of the matters mentioned in clause 52 hereof the Minister shall give to the Company notice either of his approval of the proposals or of alterations desired thereto and in the latter case shall afford to the Company opportunity to consult with and to submit new proposals to the Minister. The Minister may make such reasonable alterations to or impose such reasonable conditions on the proposals or new proposals as the case may be as he shall think fit having regard to the circumstances including the overall development and use by others as well as the Company of the port and other facilities but the Minister shall in any notice to the Company disclose his reasons for any such alteration or condition. Within two 2 months of the receipt of the notice the Company may elect by notice to the State to refer to arbitration and within two 2 months thereafter shall refer to arbitration as hereinafter provided any dispute as to the reasonableness of any such alteration or condition. If by the award on arbitration the dispute is deed against the Company then subject to clause 53 hereof unless the Company within three 3 months after delivery of the award satisfies and obtains the approval of the Minister as to the matter or matters the subject of the arbitration this Agreement shall on the expiration of that period of three 3 months cease and determine save as provided in clause 10d hereof but if the question is deed in favour of the Company the decision will take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. Extension of time 4 7. submission to arbitration hereunder is hereby empowered upon application by either party hereto to grant any interim extension of time or date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of either or both parties hereunder and an award in favour of the Company may in the name of the Minister grant any further extension of time for that purpose. 1 The arbitrator arbitrators or umpire as the case may be of any 2 Notwithstanding that under clause 6 hereof any detailed proposals of the Company are approved by the State or the Minister or determined by arbitration award unless each and every such proposal and matter is so approved or determined by the 31st day of December

1965 or by such extended date if any as the Company shall be entitled to or shall be granted pursuant to the provisions hereof then at any time after the said 31st day of December 1965 or if any extension or extensions should be granted under clause 53 hereof or any As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 23 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement other provision of this Agreement then on or after the expiration of the last of such extensions the Minister may give to the Company twelve 12 months notice of intention to determine this Agreement and unless before the expiration of the said twelve 12 months period all the detailed proposals and matters are so approved or determined this Agreement shall cease and determine subject however to the provisions of clause 10d hereof.

Commencement date 4 3 Subject to the approval of the Minister or determination by arbitration as herein provided of each hand every of the detailed proposals and matters referred to in clause 52 hereof the date upon which the last of those proposals of the Company shall have been so approved or determined or the date upon which the Company gives notice to the Minister that it proposes to proceed with the works set out in clause 9 hereof whichever shall be the later shall be the commencement date for the purposes of this Agreement. 4 If under any arbitration under clause 6 hereof the dispute is deed against the Company and subsequently but before the commencement date this Agreement ceases and determines the State will not for a period of three 3 years after such determination enter into a contract with any other party for the mining transport and shipment of iron ore from the mining areas on terms more favourable on the whole to the other party than those which would have applied to the Company hereunder if the question had been determined in favour of the Company. Terms not more favourable 4 5 In deing whether for the purposes of clause 74 or clause 12 hereof the terms granted by the State to some company or party are not more favourable on the whole than those proposed by or available to the Company regard shall be had inter alia to all the obligations which would have continued to devolve on the Company had it proceeded with the works set out in clause 9 hereof including its obligations to mine transport by rail and ship iron ore pellets and restrictions relating thereto to pay rent additional rental and royalty and

also to the need for the other company or party to pay on a fair and reasonable basis for or for the use of property accruing to the State under paragraph e of clause 10 hereof and made available by the State to that company or party but also to any additional or equivalent obligations to the State assumed by that company or party. page 24 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule Phase 2. Obligations of State Mineral Lease 4 8. state shall a 1 As soon as conveniently may be after the commencement date the after application is made by the Company for a mineral lease of any part or parts not exceeding in total area three hundred 300 square miles and in the shape of a parallelogram or parallelograms of the mining areas in conformity with the Companys detailed proposals under clause 52 hereof as finally approved or determined cause any necessary survey to be made of the land so applied for the cost of which survey to the State will be recouped or repaid to the State by the Company on demand after completion of the survey and shall cause to be granted to the Company a mineral lease thereof for iron ore in the form of the Schedule hereto for a term which subject to the payment of rents and royalties hereinafter mentioned and to the performance and observance by the Company of its obligations under the mineral lease and otherwise under this Agreement shall be for a period of twentyone 21 years commencing from the commencement date with rights to successive renewals of twentyone 21 years upon the same terms and conditions but subject to earlier determination upon the cessation or determination of this Agreement PROVIDED HOWEVER that the Company may from time to time without abatement of any rent then paid or payable in advance surrender to the State all or any portion or portions of reasonable size and shape of the mineral lease; Under Companys proposals 4 b in accordance with the Companys proposals as finally approved or determined under clause 6 hereof and as required the State to accept obligations Lands 4 i grant to the Company in fee simple or for such terms or periods and on such terms and conditions including renewal rights as subject to the proposals as finally approved or determined as aforesaid shall be reasonable having regard to the requirements of the Company hereunder and to the overall development of the harbour and

access to and use by others of lands the subject of any grant to the Company and of services and facilities provided by the Company for nominal consideration townsite lots; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 25 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement at peppercorn rental special leases of Crown lands within the harbour area the townsites and the railway; and at rentals as prescribed by law or are otherwise reasonable leases rights mining tenements easements reserves and licenses in on or under Crown lands under the Mining Act the Jetties Act 1926 or under the provisions of the Land Act modified as in subclause 2 of this clause provided as the case may require as the Company reasonably requires for its works and operations hereunder including the construction or provision of the railway wharf roads airstrip water supplies and stone and soil for construction purposes; and Services and facilities 4 ii provide any services or facilities subject to the Companys bearing and paying the capital cost involved and reasonable charges for maintenance and operation except operation charges in respect of education hospital and police services and except where and to the extent that the State otherwise agrees subject to such terms and conditions as may be finally approved or determined as aforesaid PROVIDED THAT from and after the thirtieth anniversary of the export date the Company will in addition to the rentals already referred to in this paragraph pay to the State during the currency of this Agreement after such anniversary as aforesaid a rental which subject to its being payable by the Company to the State may from time to time at the option of the Company be payable in respect of such one or more of the special leases or other leases granted to the Company under this paragraph and remaining current as the Company may from time to time designate in a notice to the Minister equal to two shillings and sixpence 2s. 6d. per ton on all iron ore and iron ore concentrates and iron ore pellets in respect of which royalty is payable under clause 92j hereof in any financial year such additional rental to be paid within three 3 months after shipment sale or use or in the case of iron ore concentrates production as the case may be of the iron ore or iron ore concentrates or iron ore pellets; and page 26 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River

Agreement Act 1964 First Schedule Other rights 4 c on application by the Company cause to be granted to it such machinery and tailings leases including leases for the dumping of overburden and such other leases licenses reserves and tenements under the Mining Act or under the provisions of the Land Act modified as in subclause 2 of this clause provided as the Company may reasonably require and request for its purposes under this Agreement on or near the mineral lease. 2 For the purposes of subparagraph i of paragraph b and paragraph c of subclause 1 of this clause the Land Act shall be deemed to be modified by a the substitution for subsection 2 of section 45A of the following subsection 2 Upon the Governor signifying approval pursuant to subsection 1 of this section in respect of any such land the same may subject to this section be sold or leased; b c d e f the deletion of the proviso to section 116; the deletion of section 135; the deletion of section 143; the inclusion of a power to offer for sale or leasing land within or in the vicinity of any townsite notwithstanding that the townsite has not been constituted a townsite under section 10; and the inclusion of a power to offer for sale or grant leases or licenses for terms or periods and on such terms and conditions including renewal rights and in forms consistent with the provisions of this Agreement in lieu of for the terms or periods and upon the terms and conditions and in the forms referred to in the Act and upon application by the Company in forms consistent as aforesaid in lieu of in the forms referred to in the Act. 3 The provisions of subclause 2 of this clause shall not operate so as to prejudice the rights of the State to determine any lease license or other right or title in accordance with the other provisions of this Agreement. 4 The State further covenants with the Company that the State Noninterference with Companys rights 4 a shall not during the currency of this Agreement register any claim or grant any lease or other mining tenement under the Mining Act or otherwise by which any person other than the Company or an As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 27 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement associated company will obtain under the laws relating to mining or otherwise any rights to mine or take the natural substances other than petroleum as defined in the Petroleum Act 1936 within the mineral lease unless the Minister reasonably

determines that it is not likely to unduly prejudice or to interfere with the operations of the Company hereunder assuming the taking by the Company of all reasonable steps to avoid the interference;

No resumption 4 b subject to the performance by the Company of its obligations under this Agreement shall not during the currency hereof without the consent of the Company resume nor suffer nor permit to be resumed by any State instrumentality or by any local or other authority of the said State any of the works installations plant equipment or other property for the time being belonging to the Company and the subject of or used for the purposes of this Agreement nor any of the lands the subject of any lease or license granted to the Company in terms of this Agreement AND without such consent which shall not be unreasonably withheld the State will not create or grant or permit or suffer to be created or granted by any instrumentality or authority of the State as aforesaid any road rightofway or easement of any nature or kind whatsoever over or in respect of any such lands which may unduly prejudice or interfere with the Companys operations hereunder;

Labour requirements 4 c shall if so requested by the Company and so far as its powers and administrative arrangements permit use reasonable endeavours to assist the Company to obtain adequate and suitable labour for the construction and the carrying out of the works and operations referred to in this Agreement including suitable immigrants for that purpose; No discriminatory rates 4 d except as provided in this Agreement shall not impose nor permit nor authorise any of its agencies or instrumentalities or any local or other authority of the State to impose discriminatory taxes rates or charges of any nature whatsoever on or in respect of the titles property or other assets products materials or services used or produced by or through the operations of the Company in the conduct of the Companys business hereunder nor will the State take or permit to be taken by any such State authority any other

page 28 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule discriminatory action which would deprive the Company of full enjoyment of the rights granted and intended to be granted under this Agreement; Rights to other minerals 4 e shall where and to the extent reasonably practicable on application by the Company

from time to time grant or assist in obtaining the grant to the Company of prospecting rights and mining leases with respect to limestone dolomite and other minerals and substances reasonably required by the Company for its purposes under this Agreement; and Consents to improvements on leases 4 f shall as and when required by the Company but without prejudice to the foregoing provisions of this Agreement relating to the detailed proposals and matters referred to in clause 52 hereof consent in writing where and to the extent that the Minister considers to be reasonably justified to the Companys making improvements other than those required in clause 52 hereof for the purposes of this Agreement on the land comprised in any lease granted by the State to the Company pursuant to this Agreement PROVIDED THAT the Company shall also obtain any other consents legally required in relation to such improvements. 5 The Company shall not have any tenant rights in improvements made by the Company on the land comprised in any lease granted by the State to the Company pursuant to this Agreement in any case where pursuant to clause 10e hereof such improvements will remain or become the absolute property of the State. Phase 2. Obligations of the Company to construct 4 9. 1 The Company shall within four 4 years next following the commencement date or within such extended at period not exceeding a further two years as the Company may satisfy the Minister that the Company reasonably requires and the Minister approves and at a total cost of not less than thirtyfive million pounds 35000000 construct install provide and do all things necessary to enable it to mine from the mineral lease to transport by rail to the plant site pelletise and transport to the Companys wharf and to commence shipment therefrom in commercial quantities at an annual rate of not less than one million 1000000 tons of iron ore pellets and will within a further period of five 5 years increase the capacity of such plant to a minimum of 3000000 tons of iron ore pellets per annum and without lessening the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 29 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement generality of this provision the Company shall within the first mentioned period or extended period as the case may be On mining areas and plant site 4 a construct install and provide upon the mineral lease or plant site or in the vicinity thereof mining

plant and equipment crushing screening stockpiling and car loading plant and facilities power house workshop and other things of a design and capacity adequate to enable the Company to meet and discharge its obligations hereunder and under the iron ore pellet contracts and to mine handle load and deal with not less than three thousand 3000 tons of iron ore per diem such capacity to be built up progressively to not less than ten thousand 10000 tons of iron ore per diem within five 5 years next following the export date; To commence exports 4 b actually commence to mine transport by rail and ship from the Companys wharf iron ore pellets produced from iron ore from the mineral lease so that the average annual rate during the first two years shall not be less than one million 1000000 tons; To construct railway 4 c subject to the State having assured to the Company all necessary rights in or over Crown lands available for the purpose construct in a proper and workmanlike manner and in accordance with recognised standards of railways of a similar nature operating under similar conditions and along a route approved or determined under clause 6 hereof but subject to the provisions of the Public Works Act 1902 to the extent that they are applicable a four feet eight and onehalf inches 4 8 gauge railway with all necessary signalling switch and other gear and all proper or usual works from the mining areas to the plant site and will provide for crossing places and the running of such railway with sufficient and adequate locomotives freight cars and other railway stock and equipment to haul at least one million 1000000 tons of iron ore per annum to the Companys wharf or as required for the purposes of this Agreement; To make roads 4 d subject to the State having assured to the Company all necessary rights in or over Crown lands or reserves available for the purpose construct such new roads as the Company reasonably requires for page 30 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule its purposes hereunder of such widths with such materials gates crossings and passovers for cattle and for sheep and along such routes as the parties hereto shall mutually agree after discussion with the respective shire councils through whose districts any such roads may pass and subject to prior agreement with the appropriate controlling authority being a shire council or the Commissioner of

Main Roads as to terms and conditions the Company may at its own expense and risk except as otherwise so agreed upgrade or realign any existing road; To construct wharf 4 e construct the Companys wharf in accordance with plans and specifications for the construction thereof previously approved or determined under clause 6 hereof on the site previously approved or determined for the purpose; and To carry out proposals 4 f in accordance with the Companys proposals as finally approved or determined under clause 6 hereof and as require the Company to accept obligations i ii dredge the berth at the Companys wharf and the channel and approaches thereto and any necessary swinging basin; lay out and develop the townsites and provide adequate and suitable housing recreational and other facilities and services; iii construct and provide roads housing school water and power supplies and other amenities and services; and iv construct and provide other works if any including an airstrip. 2 Throughout the continuance of this Agreement the Company shall Operation of railway 4 a operate its railway in a safe and proper manner and where and to the extent that it can do so without unduly prejudicing or interfering with its operations hereunder allow crossing places for roads stock and other railways and transport the passengers and carry the freight of the State and of third parties on the railway subject to and in accordance with bylaws which shall include As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 31 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement provision for reasonable charges from time to time to be made altered and repealed as provided in subclause 3 of this clause and subject thereto or if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost of the railway to the Company PROVIDED THAT in relation to its use of the said railway the Company shall not be deemed to be a common carrier at common law or otherwise; Use of roads by others 4 b except to the extent that the Companys proposals as finally approved or determined under clause 6 hereof otherwise provide allow the public to use free of charge any roads constructed or upgraded under this clause PROVIDED THAT such use shall not unduly prejudice or interfere with the Companys operations hereunder; Compliance with laws 4 c in the construction operation maintenance and use

of any work installation plant machinery equipment service or facility provided or controlled by the Company comply with and observe the provisions hereof and subject thereto the laws for the time being in force in the said State; Maintenance 4 d at all times keep and maintain in good repair and working order and condition and where necessary replace all such works installations plant machinery and equipment and the railway wharf roads other than the public roads referred to in clause 10b hereof dredging and water and power supplies for the time being the subject of this Agreement; Shipment of and price for ore 4 e ship from the Companys wharf all iron ore mined from the mineral lease and sold and use its best endeavours to obtain therefor the best price possible having regard to market conditions from time to time prevailing PROVIDED THAT this paragraph shall not apply to iron ore used for the production of iron ore pellets or for the manufacture of iron or steel in any part of the said State lying north of the twentysixth parallel of latitude; page 32 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule Use of wharf and facilities 4 f subject to and in accordance with bylaws which shall include provision for reasonable charges from time to time to be made and altered as provided in subclause 3 of this clause and subject thereto or if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost thereof to the Company allow the State and third parties to use the Companys wharf and harbour installations wharf machinery and equipment and wharf and harbour services and facilities PROVIDED THAT such use shall not unduly prejudice or interfere with the Companys operations hereunder and that the entire control and all personnel for or in respect of such use shall be provided by or with the approval of the Company; Access through mining areas 4 g allow the State and third parties to have access with or without stock vehicles and rolling stock over the mineral lease by separate route road or railway PROVIDED THAT such access over shall not unduly prejudice or interfere with the Companys operations hereunder; Protection for inhabitants 4 h subject to and in accordance with bylaws which shall include provision for reasonable charges from time to time to be made and altered as provided in subclause 3 of this clause and subject thereto or

if no such bylaws are made or in force then upon reasonable terms and at reasonable charges having regard to the cost thereof to the Company allow the inhabitants for the time being of the port townsite being employees licensees or agents of the Company or persons engaged in providing a legitimate and normal service to or for the Company or their employees licensees or agents to make use of the water power recreational health and other services or facilities provided or controlled by the Company; Use of local labour and materials 4 i so far as reasonably and economically practicable use labour materials plant equipment and supplies available within the said State where it is not prejudicial to the interests of the Company so to do; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 33 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement Royalties 4 j pay to the State royalty on all iron ore or on iron ore pellets produced from iron ore from the mineral lease shipped or sold other than ore shipped solely for testing purposes or in the circumstances mentioned in subparagraph iv of this paragraph on iron ore concentrates produced from iron ore from the mineral lease or on other iron ore from the mineral lease used as mentioned in subparagraph iv of this paragraph as follows i ii iii iv v on direct shipping ore not being locally used ore at the rate of seven and one half percentum 7 of the f.o.b. revenue computed at the rate of exchange prevailing on date of receipt by the Company of the purchase price in respect of ore shipped or sold hereunder PROVIDED NEVERTHELESS that such royalty shall not be less than six shillings 6d per ton subject to subparagraph viii of this paragraph in respect of ore the subject of any shipment or sale; on fine ore not being locally used ore at the rate of three and three quarter percentum 3 of the f.o.b. revenue computed as aforesaid PROVIDED NEVERTHELESS that such royalty shall not be less than three shillings 3d per ton subject to subparagraph ix of this paragraph in respect of ore the subject of any shipment or sale; on fines not being locally used ore at the rate of one shilling and sixpence 16d per ton; on iron ore concentrates produced from locally used ore and on other locally used ore at the rate of one shilling and sixpence 16d per ton; on iron ore pellets produced in Western Australia north of the 26th parallel of latitude from iron ore with a combined average iron of less than 60 at the rate of a one

shilling 1d per ton for all iron ore pellets shipped or sold during year one to year fifteen both inclusive; page 34 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule b c one shilling and threepence 13d per ton for all iron ore pellets shipped or sold during year sixteen to year twentyfive both inclusive; one shilling and sixpence 16d per ton for all iron ore pellets shipped or sold after year twentyfive; on iron ore pellets produced in Western Australia north of the 26th parallel of latitude from iron ore with a combined average iron ore of 60 or over at the rate of one shilling and sixpence 16d per ton; on all other iron ore not being locally used ore at the rate of seven and one half per centum 7 of the f.o.b. revenue computed as aforesaid without any minimum royalty; for averaging purposes if the amount ascertained by multiplying the total tonnage of direct shipping ore shipped or sold and liable to royalty under subparagraph i of this paragraph in any financial year by six shillings 6d is less than the total royalty which would be payable in respect of that ore but for the operation of the proviso to that subparagraph then that proviso shall not apply in respect of direct shipping ore shipped or sold in that year and at the expiration of that year any necessary adjustments shall be made accordingly; for averaging purposes if the amount ascertained by multiplying the total tonnage of fine ore shipped or sold and liable to royalty under subparagraph ii of this paragraph in any financial year by three shillings 3d is less than the total royalty which would be payable in respect of that ore but for the operation of the proviso to that subparagraph then that proviso shall not apply in respect of fine ore shipped or sold in that year and at the expiration of that year any necessary adjustments shall be made accordingly; and the royalty at the rate of one shilling and sixpence 16d. per ton referred to in subparagraphs iii iv and vi of this paragraph shall be adjusted up or down as the case may be as at the first day of January 1969 and as at the beginning of every fifth year thereafter proportionately to vi vii viii ix x As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 35 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement xi the variation of the average of the prices payable for foundry pig iron f.o.b. Adelaide during the last full calendar year preceding the date at which the

adjustment is to be made as compared with the average of those prices during the calendar year 1963. the respective royalties referred to in subparagraph v of this paragraph shall be adjusted up or down as the case may be as at the first day of January 1970 and as at the beginning of every fifth year thereafter proportionately to the variation of the average of the prices payable for foundry pig iron f.o.b. Adelaide during the last full calendar year preceding the date at which the adjustment is to be made as compared with the average of those prices during the calendar year 1968. For the purposes of this paragraph locally used ore means iron ore other than iron ore from which iron ore pellets are produced which are subject to royalty under subparagraph v or vi of this paragraph used by the Company or an associated company both within the Commonwealth and within the limits referred to in paragraph o of this clause for the production of iron ore pellets or in an integrated iron and steel industry and includes iron ore used by any other person or company north of the twentysixth parallel of latitude in the said State for the production of iron ore pellets or in an integrated iron and steel industry; Payment of royalties 4 k within fourteen days after the quarter days the last days of March June September and December in each year commencing with the quarter day next following the first commercial shipment of iron ore or iron ore pellets from the Companys wharf furnish to the Minister a return showing the quantity of all iron ore or iron ore pellets or iron ore concentrates the subject of royalty hereunder and shipped sold used or produced as the case may be during the quarter immediately preceding the due date of the return and shall not later than two 2 months after such due date pay to the Minister the royalty payable in respect of iron ore pellets shipped or sold or iron ore concentrates produced or iron ore used and in respect of all iron ore shipped or sold pay to the Minister on account of the royalty payable hereunder a sum calculated on the basis of invoices or provisional invoices as the case may be page 36 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule rendered by the Company to the purchaser which invoices the Company shall render without delay simultaneously furnishing copies thereof to the Minister of such iron ore and shall from time to time in the next following appropriate return and

payment make by the return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. revenue realised in respect of the shipments shall have been ascertained; Rent for mineral lease 4 l by way of rent for the mineral lease pay to the State annually in advance a sum equal to three shillings and sixpence 36d per acre of the area for the time being the subject of the mineral lease commencing on and accruing from the commencement date PROVIDED THAT after the Company commences production in commercial quantities within the said State of iron ore pellets if and during the period that the total area for the time being comprised within the mineral lease i ii iii is not more than one hundred 100 square miles the annual rent shall be two shillings 2d per acre; is over one hundred 100 square miles but not more than one hundred and fifty 150 square miles the annual rent shall be two shillings and sixpence 26d per acre; and is over one hundred and fifty 150 square miles but not more than two hundred 200 square miles the annual rent shall be three shillings 3d per acre; Other rentals 4 m pay to the State the rental referred to in the proviso to clause 81 b hereof if and when such rental shall become payable; Inspection 4 n permit the Minister or his nominee to inspect at all reasonable times the books of account and records of the Company relative to any shipment or sale of iron ore or iron ore pellets hereunder and to take copies or extracts therefrom and for the purpose of determining the f.o.b. Revenue payable in respect of any shipment of iron ore or iron ore pellets hereunder the Company will take reasonable steps to satisfy the State either by certificate of a competent independent party acceptable to the State or otherwise to the Ministers reasonable satisfaction as to all relevant weights and analyses and will give due regard to any objection or As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 37 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement representation made by the Minister or his nominee as to any particular weight or assay of iron ore which may affect the amount of royalty payable hereunder; and Export to places outside the Commonwealth 4 o ensure that without the prior written approval of the Minister all iron ore shipped pursuant to this Agreement will be offloaded at a place outside the Commonwealth and if it fails so to ensure the Company will subject to the provisions of

this paragraph be in default hereunder. Where any such shipment is offloaded within the Commonwealth without such prior written approval the Company shall forthwith on becoming aware thereof give to the State notice of the fact and pay to the State in respect of the iron ore the subject of the shipment such further and additional rental calculated at a rate not exceeding ten shillings 10d per ton of the iron ore as the Minister shall demand without prejudice however to any other rights and remedies of the State hereunder arising from the breach by the Company of the provisions hereof. If ore is shipped in a vessel not owned by the Company or an associated company or any other company in which the Company has a controlling interest and such ore is offloaded in the Commonwealth the Company will not be or be deemed to be in default hereunder if it takes appropriate action to prevent a recurrence of such an offloading PROVIDED FURTHER that the foregoing provisions of this paragraph shall not apply in any case including any unforeseeable diversion of the vessel for necessary repairs or arising from force majeure or otherwise where the Company could not reasonably have been expected to take steps to prevent that particular offloading PROVIDED ALSO that the provisions of this paragraph shall not apply to iron ore pellets or iron and steel or steel manufacture by the Company or an associated company within the said State.

Bylaws 4 3 The Governor in Executive Council may upon recommendation by the Company make alter and repeal bylaws for the purpose of enabling the Company to fulfil its obligations under paragraphs a b and f of subclause 2 of this clause and unless and until the port townsite is declared a townsite pursuant to section 10 of the Land Act under paragraph h of subclause 2 of this clause and under clause 10a hereof upon terms and subject to conditions including terms and conditions as to user charging and page 38 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule limitation of the liability of the Company as set out in such bylaws consistent with the provisions hereof. Should the State at any time consider that any bylaw made hereunder has as a result of altered circumstances become unreasonable or inapplicable then the Company shall recommend such alteration or repeal thereof as the State may reasonably require or in the event of there being

any dispute as to the reasonableness of such requirement then as may be decided by arbitration hereunder.

Mutual covenants 4 10. The parties hereto covenant and agree with each other as follows

Water and power supplies 4 a that subject to and in accordance with proposals approved or determined under clause 6 hereof the Company for its purposes hereunder and for domestic and other purposes in relation to a townsite may to the extent determined by the Minister but notwithstanding any Act bore for water construct catchment areas store by dams or otherwise take and charge for water from any Crown lands available for the purpose and generate transmit supply and charge for electrical energy and the Company shall have all such powers and authorities with respect to water and electrical energy as are determined by the Minister for the purposes hereof which may include the powers of a water board under the Water Board Act 1904 and of a supply authority under the Electricity Act 1945. The State acknowledges that large quantities of potable water up to four million 4000000 gallons a day will be required by the Company for its operations under this Agreement. The Company proposes to sink bores in the Fortescue area of the said State for the purposes of ascertaining and testing the availability of supplies. The Company will on request by the State from time to time give to the State particulars of the number depth and kind of bores sunk by it the precise situation of each and the quantities and quality of water obtained therefrom and will notify the State when supplies sufficient for the Companys purposes aforesaid have been proved. After such notice has been given the State will not itself and will not authorise any other to sink any new bore in any position which in the opinion of the State may injuriously affect the supply of water from the bore or bores sunk and required by the Company without making available to the Company adequate alternative supplies. The Company however shall not bore for or store water in any position which in the opinion of the State may

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Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement injuriously affect any existing water supply of the lessee or occupier of any land;

Use of public roads 4 b that the Company may use any public roads which may from time to time exist in the area of its operations hereunder for the purpose of transportation of goods and

materials in connection with such operations PROVIDED NEVERTHELESS that the Company shall on demand pay to the State or the shire council concerned the cost of making good any damage to such roads occasioned by i ii such user by the Company prior to the export date; and user by the Company for the transportation of iron ore won from the mineral lease; Upgrading of existing roads 4 c that the State will at the request and cost of the Company except where and to the extent that the Commissioner of Main Roads agrees to bear the whole or part of the cost involved widen upgrade or realign any public road over which the State has control subject to the prior approval of the said Commissioner to the proposed work; Effect on determination of Agreement 4 d that on the cessation or determination of this Agreement i except as otherwise agreed by the Minister the rights of the Company to in or under this agreement and the rights of the Company or of any assignee of the Company or any mortgagee to in or under the mineral lease and any other lease license easement or right granted hereunder or pursuant hereto shall thereupon cease and determine but without prejudice to the liability of either of the parties hereto in respect of any antecedent breach or default under this Agreement or in respect of any indemnity given hereunder AND the Company will without further consideration but otherwise at the request and cost of the State transfer or surrender to the State or the Crown all land the subject of any Crown Grant issued under the Land Act pursuant to this Agreement; page 40 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule ii iii the Company shall forthwith pay to the State all moneys which may then have become payable or accrued due; and save as aforesaid and as provided in clause 74 hereof and in the next following paragraph neither of the parties hereto shall have any claim against another of them with respect to any matter or thing in or arising out of this Agreement; Effect of determination of lease 4 e that on the cessation or determination of any lease license or easement granted hereunder by the State to the Company or except as otherwise agreed by the Minister to an associated company or other assignee of the Company under clause 13 hereof of land for the plant site or the Companys wharf for any installation within the harbour for the Companys railway or for housing at the port or port

townsite the improvements and things erected on the relevant land and provided for in connection therewith other than plant and equipment shall remain or become the absolute property of the State without compensation and freed and discharged from all mortgages and encumbrances and the Company will do and execute such documents and things including surrenders as the State may reasonably require to give effect to this provision. In the event of the Company immediately prior to such expiration or determination or subsequent thereto deing to remove its locomotives rolling stock plant and equipment or any of them from any land it shall not do so without first notifying the State in writing of its decision and thereby granting to the State the right or option exercisable within three months thereafter to purchase at valuation in situ the said plant and equipment or any of them. Such valuation shall be mutually agreed or in default of agreement shall be made by such competent valuer as the parties may appoint or failing agreement as to such appointment then by two competent valuers one to be appointed by each party or by an umpire appointed by such valuers should they fail to agree; No charge for the handling of cargoes 4 f that subject to the Company at its own expense providing all works buildings dredging and things of a capital nature reasonably required for its operations hereunder at or in the vicinity of the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 41 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement harbour no charge or levy shall be made by the State or by any State authority in relation to the loading of outward or the unloading of inward cargoes from the Companys wharf whether such cargoes shall be the property of the Company or of any other person or corporation but the State accepts no obligation to undertake such loading or unloading and may make the usual charges from time to time prevailing in respect of services rendered by the State or by any State agency or instrumentality or other local or other authority of the State and may charge vessels using the Companys wharf ordinary light conservancy and tonnage dues; Zoning 4 g that the mineral lease and the lands the subject of any Crown Grant lease license or easement granted to the Company under this Agreement shall be and remain zoned for use or otherwise protected during the currency of this Agreement so that the operations of the Company hereunder

may be undertaken and carried out thereon without any interference or interruption by the State by any State agency or instrumentality or by any local or other authority of the State on the ground that such operations are contrary to any zoning bylaw or regulation; Rentals and evictions 4 h that any State legislation for the time being in force in the said State relating to the fixation of rentals shall not apply to any houses belonging to the Company in any townsite and that in relation to each such house the Company shall have the right to include as a condition of its letting thereof that the Company may take proceedings for eviction of the occupant if the latter shall fail to abide by and observe the terms and conditions of occupancy or if the occupant shall cease to be employed by the Company; Labour conditions 4 i that during the currency of this Agreement and subject to compliance with its obligations hereunder the Company shall not be required to comply with the labour conditions imposed by or under the Mining Act in regard to the mineral lease; Subcontracting 4 j that without affecting the liabilities of the parties under this Agreement either party shall have the right from time to time to page 42 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule entrust to third parties the carrying out of any portions of the operations which it is authorised or obliged to carry out hereunder; Rating 4 k that notwithstanding the provisions of any Act or anything done or purported to be done under any Act the valuation of all lands whether of a freehold or leasehold nature the subject of this Agreement except as to any part upon which a permanent residence shall be erected or which is occupied in connection therewith shall for rating purposes be deemed to be on the unimproved value thereof and no such lands shall be subject to any discriminatory rate; Determination of Agreement 4 l that in any of the following events namely if the Company shall make default in the due performance or observance of any of the covenants or obligations to the State herein or in any lease sublease license or other title or document granted or assigned under this Agreement on its part to be performed or observed and shall fail to remedy that default within reasonable time after notice specifying the default is given to it by the State or if the alleged default is contested by the Company and promptly submitted to arbitration within a

reasonable time fixed by the arbitration award where the question is decided against the Company the arbitrator finding that there was a bona fide dispute and that the Company had not been dilatory in pursuing the arbitration or if the Company shall abandon or repudiate its operations under this Agreement or shall go into liquidation other than a voluntary liquidation for the purpose of reconstruction then and in any of such events the State may by notice to the Company determine this Agreement and the rights of the Company hereunder and under any lease license easement or right granted hereunder or pursuant hereto or if the Company shall surrender the entire mineral lease as permitted under clause 8.1a this Agreement and the rights of the Company hereunder and under any lease license easement or right granted hereunder or pursuant hereto shall thereupon determine; PROVIDED HOWEVER that if the Company shall fail to remedy any default after such notice or within the time fixed by the arbitration award as aforesaid the State instead of determining this Agreement as aforesaid because of such default may itself remedy such default or cause the same to be remedied for which purpose As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 43 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement the State by agents workmen or otherwise shall have full power to enter upon lands occupied by the Company and to make use of all plant machinery equipment and installations thereon and the costs and expenses incurred by the State in remedying or causing to be remedied such default shall be a debt payable by the Company to the State on demand; and m that i for the purposes of determining whether and the extent to which A B the Company is liable to any person or body corporate other than the State; or an action is maintainable by any such person or body corporate in respect of the death or injury of any person or damage to any property arising out of the use of any of the roads for the maintenance of which the Company is responsible hereunder and for no other purpose the Company shall be deemed to be a municipality and the said roads shall be deemed to be streets under the care control and management of the Company; and ii for the purposes of this paragraph the terms municipality street and care control and management shall have the meanings which they respectively have in the Local Government Act 1960. Alteration

of works 4 If at any time the State finds it necessary to request the Company to 11. alter the situation of any of the installations or other works other than those on the plant site and other than the Companys wharf erected constructed or provided hereunder and gives to the Company notice of the request the Company shall within a reasonable time after its receipt of the notice but at the expense in all things including increased operating costs and loss of profits if any of the State unless the alteration is rendered necessary by reason of a breach by the Company of any of its obligations hereunder alter the situation thereof accordingly. Indemnity 4 12. The Company will indemnify and keep indemnified the State and its servants agents and contractors in respect of all actions suits claims demands page 44 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule or costs of third parties arising out of or in connection with the construction maintenance or use by the Company or its servants agents contractors or assignees of the Companys wharf railway or other works or services the subject of this Agreement or the plant apparatus or equipment installed in connection therewith. Assignment 4 13. 1 time Subject to the provisions of this clause the Company may at any a b assign mortgage charge sublet or dispose of to an associated company as of right and to any other company or person with the consent in writing of the Minister the whole or any part of the rights of the Company hereunder including its rights to or as the holder of any lease license easement grant or other title and of the obligations of the Company hereunder; and appoint as of right an associated company or with the consent in writing of the Minister any other company or person to exercise all or any of the powers functions and authorities which are or may be conferred on the Company hereunder subject however to the assignee or as the case may be the appointee executing in favour of the State a deed of covenant in a form to be approved by the Minister to comply with observe and perform the provisions hereof on the part of the Company to be complied with observed or performed in regard to the matter or matters so assigned or as the case may be the subject of the appointment. 2 Notwithstanding anything contained in or anything done under or pursuant to subclause 1 of this clause the Company shall at all times during the currency of this

Agreement be and remain liable for the due and punctual performance and observance of all the covenants and agreements on its part contained herein and in any lease license easement grant or other title the subject of an assignment under the said subclause 1. Variation 4 14. writing add to cancel or vary all or any of the provisions of this Agreement or of any lease license easement or right granted hereunder or pursuant hereto for the purpose of implementing or facilitating the carrying out of such provisions or for the purpose of facilitating the carrying out of some separate part or parts of the Companys operations hereunder by an associated company as a separate 1 The parties hereto may from time to time by mutual agreement in As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 45 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement and distinct operation or for the establishment or development of any industry making use of the minerals within the mineral lease or such of the Companys works installations services or facilities the subject of this Agreement as shall have been provided by the Company in the course of work done hereunder. 2 Notwithstanding the provisions of subclause 1 of this clause the Minister may with the consent of the Company from time to time add to cancel or vary any right or obligation relating to the works set out in Clause 9 hereof to the extent that the addition cancellation or variation implements or facilitates the method of achieving any of the purposes of the export of iron ore or iron ore pellets produced from iron ore from the mining areas. 3 Notwithstanding the foregoing provisions of this clause the Minister may from time to time approve variations or require reasonable variations in the detailed proposals relating to any railway or harbour site and/or port facilities or dredging programme or townsite or town planning or any other facilities or services or other plans specifications or proposals which may have been approved pursuant to this Agreement and in considering such variations shall have regard to any changes consequent upon proposals for joint user or joint construction or both of any such works facilities or services and other relevant factors arising after the date hereof. 4 The Company shall be entitled at any time and from time to time with the prior approval in writing of the Minister to enter into an agreement with any third party for the joint construction maintenance and user or for the joint user

only of any work constructed or agreed to be constructed by the Company pursuant to the terms of this Agreement or by such other party pursuant to any agreement entered into by it with the State and in any such event any amount expended in or contributed to the cost of such construction by the Company shall for the purpose of the calculation of the said sum of thirtyfive million pounds agreed to be expended by the Company under Clause 9 hereof so long as the pelletising plant capacity stipulated hereunder and the processing capacity stipulated under the other agreement of each and every category of material shall not be reduced and provided such construction is part of the constructions to which the said sum of thirtyfive million pounds relates be taken and accepted as an amount equal to the total amount expended whether by the Company or the said third party or by them jointly in the construction of such work. 5 When any agreement entered into by the Company with some other company or person results in that other company or person discharging all or any of the obligations undertaken by the Company under this Agreement or renders it unnecessary for the Company to discharge any obligation undertaken page 46 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule 1 On the request by the Company the State shall make by it hereunder the Minister will discharge or temporarily relieve the Company from such part of its said obligations as is reasonable having regard to the extent of and period for which the other company or person actually effects the discharge of those obligations. Export license 4 15. representations to the Commonwealth for the grant to the Company of a license or licenses under Commonwealth law for the export of iron ore or iron ore pellets in such quantities and at such rate or rates as shall be reasonable having regard to the terms of this Agreement the capabilities of the Company and to maximum tonnages of iron ore or iron ore pellets for the time being permitted by the Commonwealth for export from the said State and in a manner or terms not less favourable to the Company except as to rate or quantity than the State has given or intends to give in relation to such a license or licenses to any other exporter of iron ore or iron ore pellets from the said State. 2 If at any time the Commonwealth limits by export license the total permissible tonnage of iron ore or iron ore pellets

as the case may be for export from the said State then the Company will at the request of the State and within three 3 months of such request inform the State whether or not it intends to export to the limit of the tonnage permitted to it under Commonwealth licenses in respect of the financial year next following and if it does not so intend will cooperate with the State in making representation to the Commonwealth with a view to some other producer in the said State being licensed by the Commonwealth to export such of the tonnage permitted by the Commonwealth in respect of that year as the Company does not require and such other producer may require. Such procedure shall continue to be followed year by year during such time as the Commonwealth limits by export license the total permissible tonnage of iron ore or iron ore pellets as the case may be for export from the said State. 3 The Company shall be in default hereunder if at any time it fails to obtain any license or licenses under Commonwealth law for the export of iron ore or iron ore pellets as may be necessary for the purpose of enabling the Company to fulfil its obligations hereunder or if any such license is withdrawn or suspended by the Commonwealth and such failure to obtain or such withdrawal or suspension as the case may be is due to some act or default by the Company or to the Company not being bona fide in its application to the Commonwealth or otherwise having failed to use its best endeavours to have the license granted or restored as the case may be but save as aforesaid if at any time any necessary license is not granted or any license granted to the Company As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 47 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement shall be withdrawn or suspended by the Commonwealth and so that as a result thereof the Company is not for the time being permitted to export at least the tonnage it has undertaken with the State it will export then the Company shall not be obliged to export the tonnage not so permitted until such time as it is so permitted and thereafter it will export the tonnage it has undertaken with the State it will export. The State shall at all times be entitled to apply on behalf of the Company and is hereby authorised by the Company so to do for any license or licenses under Commonwealth law for the export of iron ore or iron ore pellets as may from time to time be necessary for the purposes of this Agreement. Delays 4

16. This Agreement shall be deemed to be made subject to any delays in the performance of obligations under this Agreement and to the temporary suspension of continuing obligations hereunder which may be occasioned by or arise from circumstances beyond the power and control of the party responsible for the performance of such obligations including delays or any such temporary suspension as aforesaid caused by or arising from Act of God force majeure floods storms tempests washaways fire unless caused by the actual fault or privity of the Company act of war act of public enemies riots civil commotions strikes lockout stoppages restraint of labour or other similar acts whether partial or general shortages of labour or essential materials reasonable failure to secure contractors delays of contractors and inability common in the iron ore pellets export industry to profitably sell iron ore pellets or factors due to overall world economic conditions or factors which could not reasonably have been foreseen PROVIDED ALWAYS that the party whose performance of obligations is affected by any of the said causes shall minimise the effect of the said causes as soon as possible after their occurrence. Power to extend periods 4 17. Notwithstanding any provision hereof the Minister may at the request of the Company from time to time extend any period or date referred to in this Agreement for such period or to such later date as the Minister thinks fit and the extended period or later date when advised to the Company by notice from the Minister shall be deemed for all purposes hereof substituted for the period or date so extended. Arbitration 4 18. Any dispute or difference between the parties arising out of or in connection with this Agreement or any agreed amendment or variation thereof or agreed addition thereto or as to the construction of this Agreement or any page 48 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule such amendment variation or addition or as to the rights duties or liabilities of either party thereunder or as to any matter to be agreed upon between the parties under this Agreement shall in default of agreement between the parties and in the absence of any provision in this Agreement to the contrary be referred to and settled by arbitration under the provisions of the Arbitration Act 1895. Notices 4 19. Any notice consent or other writing authorised

or required by this Agreement to be given or sent shall be deemed to have been duly given or sent by the State if signed by the Minister or by any senior officer of the Civil Service of the said State acting by the direction of the Minister and forwarded by prepaid post to the Company at its registered office for the time being in the said State or other address of which such Company has given the State prior notice and by the Company if signed on its behalf by a director manager or secretary of the Company or by any person or persons authorised by the Company in that behalf or by its solicitors as notified to the State from time to time and forwarded by prepaid post to the Minister and any such notice consent or writing shall be deemed to have been duly given or sent on the day on which it would be delivered in the ordinary course of post. Exemption from stamp duty 4

20. operation of this clause would or might be chargeable on 1 The State shall exempt from any stamp duty which but for the a b c d this Agreement; any instrument executed by the State pursuant to this Agreement granting to or in favour of the Company or any permitted assignee of the Company any tenement lease easement license or other right or interest; any assignment sublease or disposition other than by way of mortgage or charge or any appointment made in conformity with the provisions of subclause 1 of clause 13 hereof; and any assignment sublease or disposition other than by way of mortgage or charge or any appointment to or in favour of the Company or an associated company of any interest right obligation power function or authority which has already been the subject of an assignment sublease disposition or appointment executed pursuant to subclause 1 of clause 13 hereof; PROVIDED THAT this clause shall not apply to any instrument or other document executed or made more than seven years from the date hereof. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 49 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement 2 If prior to the date on which the Bill referred to in clause 2 b hereof to ratify this Agreement is passed as an Act stamp duty has been assessed and paid on any instrument or other document referred to in subclause 1 of this clause the State when such Bill is passed as an Act shall on demand refund any stamp duty paid on any such instrument or other document to the person who paid the same. Interpretation 4 21. This Agreement

shall be interpreted according to the law for the time being in force in the said State. SCHEDULE
WESTERN AUSTRALIA IRON ORE CLEVELANDCLIFFS AGREEMENT ACT 1964 MINERAL
LEASE Lease No. Goldfields ELIZABETH
THE SECOND by the Grace of God of the United Kingdom Australia and Her other Realms and
Territories Queen Head of the Commonwealth Defender of the Faith TO ALL TO WHOM THESE
PRESENTS shall come GREETINGS KNOW YE that WHEREAS by an Agreement made the day of
1964 between the State of Western Australia of the one part and Basic Materials Pty. Limited
hereinafter called the Company which expression will include the successors and assigns of the
Company including where the context so admits the assignees of the Company under clause 13 of
the said Agreement of the other part the said State agreed to grant to the Company a mineral lease
of portion or portions of the lands referred in the said Agreement as the mining areas AND
WHEREAS the said Agreement was ratified by the Iron Ore ClevelandCliffs Agreement Act 1964
which said Act inter alia authorised the grant of a mineral lease to the Company NOW WE in
consideration of the rents and royalties reserved by and of the provisions of the said Agreement and
in pursuance of the said Act DO BY THESE PRESENTS GRANT AND DEMISE unto the Company
subject to the said provisions ALL THOSE pieces and parcels of land situated in the Goldfields
containing by admeasurement be the same more or less and particularly described and delineated
on the plan in the Schedule hereto and all those mines veins seams lodes and deposits of iron ore
page 50 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe
River Agreement Iron Ore Robe River Agreement Act 1964 First Schedule in on or under the said
land hereinafter called the said mine together with all rights liberties easements advantages and
appurtenances thereto belonging or appertaining to a lessee of a mineral lease under the Mining Act
1904 including all amendments thereof for the time being in force and all regulations made
thereunder for the time being in force which Act and regulations are hereinafter referred to as the
Mining Act or to which the Company is entitled under the said Agreement TO HOLD the said land
and mine and all and singular the premises hereby demised for the full term of twentyone years from

the day of 19 with the right to renew the same from time to time for further periods each of twentyone years as provided in but subject to the said Agreement for the purposes but upon and subject to the terms covenants and conditions set out in the said Agreement and to the Mining Act as modified by the said Agreement YIELDING and paying therefor the rent and royalties as set out in the said Agreement. AND WE do hereby declare that this lease is subject to the observance and performance by the Company of the following covenants and conditions that is to say 1. 2. The Company shall and will use the land bona fide exclusively for the purposes of the said Agreement. Subject to the provisions of the said Agreement the Company shall and will observe perform and carry out the provisions of the Mines Regulation Act 1946 and all amendments thereof for the time being in force and the regulations for the time being in force made thereunder and subject to and also as modified by the said Agreement the Mining Act so far as the same affect or have reference to this lease. PROVIDED THAT this lease and any renewal thereof shall not be determined or forfeited otherwise than under and in accordance with the provisions of the said Agreement. PROVIDED FURTHER that all mineral oil on or below the surface of the demised land is reserved to Her Majesty with the right to Her Majesty or any person claiming under her or lawfully authorised in that behalf to have access to the demised land for the purpose of searching for and for the operations of obtaining mineral oil in any part of the land under the provisions of the Petroleum Act 1936. IN WITNESS whereof we have caused our Minister for Mines to affix his seal and set his hand hereto at Perth in our said State of Western Australia and the common seal of the Company has been affixed hereto this day of 19 . As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 51 Iron Ore Robe River Agreement Act 1964 First Schedule Iron Ore Robe River Agreement THE SCHEDULE ABOVE REFERRED TO IN WITNESS WHEREOF THE HONOURABLE DAVID BRAND M.L.A. has hereunto set his hand and seal and the COMMON SEAL of the Company has hereunto been affixed the day and year first hereinbefore mentioned. SIGNED SEALED AND DELIVERED by the said THE HONOURABLE DAVID BRAND M.L.A. in the presence of DAVID BRAND [L.S.] C. W. COURT Minister for Industrial Development ARTHUR

GRIFFITH Minister for Mines THE COMMON SEAL OF BASIC MATERIALS PTY. LIMITED was hereunto affixed in the presence of [C.S.] W. E. DOHNAL Director. J. H. WILLIAMS Secretary. page 52 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement Second Schedule First variation agreement [Heading inserted No. 35 of 1970 s. 7; amended No. 19 of 2010 s. 4.] [s. 2] AN AGREEMENT made the 12th day of May One thousand nine hundred and seventy BETWEEN THE HONOURABLE SIR DAVID BRAND K.C.M.G. M.L.A. Premier and Treasurer of the State of Western Australia acting for and on behalf of the Government of the said State and instrumentalities thereof from time to time hereinafter called the State of the one part and CLIFFS INTERNATIONAL INC. a limited company incorporated under the laws of the State of Ohio one of the United States of America and registered in the State of Western Australia under the provisions of the Companies Act 1961 of the said State and having its registered office situate at 84 Saint Georges Terrace Perth in the said State hereinafter called the Company of the other part. WHEREAS a By an agreement under seal dated the 18th day of November One thousand nine hundred and sixtyfour made between the State of the one part and Basic Materials Pty. Limited hereinafter called Basic of the other part which agreement was approved by and is scheduled to the Iron Ore ClevelandCliffs Agreement Act 1964 and is hereinafter referred to as the Agreement Basic acquired upon the terms and conditions set forth in the agreement certain rights interests and benefits and assumed certain obligations with respect to the exploration for and development of specified iron ore deposits and the mining transportation processing pelletising and shipment of iron ore therefrom. b By virtue of various agreements under seal the Company is now entitled to all the right title interest claim and demand whatsoever of Basic in and under the Agreement and by virtue of deed of covenant with the State has assumed the obligations of Basic thereunder c The State and The Broken Hill Proprietary Company Limited which company is hereinafter referred to as Broken Hill have entered into an agreement which agreement was approved by and is scheduled to the Iron Ore The Broken Hill Proprietary As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 53

Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement Company Limited Agreement Act 1964 and is hereinafter referred to as the Broken Hill Agreement for the mining by that company of iron ore in specified areas and for the establishment by that company of certain port and railway facilities to be used for the transportation of such iron ore and for the construction and establishment within the said State of plant for the secondary processing of iron ore and with regard to other matters d By assignment and deed of covenant made and given pursuant to Clause 27 of the Broken Hill Agreement the rights and obligations of Broken Hill arising under that agreement are now the rights and obligations of Dampier Mining Company Limited hereinafter referred to as Dampier. e The areas covered by the Agreement and the Broken Hill Agreement are adjacent and the Company and Dampier have now entered into an agreement hereinafter referred to as the Companies Agreement which provides for various consultation and cooperation between them and subject to any necessary consents of the State for i ii iii iv Dampier to make available for use by the Company iron ore from the areas covered by the Broken Hill Agreement of an amount of up to 150000000 tons or such greater amount that the terms of the Companies Agreement may oblige it to supply; The company to make available for purchase by Dampier in accordance with the Companies Agreement any iron ore that Dampier may require up to an amount of 2000000 tons per annum or such amount as the Companies may agree; a right to Dampier to purchase part of the railway facilities and/or part or whole of the port facilities to be provided by that Company pursuant to its obligations under the Agreement; and possible additional pelletising facilities at Cape Lambert to be constructed by Dampier or the Company or jointly by Dampier and the Company. f The State the Company and Dampier have now agreed that Cape Lambert is a more desirable port site for the initial development of page 54 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement the deposits covered by the Agreement and the Broken Hill Agreement than those considered earlier and the Company has already submitted proposals for the development of certain facilities at Cape Lambert. g In view of the Companies

Agreement it is desirable that there should be some addition to the various rights and obligations of the parties created by the Agreement and by the Broken Hill Agreement and that certain additional provisions be included to facilitate the carrying out of the Agreement by the joint venture proposed to be established by the Company and referred to in the Companies Agreement. NOW THIS AGREEMENT WITNESSETH This agreement except for this clause shall have no force or effect and 1. shall not be binding upon the parties until it is approved by an Act of the Parliament of Western Australia. 2. If an Act to ratify this agreement is passed by the Parliament of the said State the provisions of this agreement shall take effect as though the same had been enacted by the ratifying Act and notwithstanding any Act or law to the contrary the State and the Minister shall for the purpose of implementing this agreement have all the powers discretions and authorities conferred on them respectively by the Agreement for the purpose of implementing that agreement. The Agreement is added to and varied as hereinafter provided and the 3. Agreement shall be read and construed accordingly. 4. The Agreement is amended as follows 1 Clause 1 is amended by a adding after the definition Companys wharf a definition Dampier as follows means Dampier Mining Company Limited and includes the Company mentioned in the agreement approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and any successor or assignee of that Company permitted under that Agreement; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 55 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement b by deleting the words Cape Preston in the definitions of harbour and plant site and substituting therefor the words Cape Lambert; c by adding to the definition mineral lease after the word includes in the second line the words the sublease of any area of a mineral lease sublet to the Company by Dampier and and by substituting for the word thereof in the last line the words of such lease or sublease; d by adding to the definition mining areas the words and also any area within the mineral lease and also the areas the subject of Temporary Reserves 4269H to 4273H both inclusive reserved under section 276 of the Mining Act; e by adding after the definition said State a definition secondary processing as follows means concentration or other beneficiation of

iron ore other than by crushing or screening and includes thermal electrostatic magnetic and gravity processing and agglomeration pelletisation or comparable changes in the physical character of iron ore. 2 Clause 5 is amended by deleting subclause 5. 3 Clause 8 is amended by adding to paragraph a of subclause 1 as follows i in the fifth line after the words mining areas the following other than the mining areas included in the sublease referred to in the definition of mineral lease and ii by changing the word thereof in the thirteenth line to the following of the lands so applied for notwithstanding the survey in respect thereof has not been completed. page 56 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement b inserting before the existing subparagraph ii of paragraph b of subclause 1 a new subparagraph as follows ii on application by the Company include in the area of any lease to be granted to the Company at Cape Lambert for the purposes hereof adequate provision for a the development of such facilities at Cape Lambert as Dampier may require in connection with the production transportation processing and shipment of iron ore produced pursuant to the agreement approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964; and b the expansion of any proposed iron ore pellet plant facilities to meet any requirements for increased production therefrom as may be required for Dampier; and and renumbering the existing subparagraph ii accordingly. c adding to paragraph b of subclause 1 in the last line after the word pellets the words PROVIDED FURTHER that additional rental will be payable pursuant to this paragraph in respect of iron ore sold to Dampier as if such iron ore were produced under a mineral lease granted pursuant to the agreement approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964. d adding two new paragraphs to subclause 1 thereof as follows d All leases rights mining tenements easements reserves and licenses granted under the provisions of this subclause may be so granted notwithstanding the survey in respect thereof has not been completed; e Notwithstanding the provisions of Section 82 of the Mining Act and of regulations 192 and 193 made thereunder and of Section 81D of the Transfer of Land As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 57 Iron Ore Robe River

Agreement Act 1964 Second Schedule First variation agreement Act 1893 and Section 143 of the Land Act insofar as the same or any of them may apply a no assignment mortgage charge sublease or disposition made or given pursuant to Clause 13 hereof of or over any lease sublease license reserve or tenement granted hereunder or pursuant hereto by the Company or any assignee or appointee who has executed and is for the time being bound by deed of covenant made pursuant to Clause 13 hereof and b no transfer assignment mortgage or sublease made or given in exercise of any power contained in any such mortgage or charge shall require any approval or consent other than such consent as may be necessary under Clause 13 of the Agreement and no equitable mortgage or charge shall be rendered ineffectual by the absence of any approval or consent otherwise than as required by Clause 13 hereof or because the same is not registered under the provisions of the Mining Act. e inserting after the word provisions in the first line of subclause 3 the words of paragraph e of subclause 1 of this clause and the provisions. f adding a new paragraph after paragraph f of subclause 4 as follows g i shall permit Dampier to sublet to the Company the whole or any part of any mineral lease granted pursuant to the agreements approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and the Iron Ore Dampier Mining Company Limited Agreement Act 1969; ii shall in the event of the termination of any mineral lease subleased in whole or in part to the Company by Dampier grant to the page 58 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement Company a mineral lease for the unexpired term of the sublease covering the same mining areas and on the same terms as were applicable under the sublease except that royalties shall be payable at the rates provided for in this Agreement. PROVIDED THAT any sublease referred to in subparagraph i and any mineral lease granted to the Company pursuant to subparagraph ii shall be included in the definition of mineral lease in Clause 1 of this agreement and shall be subject to the provisions of Clause 13 and paragraph e of subclause 1 of Clause 8. g adding a subclause as follows 6 No fee simple lease sublease license or other title or right granted or assigned under or pursuant to this Agreement and no chattel belonging to or

owned jointly or in individual shares by the Company and an associated company shall be subject to or capable of partition otherwise than by agreement including partition under the Property Law Act 1969 or under any order of any court of competent jurisdiction made under that Act or otherwise or be subject to the making of an order for sale under the said Act. 4 Clause 9 is amended by a substituting for the proviso to paragraph e of subclause 2 thereof the following proviso PROVIDED HOWEVER that this paragraph shall not apply either to i iron ore used for the production of iron ore pellets or for secondary processing or for the manufacture of iron or steel in any part of the said State lying north of the twentysixth parallel of latitude; or ii iron ore sold or otherwise disposed of to Dampier. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 59 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement b adding to paragraph j of subclause 2 after subparagraph xi and before the last sentence of the said paragraph the following provisos PROVIDED THAT for the purposes of this paragraph the words mineral lease shall not include any sublease from Dampier and PROVIDED FURTHER THAT the royalty payable on any iron ore sold to Dampier shall be computed as if such iron ore were produced under a mineral lease granted pursuant to the agreement approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and PROVIDED FURTHER THAT with regard to the contracts which the Company has advised the State were entered into prior to September One thousand nine hundred and sixtynine by an associated company for the sale of iron ore pellets and prepared sinter fines to Japanese steel mills the royalty for fines as well as iron ore pellets shall be computed at the rate specified in subparagraph v of this paragraph subject to the adjustment specified in subparagraph xi. c deleting the last proviso of paragraph o of subclause 2 thereof and substituting therefor the following PROVIDED ALSO that the provisions of this paragraph shall not apply i to iron ore pellets or to ore the subject of secondary processing or Iron or steel manufacture by the Company or an associated company within the said State or ii to ore sold or otherwise disposed of to Dampier. d inserting a new paragraph after paragraph o of subclause 2 thereof as follows p honour its undertakings with Dampier under any agreement with Dampier pursuant to

which it receives a sublease referred to in subparagraph i of paragraph g of subclause 4 of clause 8

PROVIDED THAT as sole page 60 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement

remedy for a breach of this covenant the State may if the breach is not cured within a period as provided in paragraph 1 of clause 10 after notice as provided therein require Dampier to terminate such a sublease for any breach thereof which the State considers material AND the Company shall not thereafter be entitled to a lease under subparagraph ii of paragraph g of subclause 4 of clause 8 AND the State may require the surrender of areas included in any lease or leases pursuant to subparagraph ii of paragraph b of subclause 1 of clause 8. e inserting after the word hereof in the eighth line of subclause 3 the following including the conferring upon the Company of power and authority requisite for the control and management of the works referred to in the said provisions. 5

Clause 10 is amended by substituting for paragraph 1 thereof the following paragraph I i that in any of the following events namely if the Company shall make default which the State considers material in the due performance or observance of any of the covenants or obligations to the State herein or in any lease sublease license or other title or document granted or assigned under this Agreement on its part to be performed or observed or shall abandon or repudiate its operations under this Agreement and such default shall not have been remedied or such operations resumed within a period of one hundred and eighty 180 days after notice as provided in subparagraph ii of this paragraph is given by the State or if the alleged default abandonment or repudiation is contested by the Company and within sixty 60 days after such notice is submitted by the Company to arbitration within a reasonable time fixed by the arbitration award but not less than ninety 90 days after the making of the arbitration award where the question is deed against the Company the arbitrator finding that there was a bona fide dispute and that the Company had not been dilatory in pursuing the arbitration or if the Company As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 61 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement shall go into liquidation other than a voluntary liquidation for the purpose of

reconstruction then and in any of such events the State may by notice to the Company determine this Agreement and the rights of the Company hereunder and under any lease license easement or right granted hereunder or pursuant hereto or if the Company shall surrender the entire mineral lease as permitted under Clause 81a of this Agreement then this Agreement and the rights of the Company hereunder and under any lease license easement or right granted hereunder or pursuant hereto shall thereupon determine PROVIDED HOWEVER that if the default shall not have been remedied after such notice or within the time fixed by the arbitration award as aforesaid the State instead of determining this Agreement as aforesaid because of such default may itself remedy such default or cause the same to be remedied for which purpose the State by agents workmen or otherwise shall have full power to enter upon lands occupied by the Company and to make use of all plant machinery equipment and installations thereon and the costs and expenses incurred by the State in remedying or causing to be remedied such default shall be a debt payable by the Company to the State on demand; and the notice to be given by the State in terms of subparagraph i of this paragraph shall specify the nature of the default or other ground so entitling the State to exercise such right of determination and where appropriate and known to the State the party or parties responsible therefor and shall be given to the Company and all such assignees mortgagees chargees and disponees for the time being of the Companys said rights to or in favour of whom or by whom an assignment mortgage charge or disposition has been effected in terms of Clause 131a hereof whose name and address for service of notice has previously been notified in writing to the State by the Company or any such assignee mortgagee chargee or disponent; ii page 62 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement iii the abandonment or repudiation by or liquidation of the Company referred to in subparagraph i of this paragraph means the abandonment or repudiation by or the liquidation of all of them the Company and all assignees and appointees who have executed and are for the time being bound by a deed of covenant in favour of the State as provided in Clause 13 hereof; and. 6 Clause 13 is amended by adding to subclause 1 a new

subparagraph after subparagraph b and before the words subject however as follows and c assign sublet or dispose of to Dampier in whole or in part rights under this Agreement including its rights to or as the holder of any lease license easement grant or other title in relation to the railway and the port and related facilities or any of them; b adding the following to subclause 2 PROVIDED HOWEVER that the Minister may agree to release the Company from such liability where having regard to all the circumstances of any such assignment mortgaging charging subletting disposition or appointment as mentioned in subclause 1 of this clause he considers such release will not be contrary to the interest of the State hereunder; c adding a new subclause as follows 3 To the extent that it imposes any obligation on the Company with regard to the management preservation or control of any of the facilities mentioned in subparagraph c of subclause 1 of this clause whether as to maintenance operation or otherwise this Agreement shall no longer apply with regard to any such facilities which become the sole property of Dampier. 7 Clause 19 is amended by inserting after the words prior notice in line 9 the words or in the case of any other addressee to his or its address for service of notices notified in writing to the State. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 63 Iron Ore Robe River Agreement Act 1964 Second Schedule First variation agreement IN WITNESS whereof these presents have been executed as a deed the day and year first herein before written. SIGNED by the said THE HONOURABLE SIR DAVID BRAND K.C.M.G. M.L.A in the presence of C. W. COURT Minister for Industrial Development. ARTHUR GRIFFITH Minister for Mines. SIGNED BY WILLIAM E. DOHNAL pursuant to and with the authority of a resolution of the Board of Directors of CLIFFS INTERNATIONAL INC. in the presence of T. R. COLBORN [C.S.] DAVID BRAND WILLIAM E. DOHNAL [Second Schedule inserted No. 35 of 1970 s. 7.] page 64 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement Third Schedule Second variation agreement [Heading inserted No. 68 of 1973 s. 7; amended No. 19 of 2010 s. 4.] [s. 3B] AN AGREEMENT made the day of 1973 BETWEEN THE HONOURABLE JOHN TREZISE TONKIN M.L.A. Premier and Treasurer of the State of Western Australia acting for and on

behalf of the Government of the said State and instrumentalities thereof from time to time hereinafter called the State of the first part and CLIFFS INTERNATIONAL INC. a limited company incorporated under the laws of the State of Ohio one of the United States of America and registered in the State of Western Australia under the provisions of the Companies Act 1961 of the said State and having its registered office situate at 1214 Saint Georges Terrace Perth in the said State hereinafter called Cliffs of the second part and CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. a company incorporated under the said Companies Act and having its registered office at 1214 Saint Georges Terrace Perth in the said State MITSUI IRON ORE DEVELOPMENT PTY. LTD. a company incorporated under the said Companies Act and having its registered office at 68 Saint Georges Terrace Perth in the said State ROBE RIVER LIMITED a company incorporated under the Companies Ordinance of the Australian Capital Territory and having its registered office at 20 OConnell Street Sydney in the State of New South Wales and MT. ENID IRON CO. PTY. LTD. a company incorporated under the said Companies Act and having its registered office at 22 Mount Street Perth in the said State hereinafter called the Participants of the third part. WHEREAS a By an agreement under seal dated the 18th day of November 1964 made between the State of the one part and Basic Materials Pty. Limited hereinafter called Basic of the other part which agreement was approved by and is scheduled to the Iron Ore ClevelandCliffs Agreement Act 1964 and is hereinafter referred to as the Agreement Basic acquired upon the terms and conditions set forth in the Agreement certain rights interest and benefits and assumed certain obligations with respect to the exploration for and development of specified iron ore deposits and the mining transportation processing pelletising and shipment of iron ore therefrom. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 65 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement b By virtue of various agreements under seal Cliffs became entitled to all the right title interest claim and demand whatsoever of Basic in and under the Agreement and by virtue of deed of covenant with the State assumed the obligations of Basic thereunder. c By an agreement dated the 12th day of May 1970 made between the State of the one

part and Cliffs of the other part which is scheduled to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1970 hereinafter called the first variation agreement the parties thereto varied the agreement as therein set out for the purposes set out in the recitals thereto. Under the provisions of the said Act and in the events which happened the first variation agreement was approved thereby on and from the 30th day of December 1970. d By deed dated the 29th day of June 1970 made between the State Cliffs and the Participants Cliffs granted and assigned to the Participants all the right title interest claim and demand of the Company as defined in the Agreement in and under the Agreement as then or thereafter altered from time to time except the rights of occupancy referred to therein of the mining areas therein defined and the rights to obtain mineral leases thereof as tenants in common in the following shares Cliffs Western Australian Mining Co. Pty. Ltd Mitsui Iron Ore Development Pty.Ltd. Robe River Limited Mt. Enid Iron Co. Pty. Ltd. 30 30 35 5 By the said deed the Participants severally covenanted and agreed with the State that such Participant should to the extent of its commitment therein set out comply with observe and perform the provisions of the Agreement as then or thereafter amended on the part of Cliffs to be complied with observed or performed in respect of the matters assigned as therein set forth to the intent that the same should be binding upon the Participants to the extent of the commitment therein set out in the same manner and to the same extent as if the Participants were expressly named in the Agreement. e The parties desire to add to and amend the provisions of the Agreement as amended and added to by the first variation agreement hereinafter referred to as the Principal Agreement. page 66 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement NOW THIS AGREEMENT WITNESSETH 1. Words and phrases to which meanings are given under clause 1 of the Principal Agreement other than words and phrases to which meanings are given in this Agreement shall have the same respective meanings in this Agreement as are given to them in clause 1 of the Principal Agreement. Subject to the provisions of the deed referred to in recital d hereof for the purposes of the Principal Agreement

and this Agreement the expression the Company shall where the context so admits mean and include both Cliffs and the Participants. The Principal Agreement is added to and varied as hereinafter provided 2. and the Principal Agreement shall be read and construed accordingly. 3. The Principal Agreement is hereby amended as follows 1 The definition of mining areas in clause 1 is amended by substituting for the passage 4269H to 4273H both inclusive the passage 4269H 4270H 4273H 4321H 4323H 4324H 4981H 4982H 4983H 5733H and 5845H; by adding after clause 7 two new clauses 7A and 7B as follows 2 Additional Proposals 4 7A. If the Company at any time during the continuance of this Agreement desires to modify expand or otherwise substantially vary its activities beyond those specified in any approved proposals the Company shall give notice of such desire to the Minister and within two months thereafter shall subject to the provisions of this Agreement submit to the Minister detailed proposals in respect of all matters covered by such notice and such of the other matters mentioned in subparagraphs i to vii inclusive of clause 52a as the Minister may require. The provisions of clause 6 shall mutatis mutandis apply to detailed proposals submitted pursuant to this clause; and Second Pellet Plant 4 7B. The Company shall forthwith proceed to complete its investigations into the feasibility of establishing within the said State a second iron ore pellet plant and provided that the Company has entered into or intends to enter into contracts satisfactory to the Company for the sale of iron ore pellets from the proposed second iron ore pellet plant and for financing that As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 67 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement plant and associated facilities the Company shall by the 31st December 1974 or within such extended time as the Minister may allow submit to the Minister pursuant to clause 7A detailed proposals for the establishment of such a plant on the following basis a b the plant to have an estimated design capacity of 5 million tons of iron ore pellets per annum; and the capital cost involved in the construction of the plant and associated facilities to be not less than one hundred million dollars 100000000.; 3 Clause 81a is amended by substituting for the passage for a period of twentyone 21 years commencing from the commencement date in lines nineteen and

twenty the passage for a period commencing i ii on the 31st day of October 1970 in respect of any part of the mining areas existing prior to the date of the execution of the agreement entered into pursuant to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1973; and on the date of execution of that agreement in respect of any other part of the mining areas and expiring on the 30th day of October 1991; 4 Clause 92j is amended a by substituting for the passage commencing with the word prices in line eight of subparagraph x and ending with the passage 1963. in the last line of that subparagraph the passage prices payable for foundry pig iron c.i.f. Australian capital city ports as announced by The Broken Hill Proprietary Company Limited or any subsidiary thereof from time to time during the last full calendar year preceding the date at which the adjustment is to be made as compared with the average of those prices for the calendar year 1963.; and b by substituting for the passage commencing with the word prices in line seven of subparagraph xi and ending with the passage 1968. in the last line of that subparagraph the passage prices payable for foundry page 68

Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement pig iron c.i.f. Australian capital city ports as announced by The Broken Hill Proprietary Company Limited or any subsidiary thereof from time to time during the last full calendar year preceding the date at which the adjustment is to be made as compared with the average of those prices for the calendar year 1968.; 5 Clause 921 is amended by deleting the words commencing on and accruing from the commencement date in lines five and six; 6 Paragraph a of clause 10 is deleted and the following paragraph substituted a Power 4 i that subject to and in accordance with proposals approved or determined under this Agreement the Company for its purposes hereunder and for domestic and other purposes in relation to a townsite may to the extent determined by the Minister but notwithstanding any Act generate transmit supply and charge for electrical energy and the Company shall have all such powers and authorities with respect to electrical energy as are determined by the Minister for the purposes hereof which may include the powers of a supply authority under the Electricity Act 1945; Water for mining areas 4 ii that subject to and in accordance with proposals approved or determined under this Agreement

the Company for its purposes hereunder in relation to its requirements for water in the mining areas and for domestic and other purposes in relation to any townsite associated with the mining areas may to the extent determined by the Minister but notwithstanding any Act bore for water construct catchment areas store by dams or otherwise take and charge for water from any Crown lands available for the purpose and the Company shall have all such powers and authorities with respect to water as are determined by the Minister for the purposes hereof which may include the powers of a water board under the Water Board Act 1904; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 69 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement Water for the port and port townsite 4 iii that the rights and obligations of the Company in respect to the supply of water at the industrial area at Cape Lambert for its purposes and operations under the Agreement and at the port townsite for domestic and other purposes in relation to a townsite and the rights and obligations of the State with respect to the supply of water for such purposes contained in the deed dated as of the day of 1973 and made between the State on the one part and the Participants of the other part; and 7 by adding after clause 11 a new clause 11A as follows Environmental Protection 4 11A. Nothing in this Agreement shall be construed to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or inental to the operations of the Company hereunder that may be made by the State or any State agency or instrumentality or any local or other authority or statutory body of the State pursuant to any Act for the time being in force. The Schedule to the Principal Agreement is deleted and the following 4. schedule substituted

SCHEDULE WESTERN AUSTRALIA IRON ORE CLEVELANDCLIFFS AGREEMENT ACT 19641973 MINERAL LEASE Lease No. Goldfield ELIZABETH THE SECOND by the Grace of God of the United Kingdom Australia and Her other realms and Territories Queen Head of the Commonwealth Defender of the Faith TO ALL TO WHOM THESE PRESENTS shall come GREETINGS KNOW YE that WHEREAS by an Agreement made the 18th day of November 1964 between the State of Western Australia of the one part and BASIC MATERIALS PTY. LIMITED

hereinafter called Basic of the other part the said State agreed to grant to Basic a mineral lease of portion or portions of the lands referred to in the said page 70 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement Agreement as the mining areas AND WHEREAS the said Agreement was ratified by the Iron Ore ClevelandCliffs Agreement Act 1964 which said Act inter alia authorised the grant of a mineral lease to Basic its successors and assigns AND WHEREAS by virtue of various agreements under seal CLIFFS INTERNATIONAL INC. a limited company incorporated under the laws of the State of Ohio one of the United States of America and registered in the State of Western Australia under the provisions of the Companies Act 1961 of the said State and having its registered offices situated at 1214 Saint Georges Terrace Perth in the said State hereinafter called Cliffs became entitled to all the rights title interest claim and demand whatsoever of Basic in and under the said Agreement and additions and variations thereto as set out in the agreements scheduled to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1970 and the agreement executed pursuant to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1973 the three agreements scheduled to or executed pursuant to the said Acts are hereinafter referred to as the said Agreements NOW WE in consideration of the rents and royalties reserved by and of the provisions of the said Agreements and in pursuance of the said Acts DO BY THESE PRESENTS GRANT AND DEMISE unto Cliffs subject to the said provisions ALL THOSE pieces and parcels of land situated in the Goldfield containing approximately subject to such corrections as may be necessary to accord with survey when made and particularly described and delineated on the plan in the Schedule hereto and all those mines veins seams lodes and deposits of iron ore in on or under the said land hereinafter called the said mine together with all rights liberties easements advantages and appurtenances thereto belonging or appertaining to a lessee of a mineral lease under the Mining Act 1904 including all amendments thereof for the time being in force and all regulations made thereunder for the time being in force which Act and regulations are hereinafter referred to as the Mining Act or to which Cliffs is entitled under the said Agreements. TO HOLD the

said lands and mine and all and singular the premises hereby demised for a period commencing i on the 31st day of October 1970 in respect of any part of the mining areas existing prior to the date of the execution of the agreement entered into pursuant to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1973; and ii on the date of execution of that agreement in respect of any other part of the mining areas and expiring on the 30th day of October 1991 with the right to renew the same from time to time for further periods each of twentyone years as provided in but subject to the terms covenants and conditions set out in the said Agreements As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 71 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement and to the Mining Act as modified by the said Agreements YIELDING and paying therefor the rent and royalties as set out in the said Agreements. AND WE do hereby declare that this lease is subject to the observance and performance by Cliffs of the following covenants and conditions that is to say 1. 2. 3. 4. Cliffs shall and will use the land bona fide exclusively for the purposes of the said Agreements. Subject to the provisions of the said Agreements Cliffs shall and will observe perform and carry out the provisions of the Mines Regulation Act 1946 and all amendments thereof for the time being in force and the regulations for the time being in force made thereunder and subject to and also as modified by the said Agreements the Mining Act so far as the same affect or have reference to this lease. Cliffs shall if the Minister for Mines determines during the term of this lease but not in respect of any renewed term pay to the previously registered occupant of Temporary Reserve 4321H 4322H 4323H 4324H 4981H 4982H and 4983H such amount as the Minister for Mines may approve towards expenditure incurred by such occupant on the exploration of the said reserves. Cliffs shall if the Minister for Mines so determines during the term of this lease or any renewed term pay to the previously registered occupant of Temporary Reserves 4321H 4322H 4323H 4324H 4981H 4982H and 4983H a royalty at a rate of 0.25 per centum per ton on the value of iron ore as determined by the Minister for Mines shipped or sold by Cliffs from the land formerly comprised in the said reserves during the first twentyone year production period but no longer. PROVIDED THAT this lease and any renewal

thereof shall not be determined or forfeited otherwise than under and in accordance with the provisions of the said Agreements. PROVIDED FURTHER that all petroleum on or below the surface of the demised land is reserved to Her Majesty with the right to Her Majesty or any person claiming under her or lawfully authorised in that behalf to have access to the demised land for the purpose of searching for and for the operations of obtaining petroleum in any part of the land under the provisions of the Petroleum Act 1967. page 72 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement IN WITNESS whereof we have caused our Minister for Mines to affix his seal and set his hand hereto at Perth in our said State of Western Australia and the common seal of Cliffs has been affixed hereto this day of 19 THE SCHEDULE ABOVE REFERRED TO IN WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore mentioned. Signed by the said THE HONOURABLE JOHN TREZISE TONKIN M.L.A. in the presence of Minister for Development and Decentralisation. Minister for Mines. Signed by W.E. DOHNAL pursuant to and with the Authority of a resolution of the Board of Directors of CLIFFS INTERNATIONAL INC. in the presence of The Common Seal of CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. was hereunto affixed by Authority of the Directors and in the presence of Director. Secretary. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 73 Iron Ore Robe River Agreement Act 1964 Third Schedule Second variation agreement The Common Seal of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by Authority of the Directors and in the presence of Director. Secretary. The Common Seal of ROBE RIVER LIMITED was hereunto affixed by Authority of the Directors and in the presence of Director. Secretary. The Common Seal of MT. ENID IRON CO. PTY. LTD was hereunto affixed by Authority of the Directors and in the presence of Director. Director. [Third Schedule inserted No. 68 of 1973 s. 7.] page 74 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement Fourth Schedule Third variation agreement [Heading inserted

No. 37 of 1984 s. 4; amended No. 19 of 2010 s. 4.] [s. 2] AN AGREEMENT made the thirtieth day of April One thousand nine hundred and eightyfour BETWEEN THE HONOURABLE BRIAN THOMAS BURKE M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter called the State of the first part CLIFFS INTERNATIONAL INC. a limited company incorporated under the laws of the State of Ohio one of the United States of America and registered in the State of Western Australia under the provisions of the Companies Act 1961 of the said State and having its registered office in the State of Western Australia at 1214 St. Georges Terrace Perth hereinafter called Cliffs of the second part and CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. a company incorporated under the said Companies Act and having its registered office at 1214 St. Georges Terrace Perth hereinafter called Cliffs Western MITSUI IRON ORE DEVELOPMENT PTY. LTD. a company incorporated under the said Companies Act and having its principal office in the said State at 22nd Floor 44 St. Georges Terrace Perth hereinafter called Mitsui Iron ROBE RIVER LIMITED a company incorporated under the Companies Ordinance of the Australian Capital Territory and having its principal place of business at 1 Castlereagh Street Sydney in the State of New South Wales hereinafter called RRL and NIPPON STEEL AUSTRALIA PTY. LIMITED a company incorporated in the State of New South Wales and having its registered office in that State at 60 Martin Place Sydney SUMITOMO METAL AUSTRALIA PTY. LIMITED a company incorporated in the State of New South Wales and having its registered office in that State at 31st Floor CAGA Centre 8 Bent Street Sydney and the said MITSUI IRON ORE DEVELOPMENT PTY. LTD. such lastmentioned three companies acting together and carrying on business under the registered business name CAPE LAMBERT IRON ASSOCIATES and having their principal place of business in the State of Western Australia at 22nd Floor 44 St. Georges Terrace Perth hereinafter collectively called CLIA the said Cliffs Western Mitsui Iron RRL and CLIA hereinafter collectively called the Participants being the party of the third part. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 75 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement WHEREAS a b c d by an

agreement under seal dated the 18th day of November 1964 made between the State of the one part and Basic Materials Pty. Limited hereinafter called Basic of the other part which agreement was approved by and is scheduled to the Iron Ore ClevelandCliffs Agreement Act 1964 and is hereinafter referred to as the Agreement Basic acquired upon the terms and conditions set forth in the Agreement certain rights interests and benefits and assumed certain obligations with respect to the exploration for and development of specified iron ore deposits and the mining transportation processing pelletising and shipment of iron ore therefrom; by virtue of various agreements under seal Cliffs became entitled to all the right title interest claim and demand whatsoever of Basic in and under the Agreement and by virtue of a deed of covenant with the State assumed the obligations of Basic thereunder; by an agreement dated the 12th day of May 1970 made between the State of the one part and Cliffs of the other part which is scheduled to the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1970 hereinafter called the first variation agreement the parties thereto varied the Agreement as therein set out for the purposes set out in the recitals thereto. Under the provisions of the said Act and in the events which happened the first variation agreement was approved thereby on and from the 30th day of December 1970; by deed dated the 29th day of June 1970 made between the State Cliffs and Cliffs Western Mitsui Iron RRL and Mt. Enid Iron Co. Pty. Ltd. Cliffs granted and assigned to the lastmentioned companies all the right title interest claim and demand of the Company as defined in the Agreement in and under the Agreement as then or thereafter altered from time to time except the rights of occupancy referred to therein of the mining areas therein defined and the rights to obtain mineral leases thereof as tenants in common in the following shares Cliffs Western Mitsui Iron RRL Mt. Enid Iron Co. Pty. Ltd. hereinafter called Mt. Enid 30 30 35 5 page 76 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement and by the said deed each of them Cliffs Western Mitsui Iron RRL and Mt. Enid severally covenanted and agreed with the State that it should to the extent of its commitment therein set out comply with observe and perform the provisions of the Agreement as then or thereafter amended on the part of

Cliffs to be complied with observed or performed in respect of the matters assigned as therein set forth to the intent that the same should be binding upon them to the extent of the commitment therein set out in the same manner and to the same extent as if each of them were expressly named in the Agreement; by an agreement dated the 13th day of July 1976 made between the State of the first part Cliffs of the second part and Cliffs Western Mitsui Iron RRL and Mt. Enid of the third part the execution whereof on behalf of the State was authorised by the Iron Ore Cleveland Cliffs Agreement Act Amendment Act 1973 hereinafter called the second variation agreement the parties thereto further varied the Agreement as therein set out; by an agreement dated the 22nd day of June 1977 made between Mt. Enid as vendor and CLIA as purchaser Mt. Enid with effect from the 1st day of July 1977 sold and assigned to CLIA the whole of its 5 share in and under the Agreement as amended by the first variation agreement and the second variation agreement and by virtue of a deed of covenant with the State made the 1st day of July 1977 CLIA assumed the obligations of Mt. Enid thereunder. by an agreement dated the 5th day of October 1983 made between the State of the first part Cliffs of the second part and the Participants of the third part hereinafter called the third variation Agreement the parties thereto further varied the Agreement as therein set out in manner provided for in the Agreement; and the parties desire to add to and amend the provisions of the Agreement as amended and added to by the first variation agreement the second variation agreement and the third variation agreement hereinafter referred to as the Principal Agreement. e f g h NOW THIS AGREEMENT WITNESSETH 1. Words and phrases to which meanings are given under clause 1 of the Principal Agreement other than words and phrases to which meanings are given in this Agreement shall have the same respective meanings in this Agreement as are given to them in clause 1 of the Principal Agreement. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 77 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement Subject to the provisions of the deed referred to in recital d hereof for 2. the purposes of the Principal Agreement and this Agreement the expression the Company shall where the context so admits mean and include both Cliffs and the Participants. The State shall introduce

and sponsor a Bill in the Parliament of Western 3. Australia to ratify this Agreement and endeavour to secure its passage as an Act. The subsequent clauses of this Agreement shall not operate unless and 4. until the Bill to ratify this Agreement referred to in clause 3 hereof is passed as an Act before the 30th day of June 1984 or such later date if any as the parties hereto may mutually agree upon. The Principal Agreement is added to and varied as hereinafter provided 5. and the Principal Agreement shall be read and construed accordingly. 6. The Principal Agreement is hereby amended as follows 1 Clause 1 a by inserting after the definition Land Act the following definition local authority means the council of a municipality that is a city town or shire constituted under the Local Government Act 1960; ; b by inserting after the definition of year 1 the following paragraph reference in this Agreement to the Company shall not include persons other than the parties to this agreement to whom land in the port townsite is or is agreed to be transferred or otherwise disposed of by the Company in accordance with a proposal approved pursuant to clause 7C hereof;.

2 Clause 6 by deleting 1 Within and substituting Within. 3 By inserting after clause 7B the following clauses Further proposals relating to port townsite 4 7C. 1 The Company may submit to the Minister from time to time detailed proposals with respect to the port townsite relating to a the transfer to or vesting in the State or the appropriate instrumentality of the State or page 78 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement the relevant local authority as the case may be of the ownership care control and management maintenance or preservation of any service or facility owned and/or operated by the Company hereunder; the vesting in transfer surrender lease or sublease to the State or the appropriate instrumentality of the State or the relevant local authority as the case may be of any land of which the Company is the lessee or proprietor in fee simple hereunder; the proposed sale by the Company of any land which on the 1st day of April 1984 was the subject of a sublease from the Company and was used for commercial community or welfare purposes to the sub lessee thereof or with the prior consent of the Minister to any other person; or any other purpose concerning the maintenance use or operation of the Companys services or facilities situated in or

near the port townsite as the Minister shall approve. b c d 2 The provisions of clause 7A hereof shall not apply to proposals submitted pursuant to this clause. 3 The Minister shall within two 2 months of the receipt of proposals submitted pursuant to subclause 1 of this clause give to the Company notice either of a b his approval thereof; or any objections or alterations desired thereto and in such case shall afford the Company an opportunity to consult with and submit new proposals to the Minister. 4 If within two 2 months of receipt of a notice pursuant to paragraph b of subclause 3 of this clause the Minister has not given his approval to the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 79 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement said proposals the said proposals shall not be referable to arbitration hereunder but shall lapse. 5 The Company shall implement proposals approved pursuant to this clause in accordance with the terms thereof. 7D. If a proposal approved pursuant to clause 7C hereof provides for the surrender by the Company to the State of Special Lease No. 31164629 Crown Lease No. 3101970 and all land held by the Company thereunder Grant and lease of lands 4 a the State shall in accordance with such approved proposal i ii grant to the Company in fee simple at a price to be determined by the Minister for Lands; and/or lease to the Company for such terms or periods and on such terms and conditions as subject to the approved proposal shall be determined by the Minister for Lands such part or parts of the land so surrendered as that proposal so provides; Sale of lots for housing 4 b the Company may after such surrender apply to the State from time to time for lots of land within the area shown coloured green on the plan marked B initialled by or on behalf of the parties hereto for the purpose of identification for housing for residential use by employees engaged in the operations of the Company under this Agreement and the State will provide out of such land or so much thereof as has not been released prior to the date of such application within a reasonable period after application therefor by the Company having regard to the normal time to be taken for subdivision and servicing if this is required by reason of such application the lots so applied for such lots to be vacant serviced lots of such size and position as is

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River Agreement Act 1964 Fourth Schedule Third variation agreement determined by the Minister for Lands after consultation with the Company for purchase by the Company in fee simple at prices to be determined by the Minister for Lands having regard to the price of similar lots then being made available by the State to others which will include the cost to the State of providing and servicing such lots; Release of lands 4 c notwithstanding the provisions of the Land Act the Minister for Lands shall not at any time put up for sale or lease as a single release to persons other than the Company more than 30 lots of land within the land shown coloured green on the said plan marked B without first consulting with the Company for the purpose of ensuring that provision has been made for the future housing requirements of employees engaged in the operations of the Company under this Agreement; and Preservation of subleases by Company 4 d if any land within the land so surrendered is or is subsequently to be granted in fee simple to the Company by the State pursuant to such approved proposal and that land is immediately prior to the surrender thereof the subject of a sublease granted or the subject of an agreement for sublease about to be granted or renewed by the Company under the said Special Lease then notwithstanding the surrender of the said Special Lease any provision in the sublease or agreement for sublease or the provisions of any Act or any principle of law or equity to the contrary that sublease shall as between the Company and the sublessee and any person deriving title under the sublessee continue and at all times remain in full force and effect in accordance with but subject to its terms as if the said Special Lease had not been surrendered. Authority to enter into agreements 4 7E. Where pursuant to any approved proposal as to any of the matters referred to in clause 7C hereof or as varied pursuant As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 81 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement to subclause 3 of clause 14 hereof provision is made for the relevant local authority consistent with its functions as a local authority or an instrumentality of the State to enter into and carry out any agreement with the Company and/or for the Minister or respective Ministers administering the Hospitals Act 1927 the Education Act 1928 the Public Works Act 1902 the Fire Brigades Act 1942 the Country Areas Water Supply Act 1947 and

the Country Towns Sewerage Act 1948 to enter into and carry out any agreement with the Company
a the Local Government Act 1960 the Hospitals Act 1927 the Education Act 1928 the Public Works
Act 1902 the Fire Brigades Act 1942 the Country Areas Water Supply Act 1947 and the Country
Towns Sewerage Act 1948 shall for the purposes of implementing such approved proposals be
deemed to be modified by the inclusion of a power whereby such relevant local authority
instrumentality of the State and/or Minister or Ministers are authorised and empowered to enter into
and carry out any such agreement; and b the relevant local authority instrumentality of the State and
such Minister or Ministers may enter into and carry out any such agreement notwithstanding the
other provisions of this Agreement. 7F. Notwithstanding the provisions of clause 7A hereof where
pursuant to an approved proposal under clause 7C hereof the Company has surrendered to the
State Special Lease No. 31164629 Crown Lease No. 3101970 and all land held by the Company
thereunder and the Minister has approved proposals pursuant to clause 7C hereof with respect to
schools hospitals and police station facilities and the housing for State employees associated
therewith the State thereafter will continue to operate and undertake the maintenance of such
facilities and any additions thereto and the Company shall not thereafter be required to submit any
proposals with respect to the provision operation or maintenance of such facilities in or near the port
townsite except where any such facilities are required to meet the page 82 Version 02a005
Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act
1964 Fourth Schedule Third variation agreement needs of any construction workforce involved in
the operations of the Company under this Agreement.. 4 Clause 8 a subclause 1 paragraph b i by
inserting after hereof where it first occurs the following or as varied from time to time pursuant to
subclause 3 of clause 14 hereof; and ii by inserting after paragraph where it first occurs in the first
proviso the following or otherwise payable pursuant to the provisions of paragraph n of clause 10
hereof; b subclause 2 i by inserting after clause the following the implementation of the Companys
proposals as finally approved under clause 7C hereof clause 7D hereof and paragraph n of clause
10 hereof ii by deleting and in paragraph e; iii iv by deleting Act. in paragraph f and substituting Act;;

and by adding after paragraph f the following paragraphs g h the inclusion of a power whereby any special lease granted to the Company hereunder may be varied by agreement or surrendered in whole or part; and the inclusion of a power whereby any land granted or leased to the Company hereunder may be leased or subleased by the company to the State or any appropriate instrumentality of the State or the relevant local authority as the case may be.; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 83 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement c subclause 4 paragraph b by deleting nor any of the lands the subject of any lease or licence granted to the Company in terms of and substituting the following nor any lands for the time being held by the Company under any lease or licence issued pursuant to; and d subclause 6 by deleting granted or assigned and substituting the following held by the Company. 5 Clause 10 a by adding after paragraph a the following paragraphs aa that notwithstanding any surrender by the Company to the State of the whole or any part or parts of the land within Special Lease No. 31164629 Crown Lease No. 3101970 all references in the Determination with respect to Electrical Energy made by the Minister pursuant to subparagraph i of paragraph a of this clause on the 21st day of February 1980 to the boundaries of Crown Lease No. 3101970 shall mean and be construed as the boundaries of Crown Lease No. 3101970 at the time of grant of such lease; ab that i ii the extent to which the Company may generate transmit supply and charge for and any powers and authorities with respect to electrical energy determined by the Minister pursuant to subparagraph i of paragraph a of this clause; and any rights and obligations with respect to water contained in the deed dated as of the 13th day of July 1976 referred to in subparagraph iii of paragraph a of this clause shall be modified from time to time to accord with proposals approved under clause 7C hereof including page 84 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement any variation thereof pursuant to subclause 3 of clause 14 hereof;; b paragraph d subparagraph i by deleting Agreement; and substituting the following Agreement PROVIDED that this paragraph shall not apply to townsite lots or other areas within any

land granted to the Company in fee simple pursuant to paragraph a of clause 7D hereof unless such lots or areas are then owned by the Company or to any townsite lots sold to the Company pursuant to paragraph b of clause 7D hereof;; c paragraph g by deleting granted to and substituting the following held by ; and d by inserting after paragraph m the following paragraph n that from and after the surrender by the Company to the State of any land within Special Lease No. 31164629 Crown Lease No. 3101970 under a proposal approved pursuant to clause 7C hereof notwithstanding the provisions of subparagraph i of paragraph b of subclause 1 of clause 8 hereof any grants to the Company pursuant to that subparagraph of i townsite lots within or near the port townsite in fee simple shall in lieu of being for nominal consideration be for a consideration to be determined by the Minister for Lands having regard to the price of any similar lots then being made available by the State to others which will include the cost if any to the State of providing and servicing such lots; and ii special leases of Crown lands within or near the port townsite excluding any such lands within the harbour area and the railway shall in lieu of being at peppercorn rental be As at 03 Jan 2014

Version 02a005 Published on www.legislation.wa.gov.au page 85 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement at such rentals as are prescribed by law or are otherwise reasonable.. 6 Clause 13 by inserting after subclause 3 the following subclause 4 Where in respect of any land acquired by the Company under this Agreement the Company makes any disposition in accordance with a proposal approved pursuant to clause 7C hereof then notwithstanding the provisions of subclause 1 of this clause but subject to any contrary intention contained in any such approved proposal the consent writing of the Minister shall not be required to any such disposition nor shall the assignee from the Company be required to enter into a deed of covenant as provided in subclause 1 of this clause.. 7 Clause 14 a subclause 5 by inserting after hereunder the following except in either case any obligation undertaken by the Company pursuant to subclause 5 of clause 7C hereof; and b by inserting after subclause 5 the following subclause 6 Where in the performance of its obligations under subclause 5 of clause 7C hereof the Company pursuant to a proposal approved under that clause enters into any arrangement with a person

including an instrumentality of the State or a local authority whereby that person assumes or agrees to assume any of the obligations undertaken by the Company under this Agreement in relation to the port townsite the State will discharge the Company from such obligations to the extent to which and during the period for which that person assumes or agrees to assume those obligations.. page 86 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement IN WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore written. SIGNED by the said THE HONOURABLE BRIAN THOMAS BURKE M.L.A. in the presence of BRIAN BURKE. DAVID PARKER MINISTER FOR MINERALS AND ENERGY. SIGNED for and on behalf of CLIFFS INTERNATIONAL INC. by VICTOR FAHRNEY KOONTZ pursuant to and with the authority of a resolution of the Board of Directors of CLIFFS INTERNATIONAL INC. in the presence of W. REES. THE COMMON SEAL of CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of V. KOONTZ Director. W. REES Director. THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of Y. OKAMOTO Director. J. N. MacKENZIE Secretary. V. KOONTZ. C.S. C.S. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 87 Iron Ore Robe River Agreement Act 1964 Fourth Schedule Third variation agreement THE COMMON SEAL of ROBE RIVER LIMITED was hereunto affixed by authority of a resolution of the Board of directors and in the presence of G. J. REANEY Director. A. R. EDWARDS Secretary. THE COMMON SEAL of NIPPON STEEL AUSTRALIA PTY. LIMITED was hereunto affixed by authority of the Directors in the presence of H. HIGAKI Director. S. TAIL Secretary. THE COMMON SEAL of SUMITOMO METAL AUSTRALIA PTY. LIMITED was hereunto affixed by authority of the Directors and in the presence of S. OKAMOTO Director. K. SATO Secretary. THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of Y. OKAMOTO

Director. J. N. MacKENZIE Secretary. C.S. C.S. C.S. C.S. [Fourth Schedule inserted No. 37 of 1984 s. 4.] page 88 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement Fifth Schedule Fourth variation agreement [Heading inserted No. 95 of 1985 s. 6; amended No. 19 of 2010 s. 4.] [s. 3D]

AN AGREEMENT made the 29th day of October 1985 BETWEEN THE HONOURABLE BRIAN THOMAS BURKE M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter called the State of the first part CLIFFS INTERNATIONAL INC. a limited company incorporated under the laws of the State of Ohio one of the United States of America and registered in the State of Western Australia under the provisions of the Companies Act 1961 of the said State and having its registered office in the State of Western Australia at 1214 St. Georges Terrace Perth hereinafter called Cliffs of the second part and CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. a company incorporated under the said Companies Act and having its registered office at 1214 St. Georges Terrace Perth hereinafter called Cliffs Western MITSUI IRON ORE DEVELOPMENT PTY. LTD. a company incorporated under the said Companies Act and having its principal office in the said State at 22nd Floor 44 St. Georges Terrace Perth hereinafter called Mitsui Iron PEKOWALLSEND OPERATIONS LIMITED a company incorporated under the Companies Act of the State of New South Wales and having its principal place of business at 1 Macquarie Street Sydney in the State of New South Wales hereinafter called Peko and NIPPON STEEL AUSTRALIA PTY. LIMITED a company incorporated in the State of New South Wales and having its registered office in that State at 60 Martin Place Sydney SUMITOMO METAL AUSTRALIA PTY. LIMITED a company incorporated in the State of New South Wales and having its registered office in that State at 30th floor CBA Centre 60 Margaret Street Sydney and the said MITSUI IRON ORE DEVELOPMENT PTY. LTD. such lastmentioned three companies acting together and carrying on business in the State of Western Australia at 22nd Floor 44 St. Georges Terrace Perth hereinafter collectively called CLIA the said Cliffs Western Mitsui Iron Peko and CLIA hereinafter collectively called the Participants being the party of the third part.

As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 89 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement WHEREAS a By an agreement under seal dated the 18th day of November One thousand nine hundred and sixtyfour made between the State of the one part and Basic Materials Pty. Limited hereinafter called Basic of the other part which agreement was approved by and is scheduled to the Iron Ore ClevelandCliffs Agreement Act 1964 and is hereinafter referred to as the Agreement Basic acquired upon the terms and conditions set forth in the agreement certain rights interests and benefits and assumed certain obligations with respect to the exploration for and development of specified iron ore deposits and the mining transportation processing pelletising and shipment of iron ore therefrom. b By virtue of various agreements under seal Cliffs International Inc. Cliffs became entitled to all the right title interest claim and demand whatsoever of Basic in and under the Agreement and by virtue of deed of covenant with the State assumed the obligations of Basic thereunder. c The State and The Broken Hill Proprietary Company Limited which company is hereinafter referred to as Broken Hill entered into an agreement which agreement was approved by and is scheduled to the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and is hereinafter referred to as the Broken Hill Agreement for the mining by that company of iron ore in specified areas and for the establishment by that company of certain port and railway facilities to be used for the transportation of such iron ore and for the construction and establishment within the said State of plant for the secondary processing of iron ore and with regard to other matters. d By assignment and deed of covenant made and given pursuant to Clause 27 of the Broken Hill Agreement the rights and obligations of Broken Hill arising under that agreement are now the rights and obligations of BHP Minerals Limited then called Dampier Mining Company Limited hereinafter referred to as BHPM. e The areas covered by the Agreement and the Broken Hill Agreement are adjacent and Cliffs and BHPM entered into an agreement hereinafter referred to as the Companies Agreement which provided for various consultation and cooperation between them and subject to any necessary consents of the State for inter alia i BHPM to make available for use by Cliffs iron ore from the areas

covered by the Broken Hill Agreement of an amount of up to 150000000 tons or such greater amount that the terms of the Companies Agreement may oblige it to supply; and page 90 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement ii Cliffs to make available for purchase by BHPM in accordance with the Companies Agreement any iron ore that BHPM may require up to an amount of 2000000 tons per annum or such amount as the Companies may agree. f By an Agreement under seal dated the 12th day of May 1970 between the State of the one part and Cliffs of the other part which Agreement was approved and is scheduled to the Iron Ore Cleveland Cliffs Agreement Amendment Act 1970 the Agreement was amended to take account of the developments contemplated in the Companies Agreement. g By an Agreement dated the 30th day of September 1969 between the State of the one part and BHPM of the other part which agreement was scheduled to the Iron Ore Dampier Mining Company Limited Agreement Act 1969 The Broken Hill Agreement was amended to take account of the developments contemplated in the Companies Agreement. h By deed dated the 29th day of June 1970 made between the State Cliffs and Cliffs Western Mitsui Iron Robe River Limited RRL and Mt. Enid Iron Co. Pty. Ltd. Mt. Enid hereinafter called the Original Participants Cliffs granted and assigned to the Original Participants all the right title interest claim and demand of the Company as defined in the Agreement in and under the Agreement as then or thereafter altered from time to time except the rights of occupancy referred to therein of the mining areas therein defined and the rights to obtain mineral leases thereof as tenants in common in the following shares Cliffs Western Mitsui Iron RRL Mt. Enid 30 30 35 5 and by the said deed each of them Cliffs Western Mitsui Iron RRL and Mt. Enid severally covenanted and agreed with the State that it should to the extent of its commitment therein set out comply with observe and perform the provisions of the Agreement as then or thereafter amended on the part of Cliffs to be complied with observed or performed in respect of the matters assigned as therein set forth to the intent that the same should be binding upon them to the extent of the commitment therein set out in the same manner and to the same extent as if each of them were expressly named

in the Agreement. i By virtue of various agreements and deeds Cliffs Western Mitsui Iron Peko and CLIA which parties are hereinafter called the Participants As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 91 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement are now entitled to all the right title and interests of the Original Participants in and under the Agreement as amended as tenants in common in the following shares Cliffs Western Mitsui Iron Peko CLIA 30 30 35 5 j k The Participants Cliffs and BHPM have now entered into an Agreement dated the Twenty Eighth day of October 1985 hereinafter referred to as the Second Companies Agreement which provides subject to any necessary consents of the State for inter alia BHPM to make available for use by the Participants of iron ore from areas additional and adjacent to those provided for under the Companies Agreement and which are covered by The Broken Hill Agreement as amended. In view of the Second Companies Agreement it is desirable that there should be some amendment to the various rights and obligations of the parties created by the Agreement as amended by agreements dated 12th May 1970 13th July 1976 5th October 1983 and 30th April 1984 hereinafter referred to as the Principal Agreement and by the Broken Hill Agreement as amended. NOW THIS AGREEMENT WITNESSETH 1. 2. This Agreement except for this Clause shall have no force or effect and shall not be binding upon the parties until it is approved by an Act of the Parliament of Western Australia. If an Act to ratify this Agreement is passed by the Parliament of the said State the provisions of this Agreement shall take effect as though the same has been enacted by the ratifying Act and notwithstanding any Act or law to the contrary the State and the Minister shall for the purpose of implementing this Agreement have all the powers discretions and authorities conferred on them respectively by the Agreement for the purpose of implementing the Agreement. 3. Words and phrases to which meanings are given under Clause 1 of the Principal Agreement other than words and phrases to which meanings are given in this Agreement shall have the same respective meanings in this Agreement as are given to them in Clause 1 of the Principal Agreement. page 92 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fifth

Schedule Fourth variation agreement 4. 5. Subject to the provisions of the deed referred to in recital h hereof for the purposes of the Principal Agreement and this Agreement the expression the Company shall where the context so admits mean and include both Cliffs and the Participants. The Principal Agreement is added to and varied as hereinafter provided and the Principal Agreement shall be read and construed accordingly. 6. The Principal Agreement is hereby amended as follows

1 Clause 1 a by inserting after the definition Companys wharf the following definition CRRIA means Cliffs Robe River Iron Associates a joint venture comprising Cliffs Western Australian Mining Co. Pty. Ltd. Mitsui Iron Ore Development Pty. Ltd. Peko Wallsend Operations Ltd and Cape Lambert Iron Associates a partnership comprising Nippon Steel Australia Pty. Ltd Sumitomo Metal Australia Pty. Ltd. and Mitsui Iron Ore Development Pty. Ltd. responsible only severally in the proportions of 30 30 35 and 5 respectively and each of their successors and permitted assigns under this Agreement; b by amending the definition of mineral lease as follows i by deleting the sublease where it first occurs and substituting the following any subleases ; ii by inserting after the Company the following andor CRRIA ; and iii by deleting the last word sublease and substituting the following subleases . 2 Clause 8 subclause 1 a by deleting in paragraph a the sublease and substituting the following any subleases ; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 93 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement b by inserting after paragraph g the following paragraph h i shall permit Dampier to sublet to CRRIA the whole or any part with the approval of the Minister of any mineral lease granted pursuant to the agreements approved by the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and the Iron Ore Dampier Mining Company Limited Agreement Act 1969; ii shall in the event of the termination of any mineral lease subleased in whole or in part to CRRIA by Dampier grant to CRRIA a mineral lease for the unexpired term of the sublease covering the same mining areas and on the same terms as were applicable under the sublease except that royalties shall be payable at the rates provided for in this Agreement. PROVIDED THAT any sublease referred to in subparagraph i and any mineral lease granted to

CRRIA pursuant to subparagraph ii shall be included in the definition of mineral lease in Clause 1 of this Agreement and shall be subject to the provisions of Clause 13 and paragraph e of subclause 1 of Clause 8. . IN WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore written. SIGNED by the said THE HONOURABLE BRIAN THOMAS BURKE M.L.A. in the presence of D PARKER MINISTER FOR MINERALS AND ENERGY BRIAN BURKE page 94 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement SIGNED for and on behalf of CLIFFS INTERNATIONAL INC. by VICTOR FAHRNEY KOONTZ pursuant to and with the authority of a resolution of the Board of Directors of CLIFFS INTERNATIONAL INC. in the presence of W. REES THE COMMON SEAL of CLIFFS WESTERN AUSTRALIAN MINING CO. PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Director V. KOONTZ Director W. REES THE COMMON SEAL OF MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Director Y. OKAMOTO Secretary J. MACKENZIE Executed by PEKOWALLSEND OPERATIONS LIMITED by being signed by its Attorney RICHARD ANDREW LADBURY under Power of Attorney dated 23rd October 1985 who certifies that he has received no notice of revocation thereof in the presence of R. E. BLANCKENSEE Solicitor Perth V. KOONTZ C.S. C.S. R. A. LADBURY As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 95 Iron Ore Robe River Agreement Act 1964 Fifth Schedule Fourth variation agreement Executed by NIPPON STEEL AUSTRALIA PTY LIMITED by being signed by its Attorney YASUYOSHI OKAMOTO under Power of Attorney dated 25th October 1985 who certifies that he has received no notice of revocation thereof in the presence of R. M. B. REYNOLDS Executed by SUMITOMO METAL AUSTRALIA PTY. LTD. by being signed by its Attorney YASUYOSHI OKAMOTO under Power of Attorney dated 24th October 1985 who certifies that he has received no notice of revocation thereof in the presence of R. M. B. REYNOLDS THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Director Y. OKAMOTO

Secretary J. MACKENZIE Y. OKAMOTO Y. OKAMOTO C.S. [Fifth Schedule inserted No. 95 of 1985 s. 6.] page 96 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement Sixth Schedule Fifth variation agreement [Heading inserted No. 87 of 1987 s. 8; amended No. 19 of 2010 s. 4.] [s. 2]

THIS AGREEMENT is made the 26th day of June 1987 BETWEEN THE HONOURABLE BRIAN THOMAS BURKE M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter called the State of the first part ROBE RIVER LIMITED a company incorporated in the Australian Capital Territory and having its principal office in the State of New South Wales situate at 10 Loftus Street Sydney hereinafter called Robe River Limited of the second part and ROBE RIVER MINING CO. PTY. LTD. formerly Cliffs Western Australian Mining Co. Pty. Ltd. a company incorporated in the State of Western Australia and having its registered office there at 1214 St. Georges Terrace Perth hereinafter called RRM MITSUI IRON ORE DEVELOPMENT PTY. LTD. a company incorporated in the State of Western Australia and having its principal office there at 24th Floor Forrest Centre 221 St. Georges Terrace Perth hereinafter called Mitsui Iron PEKOWALLSEND OPERATIONS LIMITED a company incorporated in the State of New South Wales and having its principal place of business there at 10 Loftus Street Sydney hereinafter called Peko NIPPON STEEL AUSTRALIA PTY. LIMITED a company incorporated in the State of New South Wales and having its registered office there at 60 Martin Place Sydney SUMITOMO METAL AUSTRALIA PTY. LTD. a company incorporated in the State of New South Wales and having its registered office there at 30th Floor CBA Centre 60 Margaret Street Sydney and the said MITSUI IRON ORE DEVELOPMENT PTY. LTD. such last mentioned three companies acting together and carrying on business under the name of CAPE LAMBERT IRON ASSOCIATES in the State of Western Australia at 24th Floor Forrest Centre 221 St. Georges Terrace Perth hereinafter collectively called CLIA and the said NIPPON STEEL AUSTRALIA PTY. LIMITED and the said SUMITOMO METAL AUSTRALIA PTY. LTD. such last mentioned two companies acting together and carrying on business under the name of

PANNAWONICA IRON ASSOCIATES in the State of Western Australia at 24th Floor Forrest Centre
As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 97 Iron Ore Robe
River Agreement Act 1964 Sixth Schedule Fifth variation agreement 221 St. Georges Terrace Perth
hereinafter collectively called PIA of the third part the said RRM Mitsui Iron Peko CLIA and PIA the
parties of the third part being hereinafter collectively called the Participants. WHEREAS a by an
agreement under seal dated the 18th day of November 1964 made between the State of the one
part and Basic Materials Pty. Limited hereinafter called Basic of the other part which agreement was
approved by and is scheduled to the Iron Ore ClevelandCliffs Agreement Act 1964 and is hereinafter
referred to as the Agreement Basic acquired upon the terms and conditions set forth in the
Agreement certain rights interests and benefits and assumed certain obligations with respect to the
exploration for and development of specified iron ore deposits and for the mining transportation
processing pelletising and shipment of iron ore therefrom; b by virtue of various agreements under
seal Robe River International Inc. formerly Cliffs International Inc. hereinafter called Cliffs became
entitled to all the right interest claim and demand whatsoever of Basic in and under the Agreement
and by virtue of deed of covenant with the State assumed the obligations of Basic thereunder; c the
Agreement has been varied by the following agreements i ii the agreement dated the 12th day of
May 1970 approved by the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1970; the
agreement dated the 13th day of July 1976 the execution of which by the State was authorized by
the Iron Ore ClevelandCliffs Agreement Act Amendment Act 1973; iii an agreement made the 5th
day of October 1983; iv v the agreement dated the 30th day of April 1984 ratified by the Iron Ore
ClevelandCliffs Agreement Amendment Act 1984; and the agreement dated the 29th day of October
1985 approved and ratified by the Iron Ore ClevelandCliff Agreement Amendment Act 1985 and as
so varied from time to time is hereinafter referred to as the Principal Agreement; d by virtue of
various agreements and deeds the Participants are now entitled to all the right title interest claim
and demand of the Company page 98 Version 02a005 Published on www.legislation.wa.gov.au As
at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement

as defined in the Principal Agreement in and under the Principal Agreement except Mineral Lease 248 SA granted thereunder by the State to Cliffs as tenants in common in the following shares RRM Mitsui Iron Peko CLIA PIA 30 20 35 5 10; by virtue of a deed dated the 12th day of May 1986 Robe River Limited became entitled inter alia to all the right title and interest of Cliffs in and to the Principal Agreement and the said Mineral Lease 248 SA; by an agreement dated the 24th day of December 1976 made between RRM Mitsui Iron Robe River Limited and Mt. Enid Iron Co. Pty. Ltd predecessors in title of the Participants and BHP Minerals Limited formerly called Dampier Mining Company Limited and referred to hereinafter as BHPM BHPM purchased inter alia interests as therein described in certain leases subleases and licences relating to the port and railway facilities constructed under the Principal Agreement and by an agreement dated the 31st day of December 1976 and made between the State and BHPM BHPM agreed to comply with observe and perform the provisions of the Principal Agreement to be complied with observed and performed in regard to the property so purchased; by an assignment and deed of covenant dated the 25th day of June 1987 made between the State BHPM and the Participants BHPM with effect from the 1st day of December 1986 sold and assigned to the Participants inter alia the whole of its interests in the leases subleases and licences referred to in recital f hereof and the Participants agreed to comply with observe and perform the provisions of the. Principal Agreement to be complied with observed and performed in regard to the property so acquired and by a release of the same date the Minister as defined in the Principal Agreement released BHPM from its obligations to the State in respect thereof; by an assignment and deed of covenant dated the 25th day of June 1987 and made between the State BHPM the Participants The Broken Hill Proprietary Company Limited and Australian Iron and Steel Proprietary Limited BHPM assigned to the Participants all its interest in the agreement defined in section 1A of the Iron Ore Dampier Mining Company Limited Agreement Act 1969 hereinafter called the Dampier e f g h As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 99 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement Agreement and in the clauses of the Agreement defined in section 2 of the Iron

Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 hereinafter called the 1964 BHP Agreement set out in item 1 of the Schedule hereto and by the same deed the Participants acquired the benefit of and became subject to the obligations arising under the clauses of the 1964 BHP Agreement set out in item 2 of the Schedule hereto insofar as they related to the interests of the Participants in the Dampier Agreement and the clauses of the 1964 BHP Agreement set out in item 1 of the Schedule hereto; by a release dated the 25th day of June 1987 the Minister as defined in the 1964 BHP Agreement released BHPM and The Broken Hill Proprietary Company Limited from liability for the performance and observance of the covenants and agreements on their part contained in the clauses set out in item 1 of the Schedule hereto and released BHPM from liability for the performance and observance of the covenants and agreements on its part contained in the Dampier Agreement; as a consequence of changed circumstances which caused the production of iron ore pellets under the Principal Agreement to become uneconomic the Minister as defined in the Principal Agreement approved the sale to the Peoples Republic of China of certain key components of the pellet plant constructed pursuant to the Principal Agreement; and i j k the parties hereto desire to amend the Principal Agreement in the light of the acquisitions by the Participants referred to in recitals g and h hereof and the said sale of the pellet plant. NOW THIS AGREEMENT WITNESSES

1. The provisions of this Agreement shall not come into operation until a Bill to ratify this Agreement is passed by the Legislature of the said State and comes into operation as an Act. 2. The Principal Agreement is hereby varied as follows 1 Clause 1 a by deleting the definition of Dampier and substituting the following definition Dampier means BHP Minerals Limited formerly Dampier Mining Company Limited;; page 100 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement b by inserting after the definition of Dampier the following definition Dampier Mineral Lease means mineral lease No. 254 SA granted to Dampier pursuant to the Agreement defined in section 2 of the Iron Ore The Broken Hill Proprietary Company Limited Agreement Act 1964 and the agreement defined in section 1A of the Iron Ore Dampier Mining Company Limited Agreement Act 1969;; c in

the definition of mineral lease by deleting and includes any subleases of any area of a mineral lease sublet to the Company and/or CRRIA by Dampier and any renewal of such lease or subleases and substituting the following d and includes any areas added to the mineral lease pursuant to the provisions of clause 10A hereof and any renewal of such lease; by inserting after the definition of State Energy Commission the following definition the 1987 Amendment date means the date on which the provisions of the agreement ratified by the Iron Ore ClevelandCliffs Agreement Amendment Act 1987 come into operation;.

2 Clause 6 in the marginal note by deleting other.

3 Clause 7A a by inserting after may require the following and in respect of measures to be taken in relation to the matters the subject of the proposals for the protection and management of the environment; b by deleting the following The provisions of clause 6 shall mutatis mutandis apply to detailed proposals submitted pursuant to this clause..

4 By inserting after clause 7A the following clauses 7AB.

1 On receipt of proposals pursuant to clause 7A hereof the Minister shall approve of the said proposals either wholly or in part without qualification or reservation; or As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 101 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement b c defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in clause 7A hereof not covered by the said proposals; or require as a condition precedent to the giving of his approval to the said proposals that the Company makes such alterations thereto or complies with such conditions in respect thereto as he having regard to the circumstances including the overall development of and the use by others as well as the Company of all or any of the facilities proposed to be provided thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions.

2 The Minister shall within two months after receipt of the said proposals pursuant to subclause 1 give notice to the Company of his decision in respect to the same.

3 4 If the decision of the Minister is as mentioned in either of paragraphs b or c of subclause 1 the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised proposals either generally or in respect to

some particular matter. Subject to subclause 5 of this clause if the decision of the Minister is as mentioned in either of paragraphs b or c of subclause 1 and the Company considers that the decision is unreasonable the Company within two months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision.

5 The Company may withdraw its proposals submitted pursuant to clause 7A hereof at any time before approval thereof or where any decision of the page 102 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 7AC. Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement Minister in respect thereof is referred to arbitration within 3 months after the award by notice to the Minister that it shall not be proceeding with the proposed modification expansion or variation of its activities as so proposed in those proposals.

6 The Company shall implement the decision of the Minister or an award made on arbitration where the proposals are not withdrawn as the case may be in accordance with the terms thereof.

1 The Company shall in respect of the matters referred to in clause 7A hereof which are the subject of proposals approved or determined under clause 7AB hereof carry out a continual programme of investigation research and monitoring to ascertain the effectiveness of the measures it is taking both generally and pursuant to its approved proposals for the protection and management of the environment.

2 The Company shall during the currency of this Agreement at yearly intervals commencing from the dates when proposals under clause 7A hereof are approved or determined or such other date or dates as the Company and the Minister may agree submit reports to the Minister concerning a measures taken for the protection and management of the environment both generally and pursuant to any proposals made under clause 7A hereof; and b investigations research and monitoring carried out pursuant to subclause 1 of this clause.

3 Each 3 years commencing from the date referred to in subclause 2 of this clause the report submitted to the Minister under that subclause shall be more detailed and shall embrace not only the matters referred to in paragraphs a and b of subclause 2 of this clause but also the results and conclusions of the investigations research and monitoring carried out during the previous 3 years and a programme of

As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 103 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement measures to be taken for protection and management of the environment including investigations research and monitoring for the ensuing 3 years. 4 The Minister may within 2 months of receipt of a detailed report pursuant to subclause 3 of this clause notify the Company that he a b requires amendment of the report andor programme for the ensuing 3 years; or requires additional detailed proposals to be submitted for the protection and management of the environment in relation to matters the subject of proposals approved or determined under clause 7AB hereof. 5 The Company shall within 2 months of receipt of a notice pursuant to paragraph a of subclause 4 of this clause submit to the Minister an amended report andor programme as required. The Minister shall afford the Company full opportunity to consult with him on his requirements during the preparation of any amended report or programme. 6 The Minister may within 1 month of receipt of an amended report or programme pursuant to subclause 5 of this clause notify the Company that he requires additional detailed proposals to be submitted for the protection and management of the environment in relation to matters the subject of proposals approved or determined under clause 7AB hereof. 7 The Company shall within 2 months of receipt of a notice pursuant to paragraph b of subclause 4 or subclause 6 of this clause submit to the Minister additional detailed proposals as required and the provisions of clause 7AB hereof where applicable shall mutatis mutandis apply. 8 The Company shall implement the decision of the Minister or an award on arbitration as the case may be in accordance with the terms thereof.. page 104

Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement 5 Clause 8 subclause 1 a paragraph a by deleting other than the mining areas included in any subleases referred to in the definition of mineral lease; b paragraph b i by deleting subparagraph ii; ii in the first proviso to paragraph b A by deleting the thirtieth anniversary of the export date and substituting the following the 31st day of December 1988; B by deleting after such anniversary as aforesaid and substituting the following after such date; iii by deleting the second proviso to paragraph b; c by deleting paragraph h inserted

by clause 62b of the agreement defined as the fourth variation agreement in section 2 of the Act ratifying the Principal Agreement. 6 Clause 8 subclause 4 by deleting paragraph g. 7 Clause 9 subclause 2 a by inserting in paragraph d after equipment the following other than the pellet plant; b in paragraph e by deleting the proviso and substituting the following proviso PROVIDED HOWEVER that this paragraph shall not apply to iron ore used for the production of iron ore pellets or for secondary processing or for the manufacture of iron or steel in any part of the said State lying north of the twentysixth parallel of latitude.; c by deleting paragraph i and substituting the following paragraph

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Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement i a for the purposes of this Agreement i as far as it is reasonable and economically practicable so to do A use labour available within the said State; and B use the services of engineers surveyors architects and other professional consultants project managers manufacturers suppliers and contractors resident and available within the said State; ii when preparing specifications calling for tenders and letting contracts for work materials plant equipment and supplies which shall at all times except where it is impracticable so to do use or be based upon Australian Standards and Codes ensure that Western Australian suppliers manufacturers and contractors are given fair and reasonable opportunity to tender or quote; and give proper consideration and where possible preference to Western Australian suppliers manufacturers and contractors when letting contracts or placing orders for works materials plant equipment and supplies where price quality delivery and service are equal to or better than that obtainable elsewhere; iii b in every contract entered into with a third party for the supply of services labour works materials plant equipment and supplies for the purposes of this Agreement require as a condition thereof that such third party shall undertake the same obligations as are referred to in subparagraph a of this paragraph and shall report to the Company concerning such third partys implementation of that condition; page 106 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement c submit a report to the Minister at quarterly intervals or such

longer periods as the Minister determines commencing from the 1987 Amendment date concerning its implementation of the provisions of this paragraph and the performance of third parties in relation thereto pursuant to subparagraph b of this paragraph together with a copy of any report received by the Company pursuant to that subparagraph during that quarter PROVIDED THAT the Minister may agree that any such reports need not be provided in respect of contracts of such kind or value as the Minister may from time to time determine;; d paragraph j i in subparagraph iii by inserting after ton the following until the 31st day of December 1988 and thereafter at the rate of three and three quarter per centum 3 of the f.o.b. revenue computed as aforesaid; ii by deleting the three provisos appearing after subparagraph xi; e paragraph o in subparagraph ii of the proviso by inserting after Dampier the following during such period as Dampier is the holder of the Dampier Mineral Lease; f by deleting paragraph p. 8 By inserting after clause 10 the following clause 10A. Notwithstanding the provisions of the Mining Act 1978 the Company shall on or before the expiration of three months from the 1987 Amendment date surrender or cause to be surrendered to the State the Company having before such surrender registered or caused to be registered surrenders of any subleases limited however in the case of Sublease Numbered 1H79 to the areas referred to in paragraph a following and subleases and As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 107 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement discharges of any mortgages and other encumbrances affecting the lands a b c those portions of the mineral lease comprising Middle Robe Section 20 and Gorge Sections 3032 34 36 and 3944; the Dampier Mineral Lease; and exploration licences numbered 4721 and 4722 granted under the Mining Act 1978 and upon such surrender the areas comprised within the Dampier Mineral Lease and the said exploration licences immediately before the surrenders thereof shall be deemed to be included in the mineral lease subject to the same terms covenants and conditions as apply to the mineral lease with such apportionments of rents as is necessary notwithstanding that the survey of such additional land has not been completed but subject to correction to accord with the survey when completed at the Companys expense and an

endorsement to that effect shall be made by the Department of Mines on the mineral lease.. 9
Clause 11 by deleting the following other than those on the plant site and. 10 Clause 13 a subclause
1 by deleting the following and c assign sublet or dispose of to Dampier in whole or in part rights
under this Agreement including its rights to or as the holder of any lease license easement grant or
other title in relation to the railway and the port and related facilities or any of them; b by deleting
subclause 3. 11 Clause 16 by deleting the following and inability common in the iron ore pellets
export industry to profitably sell iron ore pellets. page 108 Version 02a005 Published on
www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth
Schedule Fifth variation agreement 3. 4. The Participants hereby agree that notwithstanding the
provisions of any deed of assignment or covenant or other document or agreement to the contrary
any covenant or agreement on their part to be observed performed or complied with under the
Principal Agreement as varied from time to time shall be deemed to be a joint covenant or
agreement as the case may be on the part of those parties. Upon the surrender to the State of the
Dampier Mineral Lease in accordance with clause 10A of the Principal Agreement as amended by
this Agreement the Dampier Agreement the clauses of the 1964 BHP Agreement set out in item 1 of
the Schedule hereto and the clauses of the 1964 BHP Agreement set out in item 2 of the Schedule
hereto insofar as they may relate to the interests of the Participants in the Dampier Agreement and
the 1964 BHP Agreement shall thereupon be cancelled and the rights and obligations of the parties
thereto thereby terminated. 1964 BHP AGREEMENT THE SCHEDULE 1. 2. Clauses 8 9 10 21
except subclause 3 22 except paragraphs d e j and l 23 except subclause 4c 4d 4e 4g 4h 4i and 5
25 and 29. Clauses 6 22d e j and l 23a 4d 4e 4h 4i and 5 26 27 28 30 31 32 35 36 37 and 39. IN
WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto the
day and year first hereinbefore written. BRIAN BURKE SIGNED by the said THE HONOURABLE
BRIAN THOMAS BURKE M.L.A. in the presence of D. PARKER MINISTER FOR MINERALS AND
ENERGY THE COMMON SEAL of ROBE RIVER LIMITED was hereunto affixed by authority of a
resolution of the Board of Directors and in the presence of A. C. COPEMAN Director C.S. As at 03

Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 109 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement A. R. EDWARDS Secretary THE COMMON SEAL of ROBE RIVER MINING CO. PTY. LTD. was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of A. C. COPEMAN Director D. CALVIN Secretary THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Y. OKAMOTO J. MacKENZIE Director Secretary THE COMMON SEAL of PEKOWALLSEND OPERATIONS LIMITED was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of A. C. COPEMAN Director Secretary A. R EDWARDS NIPPON STEEL AUSTRALIA PTY LIMITED by its duly appointed Attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. hereunto affixing its Seal pursuant to a Power of Attorney dated 28 October 1984 registered at the Office of Titles Perth Western Australia with number C 883525 and which Attorney by its execution hereof also declares that it has no notice of revocation of the Power of Attorney aforesaid. C.S. C.S. C.S. page 110

Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement C.S. THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Y. OKAMOTO Director J. MacKENZIE Secretary SUMITOMO METAL AUSTRALIA PTY. LTD. by its duly appointed Attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. hereunto affixing its Seal pursuant to a Power of Attorney dated 18 October 1984 registered at the Office of Titles Perth Western Australia with number C883524 and which Attorney by its execution hereof declares that it has no notice of revocation of the Power of Attorney aforesaid. THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors the presence of and in Y. OKAMOTO Director C.S. J. MacKENZIE Secretary THE COMMON SEAL OF MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of a resolution of the Board of Directors and in the presence of Y. OKAMOTO Director C.S. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 111

Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement J. MacKENZIE Secretary NIPPON STEEL AUSTRALIA PTY. LIMITED by its duly appointed Attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. hereunto affixing its seal pursuant to a Power of Attorney dated 3rd November 1986 registered at the Office of Titles Perth Western Australia with number D357648 and which Attorney by its execution hereof also declares that it has no notice of revocation of the Power of Attorney aforesaid. THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by authority of the Directors and in the presence of Y. OKAMOTO Director J. MacKENZIE Secretary SUMITOMO METAL AUSTRALIA PTY. LTD. by its duly appointed Attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. hereunto affixing its seal pursuant to a Power of Attorney dated 21st October 1986 registered at the Office of Titles Perth Western Australia with number D357649 and which Attorney by its execution hereof also declares that it has no notice of revocation of the Power of Attorney aforesaid. C.S. page 112 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth Schedule Fifth variation agreement THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. was hereunto affixed by the authority of the Directors and in the presence of Y. OKAMOTO Director C.S. J. MacKENZIE Secretary [Sixth Schedule inserted No. 87 of 1987 s. 8.] As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 113 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Seventh Schedule Sixth variation agreement [s. 2] [Heading inserted No. 61 of 2010 s. 10.] 2010 THE HONOURABLE COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND ROBE RIVER LIMITED ACN 008 478 493 ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 NORTH MINING LIMITED ACN 000 081 434 NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 IRON ORE ROBE RIVER AGREEMENT 1964 RATIFIED VARIATION AGREEMENT [Solicitors details] page 114 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement

Act 1964 Sixth variation agreement Seventh Schedule THIS AGREEMENT is made this 17th day of November 2010 BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time State AND ROBE RIVER LIMITED ACN 008 478 493 of Level 33 120 Collins Street Melbourne Victoria RRL AND ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 of Level 27 Central Park 152 158 St Georges Terrace Perth Western Australia RPMC MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 of Level 26 Exchange Plaza 2 The Esplanade Perth Western Australia Mitsui NORTH MINING LIMITED ACN 000 081 434 of Level 33 120 Collins Street Melbourne Victoria NML NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 of Level 24 1 York Street Sydney New South Wales SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 of Level 39 Australia Square 264 George Street Sydney New South Wales and the said MITSUI IRON ORE DEVELOPMENT PTY. LTD. which 3 companies carry on business under the name of Cape Lambert Iron Associates CLIA and the said NIPPON STEEL AUSTRALIA PTY LTD and SUMITOMO METAL AUSTRALIA PTY LTD which 2 companies carry on business together under the name Pannawonica Iron Associates PIA. RPMC Mitsui NML CLIA and PIA are collectively referred to in this Agreement as the Robe Participants. RECITALS A. The State RRL and the Robe Participants are now the parties to the agreement dated 18 November 1964 approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 and which as subsequently As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 115 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement added to varied or amended is referred to in this Agreement as the Principal Agreement. B. The parties wish to vary the Principal Agreement. Operative provisions 1. 2. Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. The State shall introduce and sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and shall endeavour to secure its passage as an Act prior to 31 December 2010 or such later date as the parties may agree. 3. a Clause 4 does not come into

operation unless or until an Act passed in accordance with clause 2 ratifies this Agreement. b If by 30 June 2011 or such later date as may be agreed pursuant to clause 2 clause 4 has not come into operation then unless the parties hereto otherwise agree this Agreement shall cease and determine and none of the parties shall have any claim against the other parties with respect to any matter or thing arising out of or done or performed or omitted to be done or performed under this Agreement.

4. The Principal Agreement is varied as follows 1 in clause 1 a by deleting the current definition of direct shipping ore fine ore and fines; b by inserting in the appropriate alphabetical positions the following new definitions approved proposal means a proposal approved or determined under this Agreement; beneficiated ore means iron ore that has been concentrated or upgraded otherwise than solely by crushing screening separating by hydrocycloning or a similar technology which uses primarily size as a criterion washing page 116 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule scrubbing trommelling or drying or by a combination of 2 or more of those processes by the Company in a plant constructed pursuant to a proposal approved pursuant to an Integration Agreement or in such other plant as is approved by the Minister after consultation with the Minister for Mines and beneficiation and beneficiate have corresponding meanings; EP Act means the Environmental Protection Act 1986 WA; fine ore means iron ore not being beneficiated ore or pisolite fine ore which is screened and will pass through a 6.3 millimetre mesh screen; Integration Agreement means a b c d e f the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act 1963 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act Amendment Act 1968 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Hope Downs Agreement Act 1992 as from time to time

added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended; or As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 117 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement g h i j k the agreement approved by and scheduled to the Iron Ore Mount Newman Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Mount Goldsworthy Agreement Act 1964 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore GoldsworthyNimingarra Agreement Act 1972 as from time to time added to varied or amended; or the agreement authorised by and as scheduled to the Iron Ore McCameys Monster Agreement Authorisation Act 1972 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Marillana Creek Agreement Act 1991 as from time to time added to varied or amended; Integration Proponent means in relation to an Integration Agreement the Company or the Joint Venturers as the case may be as defined in and for the purpose of that Integration Agreement; iron ore includes without limitation beneficiated ore; laws relating to native title means laws applicable from time to time in the said State in respect of native title and includes the Native Title Act 1993 Commonwealth; lump ore means iron ore not being beneficiated ore or pisolite fine ore which is screened and will not pass through a 6.3 millimetre mesh screen; metallised agglomerates means products resulting from the reduction of iron ore by any method whatsoever and having an iron of not less than 85; Minister for Mines means the Minister in the Government of the said State for the time being responsible under whatsoever title for the administration of the Mining Act 1978 WA; page 118 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule pisolite fine ore means iron ore not being beneficiated ore derived from channel iron deposits that appear to be chemically precipitated sedimentary deposits comprised of a pisolitic texture of hematite grains rimmed with goethite in a goethitic matrix and a having a product grade loss on ignition of 8.5 or greater; and b which will pass

through an 9.5 millimetre mesh screen; Related Entity means a company in which a b as at 21 June 2010; and after 21 June 2010 with the approval of the Minister a direct or through a subsidiary or subsidiaries within the meaning of the Corporations Act 2001 Commonwealth indirect shareholding of 20 or more is held by c Rio Tinto Limited ABN 96 004 458 404; or d BHP Billiton Limited ABN 49 004 028 077; or e those companies referred to in paragraphs c and d in aggregate; variation date means the date on which clause 4 of the variation agreement made on or about 17 November 2010 between the State and the Company comes into operation; and washing means a process of separation by water using only size as a criterion; c in the definition of agreed or determined by i ii deleting assessed at and substituting assessed on; and deleting all the words after have regard to and substituting a colon followed by i in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to clause 92e the prices for that type of iron As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 119 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement ore prevailing at the time the price for such iron ore was agreed between the arms length purchaser referred to in paragraph Biii of that proviso and the seller in relation to the type of sale and the relevant international seaborne iron ore market into which such iron ore was sold and where prices beyond the deemed f.o.b. point are being considered the deductions mentioned in the definition of f.o.b. value; and in any other case the prices for that type of iron ore prevailing at the time the price for such iron ore was agreed between the Company and the purchaser in relation to the type of sale and the market into which such iron ore was sold and where prices beyond the deemed f.o.b. point are being considered the deductions mentioned in the definition of f.o.b. value;; ii d in the definition of Companys wharf by inserting and in clauses 92e and f also any additional wharf constructed by the Company pursuant to this Agreement before the semi colon; e in the definition of f.o.b. value by i in paragraph i A inserting subject to paragraph ii before in the case of; and B deleting assessed as and substituting assessed on; ii renumbering paragraph ii as paragraph iii; and iii inserting after paragraph i the following new paragraph ii in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to clause 92e the price

which is payable for the iron ore by the arms length purchaser as referred to in paragraph Biii of that proviso or where the Minister considers following page 120 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule advice from the appropriate Government department that the price payable in respect of the iron ore does not represent a fair and reasonable market value for that type of iron ore assessed on an arms length basis in the relevant international seaborne iron ore market such amount as is agreed or determined as representing such a fair and reasonable market value less all duties taxes costs and charges referred to in paragraph i above; and; f in the definition of loading port by g h i j i ii renumbering the existing paragraph c as paragraph e; and inserting after paragraph b the following new paragraphs c the Port of Port Hedland; or d any other port constructed after the variation date under an Integration Agreement;; in the definition of mineral lease by deleting clause 10A and substituting clauses 9A or 10A; in the definition of secondary processing by deleting concentration or other beneficiation of iron ore other than by crushing or screening and substituting beneficiation of iron ore; in the sentence beginning marginal notes by inserting and clause notes after marginal notes; and by inserting at the end of clause 1 the following new paragraphs Words in the singular shall include the plural and words in the plural shall include the singular according to the requirements of the context. Nothing in this Agreement shall be construed a to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or inental to its As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 121 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement activities under this Agreement that may be made by or under the EP Act; or b to exempt the State or the Company from compliance with or to require the State or the Company to do anything contrary to any laws relating to native title or any lawful obligation or requirement imposed on the State or the Company as the case may be pursuant to any laws relating to native title; or c to exempt the Company from compliance with the provisions of the Aboriginal Heritage Act 1972 WA.; 2 by deleting clauses 7A and 7AB and substituting the following

new clauses 7A. 1 If the Company at any time during the continuance of this Agreement after the variation date desires to significantly modify expand or otherwise vary its activities carried on pursuant to this Agreement other than under clauses 7AC 7C or 9D beyond those activities specified in any proposals approved pursuant to clause 6 it shall give notice of such desire to the Minister and within 2 months thereafter shall submit to the Minister detailed proposals in respect of all matters covered by such notice and such of the other matters mentioned in clause 52a as the Minister may require. 2 A proposal may with the consent of the Minister except in relation to an Integration Agreement and that of any parties concerned being in respect of an Integration Agreement the Integration Proponent for that agreement provide for the use by the Company of any works installations or facilities constructed or established under a Government agreement. 3 Each of the proposals pursuant to subclause 1 may with the approval of the Minister or shall if so required by the Minister be submitted separately and in any order as to any matter or matters in respect of which such proposals are required to be submitted. page 122 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule 4 At the time when the Company submits the said proposals it shall submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. 5 The Company may withdraw its proposals pursuant to subclause 1 at any time before approval thereof or where any decision in respect thereof is referred to arbitration as referred to in clause 7AB within 3 months after the award by notice to the Minister that it shall not be proceeding with the same. Consideration of Companys proposals under clause 7A 7AB.1 In respect of each proposal pursuant to subclause 1 of clause 7A the Minister shall a b c subject to the limitations set out below refuse to approve the proposal whether it requests the grant of new tenure or not if the Minister is satisfied on reasonable grounds that it is not in the public

interest for the proposal to be approved; or approve of the proposal without qualification or reservation; or defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in clause 7A1 not covered by the said proposal; or As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 123 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement d require as a condition precedent to the giving of his approval to the said proposal that the Company make such alteration thereto or comply with such conditions in respect thereto as he thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions PROVIDED ALWAYS that where implementation of any proposals hereunder has been approved pursuant to the EP Act subject to conditions or procedures any approval or decision of the Minister under this clause shall if the case so requires incorporate a requirement that the Company make such alterations to the proposals as may be necessary to make them accord with those conditions or procedures. In considering whether to refuse to approve a proposal the Minister is to assess whether or not the implementation of the proposal by itself or together with any one or more of the other submitted proposals will i ii detrimentally affect economic and orderly development in the said State including without limitation infrastructure development in the said State; or be contrary to or inconsistent with the planning and development policies and objectives of the State; or iii detrimentally affect the rights and interests of third parties; or iv detrimentally affect access to and use by others of the lands the subject of any grant or proposed grant to the Company. The right to refuse to approve a proposal conferred by paragraph a may only be exercised in respect of a proposal where the Minister is satisfied on reasonable grounds that a purpose of the proposal is the integrated use of works installations or facilities page 124 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule as defined in subclause 7 of clause 9B for the purpose of that clause as contemplated by clause 9B. It may not be so exercised in respect of a proposal if pursuant to clause 7AD5 the Minister prior to the submission of the proposal advised the Company

in writing that the Minister has no public interest concerns as defined in that clause with the single preferred development as referred to in clause 7AD5a the subject of the submitted proposals and those proposals are consistent as to their substantive scope and with the information provided to the Minister pursuant to clause 7AD5 in respect of that single preferred development. 2 The Minister shall within 2 months after receipt of 3 4 proposals pursuant to clause 7A1 give notice to the Company of his decision in respect to the proposals PROVIDED THAT where a proposal is to be assessed under Part IV of the EP Act the Minister shall only give notice to the Company of his decision in respect to the proposal within 2 months after service on him of an authority under section 457 of the EP Act. If the decision of the Minister is as mentioned in either of paragraphs a c or d of subclause 1 the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised proposals either generally or in respect to some particular matter. If the decision of the Minister is as mentioned in either of paragraphs c or d of subclause 1 and the Company considers that the decision is unreasonable the Company within 2 months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision PROVIDED THAT any requirement of the Minister pursuant to the proviso to subclause 1 shall not be referable to arbitration hereunder. A decision of the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 125 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Minister under paragraph a of subclause 1 shall not be referable to arbitration under this Agreement. 5 If by the award made on the arbitration pursuant to subclause 4 the dispute is deed in favour of the Company the decision shall take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. 6 The Company shall implement the approved proposals in accordance with the terms thereof. 7 Notwithstanding clause 14 the Minister may during the implementation of approved proposals approve variations to those proposals.; 3 by inserting after clause 7AC the following new clause Notification of possible proposals 7AD. 1 If the Company upon completion of a prefeasibility study in respect of any matter that would require the

submission and approval of proposals pursuant to this Agreement being proposals which will have as their purpose or one of their purposes the integrated use of works installations or facilities as contemplated by clause 9B for the matter to be undertaken intends to further consider the matter with a view to possibly submitting such proposals it shall promptly notify the Minister in writing giving reasonable particulars of the relevant matter. 2 Within one 1 month after receiving the notification the Minister may if the Minister so wishes inform the Company of the Ministers views of the matter at that stage. 3 If the Company is informed of the Ministers views it shall take them into account in deciding whether or not to proceed with its consideration of the matter and the submission of proposals. 4 Neither the Ministers response nor the Minister choosing not to respond shall in any way limit prejudice or otherwise affect the exercise by the page 126 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule Minister of the Ministers powers or the performance of the Ministers obligations under this Agreement or otherwise under the laws from time to time of the said State. 5 a This subclause applies where the Company has settled upon a single preferred development a purpose of which is the integrated use of works installations or facilities as defined in subclause 7 of clause 9B for the purpose of that clause as contemplated by clause 9B. b For the purpose of this subclause public interest concerns means any concern that implementation of the single preferred development or any part of it will i detrimentally affect economic and orderly development in the said State including without limitation infrastructure development in the said State; or ii be contrary to or inconsistent with the planning and development policies and objectives of the State; or iii detrimentally affect the rights and interests of third parties; or iv detrimentally affect access to and use by others of lands the subject of any grant or proposed grant to the Company. c At any time prior to submission of proposals the Company may give to the Minister notice of its single preferred development and request the Minister to confirm that the Minister has no public interest concerns with that single preferred development. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 127 Iron Ore Robe River Agreement Act 1964

Seventh Schedule Sixth variation agreement d The Company shall furnish to the Minister with its notice reasonable particulars of the single preferred development including without limitation i ii iii as to the matters that would be required to be addressed in submitted proposals; and its progress in undertaking any feasibility or other studies or matters to be completed before submission of proposals; and its timetable for obtaining required statutory and other approvals in relation to the submission and approval of proposals; and iv its tenure requirements. If so required by the Minister the Company will provide to the Minister such further information regarding the single preferred development as the Minister may require from time to time for the purpose of considering the Companys request and also consult with the Minister or representatives or officers of the State in regard to the single preferred development. e f Within 2 months after receiving the notice or if the Minister requests further information within 2 months after the provision of that information the Minister must advise the Company i that the Minister has no public interest concerns with the single preferred development; or ii that he is not then in a position to advise that he has no public interest concerns page 128 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule with the single preferred development and the Ministers reasons in that regard. g If the Minister gives the advice mentioned in paragraph fii the Company may should it so desire give a further request to the Minister in respect of a revised or alternate single preferred development and the provisions of this subclause shall apply mutatis mutandis thereto.; 4 in clause 81b by a in the second line deleting clause 6 and substituting clauses 6 or 7AB; b in subparagraph i i inserting or cause to be granted after granted; ii iii iv v in the paragraph beginning at peppercorn rental deleting the harbour area; inserting after that paragraph the following new paragraph at commercial rentals licence or easement fees as applicable leases licences or easements within Port Walcott; and inserting the Marine and Harbours Act 1981 WA after Jetties Act 1926; and inserting installations or facilities before and operations hereunder; and c in the proviso following subparagraph iii A deleting and iron ore concentrates and iron ore pellets after all iron ore; and B deleting or in the case of iron ore or

concentrates production as the case may be of the iron or iron ore concentrates or iron ore pellets and substituting of the iron ore; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 129 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement 5 by inserting after subclause 3 of clause 8 the following new subclause 3a The provisions of subclause 1 of this clause shall not operate so as to require the State to grant or vary or cause to be granted or varied any lease licence or other right or title until all processes necessary under any laws relating to native title to enable that grant or variation to proceed have been completed.; 6 by deleting paragraph e of clause 92 and substituting the following new paragraphs e ship or procure the shipment of all iron ore mined from the mineral lease and sold i ii from the Companys wharf; or from any other wharf in a loading port which wharf has been constructed under an Integration Agreement; or iii with the Ministers approval given before submission of proposals in that regard from any other wharf in a loading port which wharf has been constructed under another Government agreement excluding the Integration Agreements and use its best endeavours to obtain therefor the best price possible having regard to market conditions from time to time prevailing PROVIDED THAT A B this paragraph shall not apply to iron ore used for secondary processing or for the manufacture of iron or steel in any part of the said State lying north of the twenty sixth parallel of latitude; and iron ore from the mineral lease may be sold by the Company prior to or at the time of the shipment under this Agreement at a price equal to the production costs in respect of that iron ore up to the point of sale if i the Minister is notified before the time of shipment that the sale is to be made at cost providing details of the proposed sale; and page 130 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule ii iii the Minister is notified of the proposed arms length purchaser in the relevant international seaborne iron ore market of the iron ore the subject of the proposed sale at cost; and there is included in the return lodged pursuant to subclause 2k particulars of the transaction in which the ore sold at cost was subsequently purchased in the relevant international seaborne iron ore market by an arms length

purchaser specifying the purchaser the seller the price and the date when the sale was agreed between the arms length purchaser and the seller; and iv the arms length purchaser referred to in iii above is not then a designated purchaser as referred to in subclause 2ea; Designated purchaser ea if required by notice in writing from the Minister provide the Minister within 30 days after receiving the notice with evidence that the transaction as included in the return pursuant to paragraph Biii of subclause 2e was a sale in the relevant international seaborne iron ore market to an independent participant in that market. If no evidence is provided or the Minister is not so satisfied on the evidence provided or other information obtained the Minister may by notice to the Company designate the purchaser to be a designated purchaser and that designation will remain in force unless and until lifted by further notice from the Minister to the Company. For the avoidance of doubt the parties acknowledge that marketing entities forming part of the corporate group including the Company or part of the parallel corporate group if the Company is part of a duallisted corporate structure are not independent participants for the purposes of this subclause;; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 131 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement 7 by deleting paragraph j of clause 92 and substituting the following new paragraph j pay to the State royalty on all iron ore from the mineral lease other than iron ore shipped solely for testing purposes as follows i ii on lump ore and on fine ore and pisolite fine ore not sold or shipped separately as such at the rate of 7.5 of the f.o.b. value; on fine ore and pisolite fine ore sold or shipped separately as such at the rate of 5.625 of the f.o.b. value; iii on beneficiated ore at the rate of 5 of the f.o.b. value; and iv on all other iron ore at the rate of 7.5 of the f.o.b. value. Where beneficiated ore is produced from an admixture of iron ore from the mineral lease and iron ore from elsewhere a portion and a portion only of the beneficiated ore so produced being equal to the proportion that the amount of the iron in the iron ore from the mineral lease used in the production of that beneficiated ore bears to the total amount of iron in the iron ore so used shall be deemed to be produced from iron ore from the mineral lease. Where for the purpose of determining f.o.b. value it is necessary to convert an amount or price to Australian

currency the conversion is to be calculated using a rate excluding forward hedge or similar contract rates that has been approved by the Minister at the request of the Company and in the absence of such request as determined by the Minister to be a reasonable rate for the purpose. The provisions of regulation 85AA Effect of GST etc. on royalties of the Mining Regulations 1981 WA shall apply mutatis mutandis to the calculation of royalties under this clause;; 8 in clause 92k a b by deleting or iron ore pellets or iron ore concentrates; by inserting and also showing such other information in relation to the abovementioned iron ore as the Minister may page 132 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule from time to time reasonably require in regard to and to assist in verifying the calculation of royalties in accordance with paragraph j after the due date of return; and c by deleting all the words after on the basis of and substituting a colon followed by i ii in the case of iron ore initially sold at cost pursuant to paragraph B of the proviso to subclause 2e at the price notified pursuant to paragraph Biii of that proviso; and in any other case invoices or provisional invoices as the case may be rendered by the Company to the purchaser which invoices the Company shall render without delay simultaneously furnishing copies thereof to the Minister of such iron ore or on the basis of estimates as agreed or determined and shall from time to time in the next following appropriate return and payment make by the return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. values shall have been finally calculated agreed or determined;; 9 in clause 92n a in subparagraph i i by deleting books of account and records including but not limited to contracts of the Company and substituting books records accounts documents including contracts data and information of the Company stored by any means; ii by deleting or iron ore pellets or iron ore concentrates; and iii by inserting in whatever form after copies or extracts; and b by deleting the full stop at the end of subparagraph ii and substituting ; and and the following new subparagraph iii cause to be produced in Perth in the said State all books records accounts documents including As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 133 Iron Ore Robe River Agreement Act 1964 Seventh Schedule

Sixth variation agreement contracts data and information of the kind referred to in subparagraph i to enable the exercise of rights by the Minister or the Ministers nominee under subparagraph i regardless of the location in which or by whom those books records accounts documents including contracts data and information are stored from time to time.; 10 in clause 94 a by deleting paragraph a and substituting the following new paragraph a The Company may blend iron ore mined from the mineral lease with any i ii iron ore mined from a mining tenement or other mining title granted under or pursuant to an Integration Agreement; or iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; or iii with the prior approval of the Minister iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; or iv with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by an Integration Proponent from the third party.; and b in paragraph b i by deleting there is and substituting there are; page 134 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule ii by deleting between the relevant Government agreements; and iii by deleting blended and and substituting blended as between each of the sources referred to in paragraph a; and iv inserting a comma after processing; 11 by inserting after clause 9 the following new clauses Additional areas 9A. 1 Notwithstanding the provisions of the Mining Act 1904 or the Mining Act 1978 the Company may from time to time during the currency of this Agreement apply to the Minister for a b areas held by the Company or an associated company under a mining tenement granted under the Mining Act 1978; the area shaded in red on Plan A initialled by or on behalf of the parties for the purpose of identification and being at the variation date the subject of Mineral Lease 4SA to be included in the mineral lease but so that the total area of the mineral lease any land that may be included in the mineral lease pursuant to this Agreement and of

any other mineral lease or mining lease granted under or pursuant to this Agreement as aggregated shall not at any time exceed 777 square kilometres. The Minister shall confer with the Minister for Mines in regard to any such application and if they approve the application the Minister for Mines shall upon the surrender of the relevant mining tenement or in respect of the area referred to in paragraph b above the surrender of that area from Mineral Lease 4SA include the area the subject thereof in the mineral lease by endorsement subject to such of the conditions of the surrendered mining tenement as the Minister for Mines determines but otherwise subject to the same terms covenants and As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 135 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement conditions as apply to the mineral lease with such apportionment of rents as is necessary and notwithstanding that the survey of such additional land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. 2 The Minister may approve upon application by the Company from time to time for the total area referred to in subclause 1 to be increased up to a limit not exceeding 1000 square kilometres. 3 The Company shall not mine or carry out other activities other than exploration bulk sampling and testing on any area or areas added to the mineral lease pursuant to subclause 1 of this clause unless and until proposals with respect thereto are approved or determined pursuant to the subsequent provisions of this clause. 4 If the Company desires to commence mining of iron ore or to carry out any other activities other than as aforesaid on the said areas it shall give notice of such desire to the Minister and shall within 2 months of the date of such notice or thereafter within such extended time as the Minister may allow as hereinafter provided and subject to the provisions of this Agreement submit to the Minister to the fullest extent reasonably practicable its detailed proposals which proposals shall include plans where practicable and specifications where reasonably required by the Minister with respect to such mining or other activities as additional proposals pursuant to clause 7A. Integrated use of works installations or facilities under the Integration Agreements 9B. 1 Subject to subclauses 2 to 7 of this clause and to the other provisions of this Agreement the Company may during the

continuance of this Agreement page 136 Version 02a005 Published on www.legislation.wa.gov.au

As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule a use any existing or new works installations or facilities constructed or held i ii under this Agreement; or under any other Integration Agreement which are made available for such use and during the continuance of such Integration Agreement; or iii with the approval of the Minister under a Government agreement excluding an Integration Agreement which are made available for such use and during the continuance of that agreement wholly or in part in the activities of the Company carried on by it pursuant to this Agreement including without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing so including without limitation blending permitted by clause 94 of A iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; B with the prior approval of the Minister iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; or C with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 137 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Government agreement which has been purchased by the Company from the third party; D iron ore mined under an Integration Agreement; b make any existing or new works installations or facilities constructed or held under this Agreement available for use wholly or partly by another Integration Proponent during the continuance of its Integration Agreement in the activities of that Integration Proponent carried on by it pursuant to its Integration Agreement including without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing so including without limitation blending permitted by that Integration Agreement of i iron ore mined from a Mining Act

1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; ii with the prior approval of the Minister as defined in that Integration Agreement iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; iii with the prior approval of the Minister as defined in that Integration Agreement iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government page 138 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule agreement which has been purchased by that Integration Proponent from the third party; iv iron ore mined under an Integration Agreement; c make any existing or new works installations or facilities constructed or held under this Agreement available for use wholly or partly in connection with operations under i a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State for iron ore which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement; or ii with the approval of the Minister a Government agreement other than an Integration Agreement for the mining of iron ore in or proximate to the Pilbara region of the said State; subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c connect any existing or new works installations or facilities constructed or held under this Agreement to any existing or new works installations or facilities constructed or held under another Integration Agreement; subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c or making of any connection referred to in paragraph d construct new works installations or facilities and expand modify or otherwise vary any existing and new works installations or facilities constructed or held under this Agreement; d e As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 139 Iron Ore Robe River Agreement Act 1964 Seventh Schedule

Sixth variation agreement f g allow a railway or rail spur line not being a railway or rail spur line constructed or held under an Integration Agreement to be connected to a railway or rail spur line or other works installations or facilities constructed or held under this Agreement for the delivery of iron ore to an Integration Proponent for transport by railway and shipping from a loading port together with any ancillary and inental activities in doing so as part of its activities under its Integration Agreement; and allow an electricity transmission line not being an electricity transmission line constructed or held under an Integration Agreement to be connected to an electricity transmission line constructed or held under this Agreement for the supply of electricity permitted to be made under an Integration Agreement.

2 a A connection referred to in clause 1d or construction expansion modification or other variation referred to in subclause 1e by the Company shall to the extent not already authorised under this Agreement as at the variation date be regarded as a significant modification expansion or other variation of the Companys activities carried on by it pursuant to this Agreement and may only be made in accordance with proposals submitted and approved or determined under this Agreement in accordance with clauses 7A and 7AB or clause 9D as the case may require and otherwise in compliance with the provisions of this Agreement and the laws from time to time of the said State. For the avoidance of doubt the parties acknowledge that any use or making available for use contemplated by subclause 1a 1b or 1c shall not otherwise than as required by this paragraph a require the submission and approval of further proposals under this Agreement.

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Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule b The Company shall not be entitled to i ii submit proposals to construct any new port or to establish harbour or port works installations or facilities or to expand modify or otherwise vary harbour or works installations or facilities otherwise than within the boundaries of Port Walcott; or generate and supply power take and supply water or dispose of water otherwise than in accordance with the other clauses of this Agreement and subject to any restrictions contained in those clauses; or iii without limiting subparagraphs i and ii submit proposals to construct or establish works installations or

facilities of a type or to make expansions modifications or other variations of works installations or facilities of a type which in the Ministers reasonable opinion this Agreement immediately before the variation date did not permit or contemplate the Company constructing establishing or making as the case may be otherwise than for integration use as contemplated by subclauses 1a 1b or 1c or as permitted by clause 9D; or submit proposals to make a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e otherwise than on tenure granted under or pursuant to this Agreement from time to time or held pursuant to this Agreement from time to time; or iv As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 141 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement v vi submit proposals to make a connection referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use as contemplated by subclause 1ci if in the reasonable opinion of the Minister the activity which is the subject of the proposals would give to the holder or holders of the relevant Mining Act 1978 mining lease the benefit of rights or powers granted to the Company under this Agreement over and above the right of access to and use of the relevant works installations or facilities; or submit proposals to make a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use as contemplated by subclause 1c and involving the grant of tenure without the prior approval of the Minister; or vii submit proposals to assign sublet transfer or dispose of any works installations or facilities constructed or held under this Agreement or any leases licences easements or other titles under or pursuant to this Agreement for any purpose referred to in this clause. c Notwithstanding the provisions of clauses 7AB and 9D the Minister may defer consideration of or a decision upon a proposal submitted by the Company for a connection as referred to in subclause 1d or a construction expansion modification or other variation as referred to in subclause 1e for the purpose of use or making available for use as referred to in subclauses 1a or 1b until relevant page 142 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River

Agreement Act 1964 Sixth variation agreement Seventh Schedule corresponding proposals under the relevant Integration Agreement have been submitted and those proposals can be approved under that Integration Agreement concurrently with the Ministers approval under this Agreement of the Companys proposal. 3 Any use or making available for use as referred to in subclause 1 or submission of proposals as referred to in subclause 2 in respect of a Related Entity shall be subject to the Company first confirming with the Minister that the Minister is satisfied that the relevant company is a Related Entity. 4 The Company shall give the Minister prior written notice of any significant change other than a temporary one for maintenance or to respond to an emergency proposed in its use or in it making available for use works installations or facilities as referred to in this clause a b from that authorised under this Agreement immediately before the variation date; and subsequently from that previously notified to the Minister under this subclause as soon as practicable before such change occurs. The Company shall also keep the Minister fully informed with respect to any proposed connection as referred to in subclause 1f or 1g or request of the Company for such connection to be allowed. 5 Nothing in this Agreement shall be construed to a exempt another Integration Proponent from complying with or the application of the provisions of its Integration Agreement; or b restrict the Companys rights under clause 13. For the avoidance of doubt the approval of proposals under this Agreement shall not be construed as authorising another Integration Proponent to As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 143 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement undertake any activities under this Agreement or under another Integration Agreement. 6 Nothing in this clause shall be construed to exempt the Company from complying with or the application of the other provisions of this Agreement including without limitation clause 13 and of relevant laws from time to time of the said State. 7 For the purpose of this clause works installations or facilities means any a b c d e f harbour or port works installations or facilities including without limitation stockpiles reclaimers conveyors and wharves; railway or rail spur lines; track structures and systems associated with the operation and maintenance of a railway

including without limitation sidings train control and signalling systems maintenance workshops and terminal yards; train loading and unloading works installations or facilities; conveyors; private roads; g mine aerodrome and associated aerodrome works installations and facilities; h iron ore mining crushing screening beneficiation or other processing works installations or facilities; i mine administration buildings including without limitation offices workshops and medical facilities; j k borrow pits; accommodation and ancillary facilities including without limitation construction page 144 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule camps and in townsites constructed pursuant to and held under any Integration Agreement; l water sewerage electricity gas and telecommunications works installations and facilities including without limitation pipelines transmission lines and cables; and m any other works installations or facilities approved of by the Minister for the purpose of this clause. Transfer of rights to shared works installations or facilities 9C.

1 For the purposes of this clause Relevant Infrastructure means any works installations or facilities as defined in clause 9B7 a constructed or held under another Integration Agreement; b which the Company is using in its activities pursuant to this Agreement; c which the Minister is satisfied after consulting with the Company and the Integration Proponent for that other Integration Agreement i are no longer required by that other Integration Proponent to carry on its activities pursuant to its Integration Agreement because of the cessation of the Integration Proponents mining operations in respect of which such Relevant Infrastructure was constructed or held or because of any other reason acceptable to the Minister; and ii are required by the Company to continue to carry on its activities pursuant to this Agreement; and d in respect of which that other Integration Proponent has notified the Minister it consents As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 145 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement to the Company submitting proposals as referred to in subclause 2. 2 The Company may as an additional proposal pursuant to clause 7A propose a b that it be granted a lease licence or other title over the Relevant Infrastructure pursuant to this Agreement subject to

and conditional upon the other Integration Proponent surrendering wholly or in part and upon such terms as the Minister considers reasonable including any variation of terms to address environmental issues its lease licence or other title over the Relevant Infrastructure; or that the other Integration Proponents lease licence or other title not being a mineral lease mining lease or other right to mine title granted under a Government agreement the Mining Act 1904 or the Mining Act 1978 to the Relevant Infrastructure be transferred to this Agreement to be held by the Company pursuant to this Agreement with such surrender of land from it and variations of its terms as the Minister considers reasonable for that title to be held under this Agreement including without limitation to address environmental issues and outstanding obligations of that other Integration Proponent under its Integration Agreement in respect of that Relevant Infrastructure. The provisions of clause 7AB shall mutatis mutandis apply to any such additional proposal. In addition the Company acknowledges that the Minister may require variations of the other Integration Agreement and/or proposals under it or of this Agreement in order to give effect to the matters contemplated by this clause.

Miscellaneous Licences for Railways 9D. 1 In this clause subject to the context page 146 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule Additional Infrastructure means a Train Loading Infrastructure; b Train Unloading Infrastructure; c a conveyor train unloading and other infrastructure necessary for the transport of iron ore freight goods or other products from the Railway directly or indirectly to port facilities within a loading port in each case located outside a Port; LAA means Land Administration Act 1977 WA; Lateral Access Roads has the meaning given in subclause 3aiv; Lateral Access Road Licence means a miscellaneous licence granted pursuant to subclause 6aiv or subclause 6b as the case may be and according to the requirements of the context describes the area of land from time to time the subject of that licence; Port means any port the subject of the Port Authorities Act 1999 WA or the Shipping and Pilotage Act 1967 WA; Private Roads means Lateral Access Roads and the Companys access roads within a Railway Corridor; Rail Safety Act means the Rail Safety Act 1998 WA; Railway means a standard gauge heavy haul

railway or railway spur line located or to be located as the case may be in or proximate to the Pilbara region of the said State but outside the boundaries of a Port for the transport of iron ore freight goods and other products together with all railway track associated track structures including sidings turning loops over or under track structures supports including supports for equipment or items associated with the use of a railway tunnels bridges train As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 147 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement control systems signalling systems switch and other gear communication systems electric traction infrastructure buildings excluding office buildings housing and freight centres workshops and associated plant machinery and equipment and including rolling stock maintenance facilities terminal yards depots culverts and weigh bridges which railway is or is to be as the case may be the subject of approved proposals under subclause 4 and includes any expansion or extension thereof outside a Port which is the subject of additional proposals approved in accordance with subclause 5; Railway Corridor means prior to the grant of a Special Railway Licence the land for the route of the Railway the subject of that licence access roads other than Lateral Access Roads areas from which stone sand clay and gravel may be taken temporary accommodation facilities for the railway workforce water bores and Additional Infrastructure if any which is the subject of a subsisting agreement pursuant to subclause 3a and after the grant of the Special Railway Licence the land from time to time the subject of that Special Railway Licence; Railway Operation means the construction and operation under this Agreement of the relevant Railway and associated access roads and Additional Infrastructure if any within the relevant Railway Corridor and of the associated Lateral Access Roads in accordance with approved proposals; Railway spur line means a standard gauge heavy haul railway spur line located or to be located in or proximate to the Pilbara region of the said State but outside a Port connecting to a Railway for the transport of iron ore freight goods and other products upon the Railway to directly or indirectly a loading port; Railway Operation Date means the date of the first carriage of iron ore freight goods or other products page 148 Version 02a005 Published on www.legislation.wa.gov.au

As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule over the relevant Railway other than for construction or commissioning purposes; Railway spur line Operation Date means the date of the first carriage of iron ore freight goods or other products over the relevant Railway spur line other than for construction or commissioning purposes; Special Railway Licence means the relevant miscellaneous licence for railway and if applicable other purposes granted to the Company pursuant to subclause 6ai as varied in accordance with subclause 6h or subclause 6i and according to the requirements of the context describes the area of land from time to time the subject of that licence; Train Loading Infrastructure means conveyors stockpile areas blending and screening facilities stackers reclaimers and other infrastructure reasonably required for the loading of iron ore freight goods or other products onto the relevant Railway for transport directly or indirectly to a loading port; and Train Unloading Infrastructure means train unloading infrastructure reasonably required for the unloading of iron ore from the Railway to be processed or blended with other iron ore at processing or blending facilities in the vicinity of that train unloading infrastructure and with the resulting iron ore products then loaded on to the Railway for transport directly or indirectly to a loading port.

Company to obtain prior Ministerial inprinciple approval

2 a If the Company wishes from time to time during the continuance of this Agreement to proceed under this clause with a plan to develop a Railway it shall give notice thereof to the Minister and furnish to the Minister with that notice an outline of its plan. b The Minister shall within one month of a notice under paragraph a advise the Company As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 149 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement whether or not he approves inprinciple the proposed plan. The Minister shall afford the Company full opportunity to consult with him in respect of any decision of the Minister under this paragraph. c The Ministers inprinciple approval in respect of a proposed plan shall lapse if the Company has not submitted detailed proposals to the Minister in respect of that plan in accordance with this clause within 18 months of the Ministers inprinciple approval.

Railway Corridor 3 a If the Minister gives inprinciple approval to a plan of the Company to

develop a Railway it shall consult with the Minister to seek the agreement of the Minister as to i where the Railway will begin and end; and ii iii iv a route for the Railway access roads to be within the Railway Corridor and the land required for that route as well as Additional Infrastructure if any including without limitation areas from which stone sand clay and gravel may be taken temporary accommodation facilities for the railway workforce and water bores; and in respect of Additional Infrastructure if any the nature and capacity of such Additional Infrastructure; and the routes of and the land required for roads outside the Railway Corridor and also outside a Port for access to it to construct the Railway such roads as agreed being Lateral Access Roads. In seeking such agreement regard shall be had to achieving a balance between engineering page 150 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule matters including costs the nature and use of any lands concerned and interests therein and the costs of acquiring the land all of which shall be borne by the Company. The parties acknowledge the intention is for the Company to construct the Railway the access roads for the construction and maintenance of the Railway which are to be within the Railway Corridor and the relevant Additional Infrastructure if any along the centreline of the Railway Corridor subject to changes in that alignment to the extent necessary to avoid heritage environmental or poor ground conditions that are not identified during preliminary investigation work and recognise the width of the Railway Corridor may need to vary along its route to accommodate Additional Infrastructure if any access roads areas from which stone sand clay and gravel may be taken temporary accommodation facilities for the railway workforce and water bores. The provisions of clause 18 shall not apply to this subclause. If the date by which the Company must submit detailed proposals under subclause 4a as referred to in subclause 2c is extended or varied by the Minister pursuant to clause 17 any agreement made pursuant to paragraph a before such date is extended or varied shall unless the Minister notifies the Company otherwise be deemed to be at an end and neither party shall have any claim against the other in respect of it. b c The Company acknowledges that it shall be responsible for liaising with every title holder in respect of the land

affected and for obtaining in a form and substance acceptable to the Minister all unconditional and irrevocable consents of each such title holder to and all statutory As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 151 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement consents required in respect of the land affected for i ii the grant of the Special Railway Licence for the construction operation and maintenance within the Railway Corridor of the Railway access roads and Additional Infrastructure if any to be within the Railway Corridor; and the grant of Lateral Access Road Licences for the construction use and maintenance of Lateral Access Roads over the routes for the Lateral Access Roads agreed pursuant to paragraph a; and iii the inclusion of additional land in the Special Railway Licence as referred to in subclause 6h or subclause 6i in accordance with this clause. For the purposes of this subclause 3c title holder means a management body as defined in the LAA in respect of any part of the affected land a person who holds a mining petroleum or geothermal energy right as defined in the LAA in respect of any part of the affected land a person who holds a lease or licence under the LAA in respect of any part of the affected land a person who holds any other title granted under or pursuant to a Government agreement in respect of any part of the affected land a person who holds a lease or licence in respect of any part of the affected land under any other Act applying in the said State and a person in whom any part of the affected land is vested immediately before the provision of such consents to the Minister as referred to in subclause 4eii including as applying pursuant to subclause 5d. page 152 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule Company to submit proposals for Railway 4 a The Company shall subject to the EP Act the provisions of this Agreement agreement at that time subsisting in respect of the matters required to be agreed pursuant to subclause 3a submit to the Minister by the latest date applying under subclause 2c to the fullest extent reasonably practicable its detailed proposals including plans where practicable and specifications where reasonably required by the Minister and any other details normally required by a local government in whose area any works are to be situated with respect to the undertaking of

the relevant Railway Operation which proposals shall include the location area layout design materials and time program for the commencement and completion of construction or the provision as the case may be of each of the following matters namely i the Railway including fencing if any and crossing places within the Railway Corridor; ii Additional Infrastructure if any within the Railway Corridor; iii temporary accommodation and ancillary temporary facilities for the railway workforce on or in the vicinity of the Railway Corridor and housing and other appropriate facilities elsewhere for the Companys workforce; iv water supply; v energy supplies; vi access roads within the Railway Corridor and Lateral Access Roads both along the routes for those roads agreed between the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 153 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Minister and the Company pursuant to subclause 3a; vii any other works services or facilities desired by the Company; and viii use of local labour professional services manufacturers suppliers contractors and materials and measures to be taken with respect to the engagement and training of employees by the Company its agents and contractors. b Proposals pursuant to paragraph a must specify the matters agreed for the purpose pursuant to subclause 3a and must not be contrary to or inconsistent with such agreed matters. c Each of the proposals pursuant to paragraph a may with the approval of the Minister or must if so required by the Minister be submitted separately and in any order as to the matter or matters mentioned in one or more of subparagraphs i to viii of paragraph a and until all of its proposals under this subclause have been approved the Company may withdraw and may resubmit any proposal but the withdrawal of any proposal shall not affect the obligations of the Company to submit a proposal under this subclause in respect of the subject matter of the withdrawn proposal. d The Company shall whenever any of the following matters referred to in this subclause are proposed by the Company whether before or during the submission of proposals under this subclause submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be page 154 Version 02a005 Published on

www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. e At the time when the Company submits the last of the said proposals pursuant to this subclause it shall i furnish to the Ministers reasonable satisfaction evidence of all accreditations under the Rail Safety Act which are required to be held by the Company or any other person for the construction of the Railway; and ii furnish to the Minister the written consents referred to in subclause 3ci and 3cii. f The provisions of clause 7AB shall apply mutatis mutandis to detailed proposals submitted under this subclause. Additional Railway Proposals 5 a If the Company at any time during the currency of a Special Railway Licence desires to construct a Railway spur line connecting to the Railway the subject of that Special Railway Licence or desires to significantly modify expand or otherwise vary its activities within the land the subject of the Special Railway Licence that are the subject of this Agreement and that may be carried on by it pursuant to this Agreement other than by the construction of a Railway spur line beyond those activities specified in any approved proposals for that Railway it shall give notice of such desire to the Minister and furnish to the Minister with that notice an outline of its proposals in respect thereto including without limitation such matters mentioned in subclause 4a as are relevant or as the Minister otherwise requires. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 155 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement b c If the notice relates to a Railway spur line or to the construction of Train Loading Infrastructure or Train Unloading Infrastructure on land outside the then Railway Corridor the Minister shall within one month of receipt of such notice advise the Company whether or not he approves in principle the proposed construction of such spur line Train Loading Infrastructure or Train Unloading Infrastructure. If the Minister gives in principle approval the Company may but not otherwise submit detailed proposals in respect thereof provided that the provisions of subclause 3 shall mutatis mutandis apply prior to submission of detailed proposals in respect thereof. Subject to the EP Act

the provisions of this Agreement and agreement at that time subsisting in respect of any matters required to be agreed pursuant to subclause 3a as referred to in paragraph b the Company shall submit to the Minister within a reasonable timeframe as determined by the Minister after receipt of the notice referred to in paragraph a or in the case of a notice referred to in paragraph b the giving of the Ministers in principle consent as referred to in that paragraph detailed proposals in respect of the proposed construction of such Railway spur line Train Loading Infrastructure Train Unloading Infrastructure or other proposed modification expansion or variation of its activities including such of the matters mentioned in subclause 4a as the Minister may require. d The provisions of subclause 4 with the date for submission of proposals being read as the date or time determined by the Minister under paragraph c and the reference in subclause 4eii to subclause 3ci being read as a reference to subclause 3ciii and page 156 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule of clause 7AB shall mutatis mutandis apply to detailed proposals submitted pursuant to this subclause.

Grant of Tenure 6 a On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 months after all its proposals submitted pursuant to subclause 4a have been approved or deemed to be approved and the Company has complied with the provisions of subclause 4e the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company i a miscellaneous licence to conduct within the Railway Corridor and in accordance with its approved proposals all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction commissioning operation and maintenance within the Railway Corridor of the Railway access roads and Additional Infrastructure if any the Special Railway Licence such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Second Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at a rental

calculated in accordance with the Mining Act 1978 As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 157 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement A B prior to the Railway Operation Date as if the width of the Railway Corridor were 100 metres; and on and from the Railway Operation Date at the rentals from time to time prescribed under the Mining Act 1978; and ii a miscellaneous licence or licences to allow the construction use and maintenance of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a each a Lateral Access Road Licence each such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Third Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. b On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 months after its proposals submitted pursuant to subclause 5a for the construction of Lateral Access Roads for access to the Railway Corridor to construct a Railway spur line have been approved or deemed to be approved and the Company has complied with the provisions of subclause 4e as applying pursuant to subclause 5d the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company a miscellaneous licence or licences to allow the construction use and maintenance of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a as applying pursuant to page 158 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule subclause 5b each a Lateral Access Road Licence each such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Fourth Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. c Notwithstanding the Mining Act 1978 the term of the Special Railway Licence shall subject to the sooner determination thereof on the cessation or sooner determination of this Agreement be

for a period of 50 years commencing on the date of grant thereof. d Notwithstanding the Mining Act 1978 the term of any Lateral Access Road Licence shall subject to the sooner determination thereof on the cessation or sooner determination of this Agreement be for a period of 4 years commencing on the date of grant thereof. e Notwithstanding the Mining Act 1978 and except as required to do so by the terms of the Special Railway Licence the Company shall not be entitled to surrender the Special Railway Licence or any Lateral Access Road Licence or any part or parts of them without the prior consent of the Minister. f i The Company may in accordance with approved proposals take stone sand clay and gravel from the Railway Corridor for the construction operation and maintenance of the Railway constructed within or approved for construction within the Railway Corridor. ii Notwithstanding the Mining Act 1978 no royalty shall be payable under the Mining As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 159 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Act in respect of stone sand clay and gravel which the Company is permitted by subparagraph i to obtain from the land the subject of the Special Railway Licence. g For the purposes of this Agreement and without limiting the operation of paragraphs a to f inclusive above the application of the Mining Act 1978 and the regulations made thereunder are specifically modified; i in section 911 by A B C deleting the mining registrar or the warden in accordance with section 42 as read with section 92 and substituting the Minister; deleting any person and substituting the Company as defined in the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; deleting for any one or more of the purposes prescribed and substituting for the purpose specified in clause 9D6ai clause 9D6aii or clause 9D6b of the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; ii in section 913a by deleting prescribed form and substituting form required by the agreement approved by and scheduled to the Iron Ore Robe page 160 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule River Agreement Act 1964 as from time to time added to

varied or amended; iii by deleting sections 916 919 9110 and 91B; iv v in section 92 by deleting Sections 41 42 44 46 46A 47 and 52 apply and inserting Section 46A excluding in subsection 2a the mining registrar the warden or applies and by deleting in those provisions and inserting in that provision; by deleting the full stop at the end of the section 941 and inserting except to the extent otherwise provided in or to the extent that such terms and conditions are inconsistent with the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; vi by deleting sections 942 3 and 4; vii in section 961 by inserting after miscellaneous licence the words not being a miscellaneous licence granted pursuant to the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; viii by deleting mining regulations 372 373 42 and 42A; and ix by inserting at the beginning of mining regulations 41c and f the words subject to the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 161 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement h i j If additional proposals are approved in accordance with subclause 5 for the construction of a Railway spur line outside the then Railway Corridor the Minister for Mines shall include the area of land within which such construction is to occur in the Special Railway Licence by endorsement. The area of such land may be included notwithstanding that the survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. If additional proposals are approved in accordance with subclause 5 for the construction of Train Loading Infrastructure or Train Unloading Infrastructure outside the then Railway Corridor the Minister for Mines shall include the area of such land within which such infrastructure is approved for construction in the Special Railway Licence by endorsement. The area of such land may be included notwithstanding that the survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. The provisions of this subclause shall not operate so as to require the State to cause a Special Railway

Licence or a Lateral Access Road Licence to be granted or any land included in the Special Railway Licence as mentioned above until all processes necessary under any laws relating to native title to enable that grant or inclusion of land to proceed have been completed. Construction and operation of Railway 7 a Subject to and in accordance with approved proposals the Rail Safety Act and the grant of the relevant Special Railway Licence and any associated Lateral Access Road Licences the Company shall in a proper and workmanlike manner and in accordance with recognised standards for railways of a similar nature operating under similar conditions construct the Railway and associated Additional Infrastructure and access roads within the Railway Corridor and shall also construct inter alia any necessary sidings crossing points bridges signalling switches and other works and appurtenances and provide for crossings and where appropriate and required by the Minister grade separation or other protective devices including flashing lights and boom gates at places where the Railway crosses or intersects with major roads or existing railways. b The Company shall while the holder of a Special Railway Licence i ii keep the Railway the subject of that licence in an operable state; and ensure that the Railway the subject of that licence is operated in a safe and proper manner in compliance with all applicable laws from time to time; and iii without limiting subparagraph ii ensure that the obligations imposed under the Rail Safety Act on an owner and an operator as those terms are therein defined are complied with in connection with the Railway the subject of that licence. Nothing in this Agreement shall be construed to exempt the Company or any other person from compliance with the Rail Safety Act or limit its application to the Companys operations generally except as otherwise may be provided in that Act or regulations made under it. c The Company shall provide crossings for livestock and also for any roads other railways conveyors pipelines and other utilities which

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Sixth variation agreement exist at the date of grant of the relevant Special Railway Licence or in

respect of land subsequently included in it at the date of such inclusion and the Company shall on reasonable terms and conditions allow such crossings for roads railways conveyors pipelines and other utilities which may be constructed for future needs and which may be required to cross a Railway constructed pursuant to this clause. Subject to clause 9C the Company shall at all times be the holder of Special Railway Licences and Lateral Access Road Licences granted pursuant to this clause and without limiting clause 10j but subject to clause 9C shall at all times own manage and control the use of each Railway the subject of a Special Railway Licence held by the Company. d e The Company shall not be entitled to exclusive possession of the land the subject of a Special Railway Licence or Lateral Access Road Licence granted pursuant to this clause to the intent that the State the Minister the Minister for Mines and any persons authorised by any of them from time to time shall be entitled to enter upon the land or any part of it at all reasonable times and on reasonable notice with all necessary vehicles plant and equipment and for purposes related to this Agreement or such other purposes as they think fit but in doing so shall be subject to the reasonable directions of the Company so as not to unreasonably interfere with the Companys operations. f The Companys ownership of a Railway constructed pursuant to this clause shall not give it an interest in the land underlying it. g The Company shall not at any time without the prior consent of the Minister dismantle sell or otherwise dispose of any part or parts of any Railway constructed pursuant to this clause or page 164 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule permit this to occur other than for the purpose of maintenance repair upgrade or renewal. h The Company shall subject to and in i accordance with approved proposals in a proper and workmanlike manner construct any Additional Infrastructure access roads Lateral Access Roads and other works approved for construction under this clause. The Company shall while the holder of a Special Railway Licence at all times keep and maintain in good repair and working order and condition which obligation includes where necessary replacing or renewing all parts which are worn out or in need of replacement or renewal due to their age or condition the Railway access roads and

Additional Infrastructure if any the subject of that licence and all such other works installations plant machinery and equipment for the time being the subject of this Agreement and used in connection with the operation use and maintenance of that Railway access roads and Additional Infrastructure if any. j Subject to clause 9C the Company shall i ii be responsible for the cost of construction and maintenance of all Private Roads constructed pursuant to this clause; and at its own cost erect signposts and take other steps that may be reasonable in the circumstances to prevent any persons and vehicles other than those engaged upon the Companys activities and its invitees and licensees from using the Private Roads; and iii at any place where any Private Roads are constructed by the Company so as to cross any railways or public roads As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 165 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement provide at its cost such reasonable protection and signposting as may be required by the Commissioner of Main Roads or the Public Transport Authority as the case may be. k The provisions of clauses 92a and 3 regarding third party access as well as the proviso to clause 92a shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to this clause except that the Company shall not be obliged to transport passengers upon any such Railway or Railway spur line. Aboriginal Heritage Act 1972 WA 8 For the purposes of this clause the Aboriginal Heritage Act 1972 WA applies as if it were modified by a the insertion before the full stop at the end of section 181 of the words and the expression the Company means the persons from time to time comprising the Company in their capacity as such under the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended in relation to the use or proposed use of land pursuant to clause 9D of that agreement after and in accordance with approved proposals under clause 9D of that agreement and in relation to the use of that land before any such approval of proposals where the Company has the requisite authority to enter upon and so use the land; b the insertion in sections 182 184 185 and 187 of the words or the Company as the case may be after the words owner of any land; page 166 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe

River Agreement Act 1964 Sixth variation agreement Seventh Schedule c the insertion in section 183 of the words or the Company as the case may be after the words the owner; d the insertion of the following sentences at the end of section 183 In relation to a notice from the Company the conditions that the Minister may specify can as appropriate include among other conditions a condition restricting the Companys use of the relevant land to after the approval or deemed approval as the case may be under the abovementioned agreement of all of the Companys submitted initial proposals thereunder for the Railway Operation as defined in clause 9D1 of the abovementioned agreement or in the case of additional proposals submitted or to be submitted by the Company to after the approval or deemed approval under that agreement of such additional proposals and to the extent so approved. ; and e the insertion in sections 182 and 185 of the words or it as the case may be after the word he. The Company acknowledges that nothing in this subclause 8 nor the granting of any consents under section 18 of the Aboriginal Heritage Act 1972 WA will constitute or is to be construed as constituting the approval of any proposals submitted or to be submitted by the Company under this Agreement or as the grant or promise of land tenure for the purposes of this Agreement. Taking of land for the purposes of this clause 9 a The State is hereby empowered as and for a public work under Parts 9 and 10 of the LAA to take for the purposes of this clause any land other than any part of a Port which in the As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 167 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement opinion of the Company is necessary for the relevant Railway Operation and which the Minister determines is appropriate to be taken for the relevant Railway Operation except any land the taking of which would be contrary to the provisions of a Government agreement entered into before the submission of the proposals relating to the proposed taking and notwithstanding any other provisions of that Act may license that land to the Company. b In applying Parts 9 and 10 of the LAA for the purposes of this clause i ii land in that Act includes a legal or equitable estate or interest in land; sections 170 171 172 173 174 175 and 184 of that Act do not apply; and iii that Act applies as if it were modified in section 1772 by inserting A after railway the

following or land is being taken pursuant to a Government agreement as defined in section 2 of the Government Agreements Act 1979 WA; and B after that Act the following or that Agreement as the case may be. c The Company shall pay to the State on demand the costs of or incidental to any land taken at the request of and on behalf of the Company including but not limited to any compensation payable to any holder of native title or of native title rights and interests in the land. page 168

Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule Notification of Railway Operation Date 10 a The Company shall from the date occurring 6 months before the date for completion of construction of a Railway specified in its time program for the commencement and completion of construction of that Railway submitted under subclause 4a keep the Minister fully informed as to i the progress of that construction and its likely completion and commissioning; and ii the likely Railway Operation Date. b The Company shall on the Railway Operation Date notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over the Railway other than for construction or commissioning purposes has occurred. c The Company shall from the date occurring 6 months before the date for completion of construction of a Railway spur line specified in its time program for the commencement and completion of construction of that spur line submitted under subclause 5c keep the Minister fully informed as to i the progress of that construction and its likely completion and commissioning; and ii in respect of it the likely Railway spur line Operation Date. d The Company shall on the Railway spur line Operation Date in respect of any Railway spur line notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over such spur line other than for As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 169 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement construction or commissioning purposes has occurred;

12 in clause 10ai by deleting the comma at the end of subparagraph c and substituting a semi colon followed by D in relation to electrical energy but not water the Company for the purpose of supply to i ii the Company or Joint Venturers as the case may be as defined in and for the purpose of an

Integration Agreement for its or their purposes thereunder; the holders from time to time of a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement for the purpose of their iron ore mining operations on that mining lease; and iii with the prior approval of the Minister the Company or the Joint Venturers as the case may be as defined in and for the purpose of a Government agreement excluding an Integration Agreement for the mining of iron ore in or proximate to the Pilbara region of the said State for the purpose of its or their operations under that agreement; 13 in clause 10d by inserting or held pursuant hereto after hereunder or pursuant hereto; page 170 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule 14 in clause 10e by inserting or pursuant hereto after a granted hereunder; and b inserting or held pursuant hereto after clause 13 hereof; 15 in clause 10l by a b c inserting granted under or pursuant to this Agreement or held pursuant to this Agreement after licence or other title; inserting or held pursuant hereto after each of the two references to granted hereunder or pursuant hereto; and deleting occupied by the Company and substituting the subject of any lease licence easement or other title granted under or pursuant to this Agreement or held pursuant to this Agreement; 16 by deleting clause 11A; 17 by inserting the following sentence at the end of clause 12 As a separate independent indemnity the Company will indemnify and keep indemnified the State and its servants agents and contractors in respect of all actions suits claims demands or costs of third parties arising out of or in connection with any use making available for use or other activities of the Company as referred to in clause 9B.; 18 in clause 141 by inserting or held pursuant hereto after granted hereunder or pursuant hereto; and 19 by inserting after the Schedule the following new schedules As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 171 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement SECOND SCHEDULE WESTERN AUSTRALIA IRON ORE ROBE RIVER AGREEMENT ACT 1964 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A RAILWAY AND

OTHER PURPOSES No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction operation and maintenance of a Railway as defined in clause 9D1 of the Agreement and otherwise as provided in the Agreement and if applicable other purposes AND WHEREAS the Company pursuant to clause 9D6a of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the Company is hereby granted by this licence authority to conduct on the land the subject of this licence as more particularly delineated and described from time to time in the Schedule hereto all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce in accordance with the Agreement and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction commissioning operation and maintenance on the land the subject of this licence of the Railway and Additional Infrastructure as defined in clause 9D1 of the Agreement and access roads to be located on the land the subject of this licence in accordance with the provisions of the Agreement and proposals approved under the Agreement for the term of 50 years from the date hereof subject to the sooner determination of the term upon the determination of the Agreement and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or page 172 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 9D6ai of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the

Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. The terms approved proposals Railway Railway Operation Date and Railway spur line have the meanings given in the Agreement.

ENDORSEMENTS AND CONDITIONS Endorsements 1. 2. 3. 4. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. The Company is permitted to in accordance with approved proposals take stone sand clay and gravel from the land the subject of this licence for the construction operation and maintenance of the Railway including any Railway spur line constructed within or approved for construction within the area of land the subject of this licence. Notwithstanding the Mining Act 1978 no royalty shall be payable under the Mining Act 1978 in respect of stone sand clay and gravel which the Company is permitted by the Agreement to obtain from the land the subject of this licence. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 173 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Conditions 1. a Except as provided in paragraph b the Company shall within 2 years after the Railway Operation Date surrender in accordance with the provisions of the Mining Act 1978 the area of this licence down to a maximum of 100 metres width or as otherwise approved by the Minister as defined in the Agreement for the safe operation of the Railway then constructed or approved for construction under approved proposals. 2. 3. b Paragraph a shall not apply to land the subject of this licence that was included in this licence pursuant to clause 9D6h or clause 9D6i of the Agreement. The Company shall as soon as possible after the construction of a Railway spur line or of an expansion or extension thereof as the case may be

surrender in accordance with the Mining Act 1978 the land the subject of this licence that was included in this licence pursuant to clause 9D6h of the Agreement for the purpose of such construction down to a maximum of 100 metres in width or as otherwise approved by the Minister as defined in the Agreement for the safe operation of that Railway spur line or expansion or extension thereof as the case may be then constructed or approved for construction under approved proposals. [Any further conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] SCHEDULE Land description Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES page 174 Version 02a005 Published on www.legislation.wa.gov.au

As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule THIRD SCHEDULE WESTERN AUSTRALIA IRON ORE ROBE RIVER AGREEMENT ACT 1964 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction use and maintenance of a Lateral Access Road as defined in the Agreement AND WHEREAS the Company pursuant to clause 9D6aⁱⁱ of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the Company is hereby authorised to construct use and maintain a road on the land more particularly delineated and described from time to time in the Schedule hereto in accordance with the provisions of the Agreement and proposals approved under the Agreement for a term of 4 years commencing on the date hereof subject to the sooner determination of the term upon the cessation or determination of the Agreement and for the purposes and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and

any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 9D6a(ii) of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several.

As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 175 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended.

ENDORSEMENTS AND CONDITIONS

Endorsements 1. 2. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.]

Conditions [Such conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including during the term of the Agreement.]

SCHEDULE

Description of land	Locality	Mineral Field	Area
DATED at Perth this day of . MINISTER FOR MINES			

page 176 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth variation agreement Seventh Schedule **FOURTH SCHEDULE** WESTERN AUSTRALIA IRON ORE ROBE RIVER AGREEMENT ACT 1964 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction use and maintenance of a Lateral Access

Road as defined in the Agreement AND WHEREAS the Company pursuant to clause 9D6b of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended the Company is hereby authorised to construct use and maintain a road on the land more particularly delineated and described from time to time in the Schedule hereto in accordance with the provisions of the Agreement and proposals approved under the Agreement for a term of 4 years commencing on the date hereof subject to the sooner determination of the term upon the cessation or determination of the Agreement and for the purposes and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 9D6b of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 177 Iron Ore Robe River Agreement Act 1964 Seventh Schedule Sixth variation agreement Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. ENDORSEMENTS AND CONDITIONS Endorsements 1. 2. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions [Such conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including

during the term of the Agreement.] SCHEDULE Description of land Locality Mineral Field Area
DATED at Perth this day of . MINISTER FOR MINES . page 178 Version 02a005 Published on
www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Sixth
variation agreement Seventh Schedule EXECUTED as a deed. SIGNED by THE HONOURABLE
COLIN JAMES BARNETT in the presence of [Signature] STEPHEN WOOD Signed for ROBE
RIVER LIMITED ACN 008 478 493 by its attorney in the presence of [Signature] [Signature] Witness
Signature HELEN FERNIHOUGH Print Name [Signature] Attorney Signature ALAN DAVIES Print
Name THE COMMON SEAL of ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 was
hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director
[Signature] Secretary ALAN DAVIES HELEN FERNIHOUGH THE COMMON SEAL of MITSUI
IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 was hereunto affixed by authority of the
Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary YOICHI
HASHIMOTO JOHN SMITH As at 03 Jan 2014 Version 02a005 Published on
www.legislation.wa.gov.au page 179 Iron Ore Robe River Agreement Act 1964 Seventh Schedule
Sixth variation agreement Signed by NORTH MINING LIMITED ACN 000 081 434 by its attorney in
the presence of [Signature] Witness Signature HELEN FERNIHOUGH Print Name [Signature]
Attorney Signature ALAN DAVIES Print Name CAPE LAMBERT IRON ASSOCIATES Signed by
NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 by its duly appointed attorney MITSUI
IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 hereunto affixing its Seal by authority of
the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary YOICHI
HASHIMOTO JOHN SMITH Signed by SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444
604 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734
361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature]
Director [Signature] DirectorSecretary YOICHI HASHIMOTO JOHN SMITH page 180 Version
02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement
Act 1964 Sixth variation agreement Seventh Schedule The COMMON SEAL of MITSUI IRON ORE

DEVELOPMENT PTY. LTD. ACN 008 734 361 was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary YOICHI HASHIMOTO JOHN SMITH PANNAWONICA IRON ASSOCIATES Signed by NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary YOICHI HASHIMOTO JOHN SMITH Signed by SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary YOICHI HASHIMOTO JOHN SMITH [Seventh Schedule inserted No. 61 of 2010 s. 10.] As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 181 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement Eighth Schedule Seventh variation agreement [s. 4D] [Heading inserted No. 61 of 2011 s. 10] 2011 THE HONOURABLE COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND ROBE RIVER LIMITED ACN 008 478 493 ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 NORTH MINING LIMITED ACN 000 081 434 NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 page 182 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 IRON ORE ROBE RIVER AGREEMENT 1964 RATIFIED VARIATION AGREEMENT [Solicitors details] As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 183 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement THIS AGREEMENT is made this 8th day of November 2011 BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time State AND ROBE RIVER LIMITED ACN 008 478 493 of Level 33 120 Collins Street Melbourne

Victoria RRL AND ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 of Level 27 Central Park 152158 St Georges Terrace Perth Western Australia RPMC MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 of Level 26 Exchange Plaza 2 The Esplanade Perth Western Australia Mitsui NORTH MINING LIMITED ACN 000 081 434 of Level 33 120 Collins Street Melbourne Victoria NML NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 of Level 24 1 York Street Sydney New South Wales SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 of Level 39 Australia Square 264 George Street Sydney New South Wales and the said MITSUI IRON ORE DEVELOPMENT PTY. LTD. which 3 companies carry on business under the name of Cape Lambert Iron Associates CLIA and the said NIPPON STEEL AUSTRALIA PTY LTD and SUMITOMO METAL AUSTRALIA PTY LTD which 2 companies carry on business together under the name Pannawonica Iron Associates PIA. RPMC Mitsui NML CLIA and PIA are collectively referred to in this Agreement as the Robe Participants. page 184 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement RECITALS A. The State RRL and the Robe Participants are now the parties to the agreement dated 18 November 1964 approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 and which as subsequently added to varied or amended is referred to in this Agreement as the Principal Agreement. B. The parties wish to vary the Principal Agreement. THE PARTIES AGREE AS FOLLOWS 1. Interpretation Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. 2. Ratification and Operation 1 The State shall introduce and sponsor a Bill in the State Parliament of Western Australia prior to 31 December 2011 or such later date as may be agreed between the parties hereto to ratify this Agreement. The State shall endeavour to secure the timely passage of such Bill as an Act. 2 The provisions of this Agreement other than this clause and clause 1 will not come into operation until the day after the day on which the Bill referred to in subclause 1 has been passed by the State Parliament of Western Australia and commences to operate as an Act. 3 If by 30 June 2012 the said Bill has not commenced to operate

as an Act then unless the parties hereto otherwise agree this Agreement will then cease and determine and no party hereto will have any claim against any other party hereto with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement. 4 On the day after the day on which the said Bill commences to operate as an Act all the provisions of this Agreement will operate and take effect despite any enactment or other law. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 185 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement 3. Variation of Principal Agreement The Principal Agreement is varied as follows 1 in clause 1 by a inserting in the appropriate alphabetical positions the following new definitions Eligible Existing Tenure means a i a miscellaneous licence or general purpose lease granted to the Company under the Mining Act 1978; or ii a lease or easement granted to the Company under the LAA and not clearly to the satisfaction of the Minister granted under or pursuant to or held pursuant to this Agreement; or b an application by the Company for the grant to it of a tenement referred to in paragraph ai which application has not clearly to the satisfaction of the Minister been made under or pursuant to this Agreement and as the context requires the tenement granted pursuant to such an application where that tenure was granted or that application was made as the case may be on or before 1 October 2011; LAA means the Land Administration Act 1997 WA; Relevant Land in relation to Eligible Existing Tenure or Special Advance Tenure means the land which is the subject of that Eligible Existing Tenure or Special Advance Tenure as the case may be; second variation date means the date on which clause 3 of the variation agreement made on or about 7 November 2011 between the State and the Company comes into operation; page 186 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement Special Advance Tenure means a b a miscellaneous licence or general purpose lease requested under clause 82b to be granted to the Company under the Mining Act 1978; or an easement or a lease requested under clause 82b to be granted to the Company under the LAA and as the context requires such tenure if granted; b inserting after the words reference in this

Agreement to an Act shall include the amendments to such Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and the regulations for the time being in force thereunder the words and for the avoidance of doubt this principle subject to the context and without limitation to its application to other Acts may apply in respect of references to the Land Act and the Mining Act notwithstanding references in this Agreement to the LAA and the Mining Act 1978;; 2 by inserting after clause 7F the following new clauses Community development plan 7G. 1 In this clause the term community and social benefits includes a b assistance with skills development and training opportunities to promote work readiness and employment for persons living in the Pilbara region of the said State; regional development activities in the Pilbara region of the said State including partnerships and sponsorships; c contribution to any community projects town services or facilities; and d a regionally based workforce. 2 The Company acknowledges the need for community and social benefits flowing from this Agreement. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 187 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement 3 The Company agrees that a b it shall prepare a plan which describes the Companys proposed strategies for achieving community and social benefits in connection with its activities under this Agreement; and the Company shall not later than 3 months after the second variation date submit to the Minister the plan prepared under paragraph a and confer with the Minister in respect of the plan. 4 The Minister shall within 2 months after receipt of a plan submitted under subclause 3b either notify the Company that the Minister approves the plan as submitted or notify the Company of changes which the Minister requires be made to the plan. If the Company is unwilling to accept the changes which the Minister requires it shall notify the Minister to that effect and either party may refer to arbitration hereunder the question of the reasonableness of the changes required by the Minister. 5 The effect of an award made on an arbitration pursuant to subclause 4 shall be that the relevant plan submitted by the Company pursuant to subclause 3b shall with such changes required by the Minister under subclause 4 as the arbitrator determines to be reasonable with or without modification by the arbitrator be deemed to be

the plan approved by the Minister under this clause. 6 At least 3 months before the anticipated submission of proposals relating to a proposed development pursuant to clauses 7A or 9D the Company must unless the Minister otherwise requires give to the Minister information about how the proposed development may affect the plan approved or deemed to be approved by the Minister under this clause. This obligation operates in relation to all proposals page 188 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement submitted on or after the date that is 4 months after the date when a plan is first approved or deemed to be approved under this clause. 7 The Company shall at least annually report to the Minister about the Companys implementation of the plan approved or deemed to be approved by the Minister under this clause. 8 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan approved or deemed to be approved by the Minister under this clause and may agree to amendment of the plan or adoption of a new plan. Any such amended plan or new plan will be deemed to be the plan approved by the Minister under this clause in respect of the development to which it relates. 9 During the currency of this Agreement the Company shall implement the plan approved or deemed to be approved by the Minister under this clause. Local participation plan 7H. 1 In this clause the term local industry participation benefits means a b c the use and training of labour available within the said State; the use of the services of engineers surveyors architects and other professional consultants experts specialists project managers and contractors available within the said State; and the procurement of works materials plant equipment and supplies from Western Australian suppliers manufacturers and contractors. As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 189 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement 2 The Company acknowledges the need for local industry participation benefits flowing from this Agreement. 3 The Company agrees that it shall not later than 3 months after the second variation date prepare and provide to the Minister a plan which contains a b c d a clear statement on the strategies which the Company will use and require a

third party as referred to in subclause 7 to use to maximise the uses and procurement referred to in subclause 1; detailed information on the procurement practices the Company will adopt and require a third party as referred to in subclause 7 to adopt in calling for tenders and letting contracts for works materials plant equipment and supplies stages in relation to a proposed development and how such practices will provide fair and reasonable opportunity for suitably qualified Western Australian suppliers manufacturers and contractors to tender or quote for works materials plant equipment and supplies; detailed information on the methods the Company will use and require a third party as referred to in subclause 7 to use to have their respective procurement officers promptly introduced to Western Australian suppliers manufacturers and contractors seeking such introduction; and details of the communication strategies the Company will use and require a third party as referred to in subclause 7 to use to alert Western Australian engineers surveyors architects and other professional consultants experts specialists project page 190 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement managers and consultants and Western Australian suppliers manufacturers and contractors to services opportunities and procurement opportunities respectively as referred to in subclause 1. It is acknowledged by the Company that the strategies of the Company referred to in subclause 3a will include strategies of the Company in relation to supply of services labour works materials plant equipment or supplies for the purposes of this Agreement. 4 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan provided under this clause and may agree to the amendment of the plan or the provision of a new plan in substitution for the one previously provided. 5 At least 6 months before the anticipated submission of proposals relating to a proposed development pursuant to clauses 7A or 9D the Company must unless the Minister otherwise requires give to the Minister information about the implementation of the plan provided under this clause in relation to the proposed development. This obligation operates in relation to all proposals submitted on or after the date that is 7 months after the date when a plan is first provided under this

clause. 6 During the currency of this Agreement the Company shall implement the plan provided under this clause. 7 The Company shall a in every contract entered into with a third party where the third party has an obligation or right to procure the supply of services labour works materials plant equipment or supplies for or in connection with a proposed development ensure that the contract contains appropriate provisions As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 191 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement requiring the third party to undertake procurement activities in accordance with the plan provided under this clause; and b use reasonable endeavours to ensure that the third party complies with those provisions.; 3 in clause 81b by a inserting a comma after Mining Act; and b inserting after subparagraph iii the following new paragraph and notwithstanding clause 9B2biv detailed proposals may refer to activities on tenure which is proposed to be granted pursuant to this paragraph b as if that tenure was granted pursuant to this Agreement but this does not limit the powers or discretions of the Minister under this Agreement or the Minister responsible for the administration of any relevant Act with respect to the grant of the tenure;; 4 by inserting after clause 82 the following new subclauses Application for Eligible Existing Tenure to be held pursuant to this Agreement 2a a The Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Eligible Existing Tenure becoming held pursuant to this Agreement on such conditions as the Minister sees fit including without limitation and notwithstanding the Mining Act 1978 and the LAA as to the surrender of land the submission of detailed proposals and the variation of the terms and conditions of the Eligible Existing Tenure including for the Eligible Existing Tenure to be held pursuant to this Agreement and for the more efficient use of the Relevant Land and the Minister may from time to time vary such conditions in order to extend any specified time for the doing of any thing or otherwise with the agreement of the Company. page 192 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement b Eligible Existing Tenure the subject of an approval by the Minister under this subclause will be held by the

Company pursuant to this Agreement i ii iii if the Ministers approval was not given subject to conditions on and from the date of the Ministers notice of approval; unless paragraph iii applies if the Ministers approval was given subject to conditions on the date on which all such conditions have been satisfied; and if the Ministers approval was given subject to a condition requiring that the Company submit detailed proposals in accordance with this Agreement on the later of the date on which the Minister approves proposals submitted in discharge of that specified condition and the date upon which all other specified conditions have been satisfied but the Company is authorised to implement any approved proposal to the extent such implementation is consistent with the then terms and conditions of the Eligible Existing Tenure pending the satisfaction of any conditions relating to the variation of the terms or conditions of the Eligible Existing Tenure. Where this paragraph iii applies prior to any approval of proposals and satisfaction of other conditions the relevant tenure will be treated for but only for the purposes of clause 9B2biv as tenure held pursuant to this Agreement. Application for Special Advance Tenure to be granted pursuant to this Agreement

2b Without limiting clause 81c the Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Special Advance As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 193 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement Tenure being granted to the Company pursuant to this Agreement if a b the Company proposes to submit detailed proposals under this Agreement other than under clause 9D to construct works installations or facilities on the Relevant Land and the Companys request is so far as is practicable made unless the Minister approves otherwise no less than 6 months before the submission of those detailed proposals; and the Minister is satisfied that it is necessary and appropriate that Special Advance Tenure rather than tenure granted under or pursuant to the other provisions of this Agreement be used for the purposes of the proposed works installations or facilities on the Relevant Land and if the Minister does so approve c d notwithstanding the Mining Act 1978 or the LAA the appropriate authority or instrumentality of the State shall obtain the consent of the Minister to the form and substance of the Special Advance

Tenure prior to its grant which for the avoidance of doubt neither the State nor the Minister is obliged to cause to the Company; and if the Company does not submit detailed proposals relating to construction of the relevant works installations or facilities on the Relevant Land within 24 months after the date of the Ministers approval or such later time subsequently allowed by the Minister or if submitted the Minister does not approve such detailed proposals the Special Advance Tenure if then granted shall be surrendered at the request of the Minister. 2c The decisions of the Minister under subclauses 2a and 2b shall not be referable to arbitration and any approval of the Minister under this clause shall not in any way limit prejudice or otherwise affect the exercise by the Minister of the Ministers powers or the performance of the Ministers

page 194 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement obligations under this Agreement or otherwise under the laws from time to time of the said State.; 5 in clause 8 by a b deleting in subclause 3 subclause 2 and substituting subclauses 2 2a and 2b; and deleting in subclause 3a subclause 1 and substituting subclauses 1 2a and 2b; 6 in clause 92 by a deleting in paragraph a the words allow crossing places for roads stock and other railways and; b inserting after paragraph a the following new paragraph Crossings over Railway aa for the purposes of livestock and infrastructure such as roads railways conveyors pipelines transmission lines and other utilities proposed to cross the land the subject of the Companys railway the Company shall i if applicable give its consent to or otherwise facilitate the grant by the State or any agency instrumentality or other authority of the State of any lease licence or other title over land the subject of the Companys railway so long as such grant does not in the Ministers opinion unduly prejudice or interfere with the activities of the Company under this Agreement; and ii on reasonable terms and conditions allow access for the construction and operation of such crossings and associated infrastructure provided that in forming his opinion under this clause the Minister must consult with the Company;; As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 195 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement c deleting paragraph jii and substituting the following

subparagraph ii on fine ore and pisolite fine ore sold or shipped separately as such at the rate of A B 5.625 of the f.o.b. value for ore shipped prior to or on 30 June 2012; 6.5 of the f.o.b. value for ore shipped during the period from 1 July 2012 to 30 June 2013 inclusive of both dates; and C 7.5 of the f.o.b. value for ore shipped on or after 1 July 2013;; 7 in clause 9D by a deleting in subclause 1 LAA means the Land Administration Act 1997 WA; b inserting after subclause 3c the following new paragraph d Without limiting subclause 9 the Minister may waive the requirement under this clause for the Company to obtain and to furnish the consent of a title holder if the title holder has refused to give the required consent and the Minister is satisfied that i ii the title holders affected land is or was subject to a miscellaneous licence granted under the Mining Act 1978 for the purpose of a railway to be constructed and operated in accordance with this Agreement; and in the Ministers opinion the title holders refusal to give the required consent is not reasonable in all the circumstances including having regard to A the rights of the Company in relation to the affected land as the holder of the miscellaneous licence relative to its rights as the holder of the sought Special page 196 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement Railway Licence or Lateral Access Road Licence as the case may be; and B the terms of any agreement between the Company and the title holder.; c deleting in subclause 4a the comma after the provisions of this Agreement and substituting and; and d in subclause 7 i ii deleting all words in paragraph c after at the date of such inclusion; and inserting after paragraph k the following new paragraph l The provisions of clause 92aa shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to this clause.; and 8 in clause 10B by deleting clause 92a and substituting clauses 92a and aa.

EXECUTED as a deed. SIGNED by the HONOURABLE COLIN JAMES BARNETT in the presence of [Signature] [Signature] Signature of witness Stephen Bombardieri Name of witness As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 197 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement Signed for ROBE RIVER LIMITED ACN 008 478 493 by its attorney in the presence of [Signature] Witness signature

Christopher Richards Print Name [Signature] Attorney signature Paul Shannon Print Name THE COMMON SEAL of ROBE RIVER MINING CO PTY. LIMITED ACN 008 694 246 was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] Secretary Andrew Kite Helen Fernihough page 198 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary Hirofumi Fujita John William Smith Signed by NORTH MINING LIMITED ACN 000 081 434 by its attorney in the presence of [Signature] Witness signature Christopher Richards Print Name [Signature] Attorney signature Paul Shannon Print Name As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page 199 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement CAPE LAMBERT IRON ASSOCIATES Signed by NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENTS PTY. LTD. ACN 008 734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary Hirofumi Fujita John William Smith Signed by SUMITOMO METAL AUSTRALIA PTY. LTD. ACN 001 444 604 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENTS PTY. LTD. ACN 008 734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] DirectorSecretary Hirofumi Fujita John William Smith page 200 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Eighth Schedule Seventh variation agreement THE COMMON SEAL of MITSUI IRON ORE DEVELOPMENT PTY. LTD. ACN 008 734 361 was hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director [Signature] Secretary Hirofumi Fujita John William Smith PANNAWONICA IRON ASSOCIATES Signed by NIPPON STEEL AUSTRALIA PTY. LTD. ACN 001 445 049 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENTS PTY. LTD. ACN 008

734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.] [Signature]
Director [Signature] Secretary Hirofumi Fujita John William Smith As at 03 Jan 2014 Version 02a005
Published on www.legislation.wa.gov.au page 201 Iron Ore Robe River Agreement Act 1964 Eighth
Schedule Seventh variation agreement Signed by SUMITOMO METAL AUSTRALIA PTY. LTD.
ACN 001 444 604 by its duly appointed attorney MITSUI IRON ORE DEVELOPMENT PTY. LTD.
ACN 008 734 361 hereunto affixing its Seal by authority of the Directors in the presence of [C.S.]
[Signature] Director [Signature] Secretary Hirofumi Fujita John William Smith [Eighth Schedule
inserted No. 61 of 2011 s. 10.] page 202 Version 02a005 Published on www.legislation.wa.gov.au
As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Notes 1 This reprint is a compilation as
at 3 January 2014 of the Iron Ore Robe River Agreement Act 1964 and includes the amendments
made by the other written laws referred to in the following table. The table also contains information
about any reprint. Compilation table Assent Commencement 14 Dec 1964 14 Dec 1964 Number and
year 91 of 1964 13 Eliz. II No. 91 113 of 1965 21 Dec 1965 Act other than s. 49 21 Dec 1965 see s.
21; s. 49 14 Feb 1966 see s. 22 7 Nov 1969 7 Nov 1969 79 of 1969 Repealed by No. 35 of 61970
35 of 1970 27 May 1970 27 May 1970 68 of 1973 28 Nov 1973 Act other than s. 3 4 and 6 28 Nov
1973 see s. 21; s. 3 4 and 6 30 Apr 1984 see s. 22 and Act No. 37 of 1984 s. 4 37 of 1984 20 Jun
1984 20 Jun 1984 95 of 1985 4 Dec 1985 4 Dec 1985 see s. 2 87 of 1987 9 Dec 1987 9 Dec 1987
see s. 2 Short title Iron Ore Cleveland Cliffs Agreement 5 Act 1964 Decimal Currency Act 1965 Iron
Ore ClevelandCliffs Agreement Act Amendment Act 1969 Iron Ore ClevelandCliffs Agreement Act
Amendment Act 1970 Iron Ore ClevelandCliffs Agreement Act Amendment Act 1973 Iron Ore
ClevelandCliffs Agreement Amendment Act 1984 Iron Ore ClevelandCliffs Agreement Amendment
Act 1985 Iron Ore ClevelandCliffs Agreement Amendment Act 1987 Reprint of the Iron Ore Robe
River Agreement Act 1964 as at 3 Aug 2001 includes amendments listed above Standardisation of
Formatting Act 2010 s. 4 and 422 19 of 2010 28 Jun 2010 11 Sep 2010 see s. 2b and Gazette 10
Sep 2010 p. 4341 As at 03 Jan 2014 Version 02a005 Published on www.legislation.wa.gov.au page
203 Iron Ore Robe River Agreement Act 1964 Short title Number and year Assent Commencement

Iron Ore Agreements Legislation Amendment Act 2010 Pt. 10 Iron Ore Agreements Legislation Amendment Act No. 2 2010 Pt. 3 Iron Ore Agreements Legislation Amendment Act 2011 Pt. 3 34 of 2010 26 Aug 2010 1 Jul 2010 see s. 2bii 61 of 2010 10 Dec 2010 11 Dec 2010 see s. 2c 61 of 2011 14 Dec 2011 15 Dec 2011 see s. 2b Reprint 2 The Iron Ore Robe River Agreement Act 1964 as at 3 Jan 2014 includes amendments listed above The Mining Act 1904 was repealed by the Mining Act 1978. 2 3 The Interpretation Act 1918 was repealed by the Interpretation Act 1984. 4 Marginal notes in the agreement have been represented as bold headnotes in this reprint but that does not change their status as marginal notes. 5 6 Now known as the Iron Ore Robe River Agreement Act 1964; short title changed see note under s. 1. See s. 2A. page 204 Version 02a005 Published on www.legislation.wa.gov.au As at 03 Jan 2014 Iron Ore Robe River Agreement Act 1964 Defined terms Defined terms [This is a list of terms defined and the provisions where they are defined. The

list	is	not	part	of	the	law.]	Defined	term	Provisions	Agreement
.....							2	4A1	Company	
.....							2	fifth	variation	agreement
.....							2	first	variation	agreement
.....							2	fourth	variation	agreement
.....							2	second	variation	agreement
.....							2	seventh	variation	agreement
.....							2	sixth	variation	agreement
.....							2	third	variation	agreement
.....							2	As at 03 Jan 2014	Version 02a005	
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GHTS OF THE CONTRACTOR 8. GENERAL STANDARDS OF CONDUCT 9. JOINT LIABILITY AND INDEMNITY 10. WELLS AND SURVEYS 11. OFFSHORE OPERATIONS 12. FIXTURES AND INSTALLATION 13. TITLE TO ASSETS 14. LOCAL EMPLOYMENT TRAINING AND COMMUNITY DEVELOPMENT PROJECT 15. DATA AND SAMPLES 16. REPORTS PART IV RIGHTS AND OBLIGATIONS OF THE GOVERNMENT AND THE MINISTER 17. OBLIGATIONS OF THE GOVERNMENT PART V WORK PROGRAMME DEVELOPMENT AND PRODUCTION 18. EXPLORATION WORK PROGRAMME 19. DISCOVERY AND EVALUATION WORK PROGRAMME 20. DEVELOPMENT PLAN AND DEVELOPMENT WORK PROGRAMME 21. UNITISATION 22. MARGINAL AND NON COMMERCIAL DISCOVERIES 23. NATURAL GAS 24. PRODUCTION LEVELS AND ANNUAL PRODUCTION PROGRAMME 25. MEASUREMENT OF PETROLEUM 26. VALUATION OF CRUDE OIL AND NATURAL GAS PART VI COST RECOVERY PRODUCTIONS SHARING MARKETING AND PARTICIPATION 27. COST RECOVERY PRODUCTIONS SHARING WINDFALL AND INCOME TAX... 28. GOVERNMENT PARTICIPATION 29. DOMESTIC CONSUMPTION PART VII BOOKS, ACCOUNTS, AUDITS, IMPORTS, EXPORTS AND FOREIGN EXCHANGE 30. BOOKS, ACCOUNTS AND AUDITS 31. PREFERENCE TO KENYAN GOODS AND SERVICES 32. EXPORTS AND IMPORTS 33. EXCHANGE AND CURRENCY CONTROL PART VIII GENERAL 34. PAYMENTS 35. ASSIGNMENT

Production Sharing Contract Block 11 A Ministry of Energy Page 226 27 27 28 29 30 31 32 32 33 34 34 39 40 41 41 42 43 44 45 45 46 36. MANAGER ATTORNEY AND JOINT OPERATION AGREEMENT 37. CONFIDENTIALITY 38. FORCE MAJEURE 39. WAIVER 40. GOVERNING LAW 41. ARBITRATION 42. ABANDONMENT AND DECOMMISSIONING OPERATIONS 43. NOTICES 44. HEADING AND AMENDMENTS APPENDIX A THE CONTRACT ARE A BLOCK APPENDIX B ACCOUNTING PROCEDURE APPENDIX C PARTICIPATION AGREEMENT

Production Sharing Contract Block 11 A Ministry of Energy Page 346 46 47 48 48 49 50 54 55 56 58 59 60 72 72 Block Map of Kenya Arrow Showing Location of Block 11 A Production Sharing Contract Block 11 A Ministry of Energy Page 4

PRODUCTI ONSHARING CONTRACT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF KENYA AND ERHCA GCPROFOND LTD. This CONTRACT is made and entered into on the day of

by and between the Government of the Republic of Kenya hereinafter referred to as the Government represented for the purpose of this Contract by the Minister for the time being responsible for energy hereinafter referred to as the Minister and ERHC AGC Profond Ltd. a company registered in the British Virgin Islands and a wholly owned subsidiary of ERHCEnergy Inc. A Colorado Corporation with a place of business at 5444 Westheimer Road Houston Texas 77056 USA hereinafter referred to as The Contractor. The Government and the Contractor herein are referred to either individually as Party or collectively as Parties. WITNESSETH WHEREAS the title to all Petroleum resources existing in their natural conditions in Kenya is vested in the Government and WHEREAS the Government wishes to promote and encourage the exploration and the development of Petroleum resources in and throughout the Contract Area as defined herein and WHEREAS the Contractor desires to join and assist the Government in accelerating the exploration and development of the potential Petroleum resources within the Contract Area and WHEREAS the Contractor has the financial ability technical competence and professional skills necessary to carry out the Petroleum Operations hereinafter described and WHEREAS in accordance with the Petroleum Exploration and Production Act Cap 308 laws of Kenya

1986 enacted by the Parliament of the Republic of Kenya agreements in the form of production sharing contracts may be entered between the Government and capital investors NOW THEREFORE in consideration of the undertaking and covenants herein contained the Parties hereby agree as follows Production Sharing Contract Block 11 A Ministry of Energy Page 5 PART I SCOPE AND INTERPRETATION 1 ASCOPE This Contract is a production sharing contract in accordance with the provisions herein contained and is within the meaning of the term petroleum agreement under section 2 of the Act and is an enforceable contract between the Government and the Contractor. The Contractor shall be responsible to the Government for the execution of the Petroleum Operations contemplated hereunder in accordance with the provisions of this Contract and is hereby appointed and constituted the exclusive legal Contractor to conduct Petroleum Operations in the Contract Area for the term hereof b Provide all capital machinery equipment technology and personnel necessary for the conduc

to Petroleum Operations shall bear the risk of Petroleum Costs required in carrying out Petroleum Operations and shall therefore have an economic interest in the development of the Petroleum deposits in the Contract Area. Such costs shall be included in Petroleum Costs recoverable as provided in clause 27 hereof. During the term of this Contract the total production achieved in the conduct of the Petroleum Operations shall be divided between the parties hereto in accordance with the provisions of clause 27 hereof.

1. BINTERPRETATION

In this Contract words in the singular include the plural and vice versa and except where the context otherwise requires Accounting Procedure means the accounting procedures and requirements set out in Appendix B attached hereto and made an integral part thereof. The Act means the Petroleum Exploration and Production Act Cap 308 laws of Kenya 1986 enacted by the Parliament of the Republic of Kenya.

Additional Exploration Period means the First Additional Exploration Period and/or Second Additional Exploration Period.

Affiliate means a Person directly or indirectly controlling or controlled by or under direct or indirect common control with another Person and Control means the ownership of at least fifty percent (50%) of voting rights in that Person.

Production Sharing Contract Block 11A Ministry of Energy Page 6

Appointee means a body corporate wholly owned or controlled by the Government of the Republic of Kenya and appointed for the purposes of this Contract.

Barrel means a quantity consisting of 158.987 litres at standard atmospheric pressure of 1.01325 bars and temperature of fifteen degrees centigrade.

15C Barrel of Oil Equivalent means that 6000 standard cubic feet of Natural Gas at standard temperature 15°C and pressure 1.01325 bars is equivalent to one Barrel of Crude Oil for the purposes of volumetric calculations under this Contract.

Blocks means area covered by separate production sharing contracts between the Government and the Contractor.

Calendar Quarter or Quarter means a period of three (3) consecutive months commencing with the first day of January, April, July and October.

Calendar Year means a period of twelve (12) consecutive months commencing with the first day of January in any year and ending the last day of December in that year according to Gregorian calendar.

Change in Control means any direct or indirect change in Control of a Party whether through mergers, sale of shares or other equity interests or otherwise through a single transaction or series of related transactions.

ansactions from one or more transferors to one or more transferees Commercial Discovery means a tested and delineated accumulation of Petroleum in an Exploratory Well which has been duly evaluated in accordance with the provisions of clause 19 and whose reserves are certified by a competent 3rd party appointed by the Contractor as being capable of Commercial Production according to good international financial and petroleum industry practice after the consideration of all pertinent technical and economic data Commercial Production means the quantity of Petroleum produced on a regular basis from a Commercial Discovery not used in Petroleum Operations but saved and sold at a value exceeding the combined exploring, finding, appraising, developing, producing, transporting and marketing costs of that production Constitution means the Constitution of the Republic of Kenya Contract means this agreement upon execution Contract Area means Block 11A the geographic area covered by this Contract and described in Appendix A and any part thereof not previously surrendered Contract Year means twelve (12) consecutive calendar months from the Effective Date or from the anniversary thereof Production Sharing Contract Block 11A Ministry of Energy Page 7 Contractor means the Entities and their respective successors or any assignee or assignees of any paying Participating Interest provided that the assignment of any such paying Participating Interest is accomplished pursuant to the provisions of clauses 64 or 35 hereof and such term will include the Government or its Appointee in those certain Development Areas in which the Government exercises its right to acquire a fully paying Participating Interest in accordance with Clause 28.2 Cost Oil shall have the meaning set out in subclause 27.1 Crude Oil means all hydrocarbons regardless of gravity that are produced at the wellhead in liquid state at atmospheric pressure asphalt ozokerites and the liquid hydrocarbons known as distillates or Natural Gas Liquids obtained from Natural Gas by condensation or extraction Customs Duties means duties, levies and other taxes on imports which are payable as a result of the importation of the item or items under consideration Decommissioning Plan means the plan for the decom

commissioning abandonment recovery and removal or if applicable redeployment of wells flow lines pipelines facilities infrastructure and assets related to Petroleum Operations Delivery Point means the inlet flange point F.O.B. Kenya export pipeline or loading facility at which Natural Gas or Crude Oil reaches the metering station of a pipeline or the inlet flange of the lifting tank ship intake pipe or such other point that may be agreed by the Parties Development Area means the area delimited in a Development Plan adopted under Clause 20 hereof Development Period means the period for the development of a Commercial Discovery which begins on the date of the designation of a Development Area in accordance with the provisions of Clause 20 hereof and continues for the term set out in clause 26 Development Plan means the programme for drilling testing and completing all wells meant for production or pressure maintenance installation of a gathering system between wells and installation and commissioning of any processing and transportation facilities necessary to deliver production to the Point of Sale all of which are contained in a plan for development that is prepared and adopted under Clause 20 hereof Discount Rate means the sum of one and the decimal equivalent of the percentage increase in the United States Consumer Price Index as reported for the first time in the monthly publication International Finance Statistics of the International Monetary Fund between the month of the Effective Date and the month when such costs were incurred Production Sharing Contract Block 11 A Ministry of Energy Page 8 Discovery means the Discovery of Petroleum Economic Limit means that point in the life of field where expected Revenue to Contractor from Petroleum Operations is insufficient to cover the operating costs to continue Petroleum Operations in accordance with the requirements of the Contract. In this context Revenue means the expected revenues derived from the conveyance and sale of Petroleum at the Delivery Point together with any firm tariff income earned by the field facilities if any Effective Date means the date falling ninety days after this Contract is executed by the Government and the Contractor Evaluation means the logical cataloguing interpretation and assessment of economic and or technical data and information in order to understand the implications and impact of such data and information on technical and business decisions with respect to Petroleum Operations and shall be inclusive of logging coring and testing an Exploratory Well but exclusive of drillingreamingside tracking or similar activities Execution Date means the

edatethisContractassignedbytheGovernmentandtheContractorExpertDeterminationmeanstheprocess wherebyatechnicaldisputeisresolvedbytheappointmentofaninternationallyrecognizedtechnicalexpertwhoshallbeappointedbymutualagreementoftheGovernmentandtheContractor or failing mutual agreement within thirty 30 days by the International Chamber of Commerce for the purpose of making a determination related to disputes on technical matters or technical differences under subclause261bwhichdeterminationshallbemadewithintwenty20daysoftheappointmentandshallbefinal andbindingupontheGovernmentandtheContractorExplorationPeriodmeanstheInitialExplorationPeriod andtheAdditionalExplorationPeriodasextendedasthecasemaybeduringwhichExplorationOperationsare undertakenbytheContractorExploration Operations include geological geophysical and Geochemical surveys and analyses aerialmapping investigations of subsurface geology stratigraphic tests drilling Exploratory Wells and work necessarilyconnectedtherewithExploratoryWellmeansawelldrilledortobedrilledasthecasemaybeinsearchofPetroleumtotestageological feature which has not been determined to contain producible Petroleum sufficient for CommercialProductionFirst Additional Exploration Period means the additional period of two 2 Contract Years after the InitialExplorationPeriodpursuanttosubclause23asmaybeextendedunderthisContractProductionSharingContractBlock11AMinistryofEnergyPage9FiscalYearmeanasaperiodoftwelve12consecutivemonths correspondingtotheyearofincomeasdefinedintheIncomeTaxActofKenyaGovernmentmeanstheGovernmentoftheRepublicofKenyaIncomeTaxActmeanstheIncomeTaxActofKenyaasfromtimetotimeamendedInitialExplorationPeriodmeanstheperiodoftwo2ContractYearscommencingontheEffectiveDateoftheContractasdefinedinsubclause21JointAccountshallhavethemeaningsetoutinsubpart1.1.1oftheAccountingProcedureJoint Operating Agreement JOA means the operating and participating agreement between the PartiesconstitutingtheContractorthatgovernstheiroperationalactivitiesobligationsandresponsibilitiesunderthisContractLIBOR means London InterBank Offered Rate of interest on six 6 months United States dollars

deposit quoted at 11 a.m. by the National Westminster Bank Plc or any other bank agreed by the parties on the first banking day of each month for which interest is due

Lower Thermal Heat Rate means the Btu content of a fuel by international Standards used for comparison of thermal value of a hydrocarbon

Market Evaluation Report means a report for a potentially commercial Natural Gas Discovery by the Contractor including but not limited to identifying potential markets for the Natural Gas expected volumes for such markets infrastructure potentially required to access such markets and expectations of price for the Natural Gas supplied to such markets

Maximum Efficient Rate means the rate at which the maximum ultimate economic petroleum recovery is obtained from a commercial field without excessive rate of decline in reservoir pressure and consistent with good international petroleum industry practice

Minimum Expenditure means the minimum expenditure obligations of the Contractor during each of the Exploration Periods as specified in Clause 4 herein

Minister means the Minister for the time being responsible for energy or his designated representative

Ministry means the Ministry for the time being responsible for energy or its designated representative

Production Sharing Contract Block 11A Ministry of Energy Page 10

Natural Gas means hydrocarbons that are in a gaseous phase at atmospheric conditions of temperature

and pressure including wet mineral gas dry mineral gas casing head gas and residue gas remaining after the extraction or separation of liquid hydrocarbons from wet gas and non hydrocarbon gas produced in association with liquid or gaseous hydrocarbons

Natural Gas Liquids or NGLs means liquefiable hydrocarbons obtained from Natural Gas by condensation or extraction including but not limited to ethane propane butane pentanes and heavies

Normal Cubic Meter means the volume of gas that occupies a cubic meter when this gas is at a temperature of 15 degrees Celsius and a pressure of 1013.25 millibar

Offshore shall mean any area which lies below the elevation of the lowest tide level of the shoreline in question for the 10 years preceding this Contract

Participation Agreement means that model agreement as set out in Appendix C between the Government and Contractor that sets guidelines with respect to the relationship between the Government and Contractor in connection with their respective activities obligations and responsibilities

possibilities and which shall only come into force after negotiation of a mutually acceptable form and on signature by the Parties upon the election of the Government to acquire hold and execute a fully paying working Participating Interest in one or more Development Areas in accordance with Clause 28 of this Contract. Participating Interest or Participating Interest shall mean as the context requires the fully paying Participating Interest expressed as a percentage and held by the Entities in and to this Contract and the Contract Area and will include the Government or its Appointee in those certain Development Areas in _____ which _____ the Government exercises its right to acquire such a fully paying Participating Interest in accordance with Clause 28.

Person means any legal Contractor, corporeal or otherwise. **Petroleum** means Crude Oil and Natural Gas. **Petroleum Costs** means those expenditures made and obligations incurred by the Contractor in carrying out Petroleum Operations hereunder determined in accordance with this Contract and the Accounting Procedure attached hereto in Appendix B and made apart thereof. **Petroleum Operations** means all or any of the operations authorised under this Contract related to the exploration for finding appraisal development extraction production decommissioning separation and treatment storage transportation and sale or disposal of Petroleum up to the point of export or the agreed Delivery Point in Kenya or the point of entry into a refinery and includes Natural Gas processing liquefaction and _____ compressed _____ Natural Gas operations but does not include petroleum refining operations.

Production Sharing Contract Block 11 Ministry of Energy Page 11. **Point of Sale** means Delivery Point unless otherwise specified. **Profit Oil** shall have the meaning set out in subclause 27.3. **Regulations** mean the Petroleum Exploration and Production Regulations. **Second Additional Exploration Period** means the second period of two (2) contract years after the First Additional Exploration Period pursuant to subclause 24 as may be extended under this Contract. **Second Tier Amount** shall have the meaning set out in subclause 27.3. **Semester** means a period of six (6) consecutive months commencing with the first day of January or the first day of July of a Calendar Year. **Stub Year** shall mean that portion of the first Contract Year between the Effective Date and the last day of the Calendar Year then in progress. **Threshold Prices** shall have the meaning set out in subclause 27.3e.

PART II TERM EXPLORATION OBLIG

ATIONSANDTERMINATION2.TERM1234The Contractor is authorized to conduct Exploration Operations in the Contract Area during an InitialExplorationPeriodofTwo2ContractYearsfromtheEffectiveDate.TheContractorshallbeginExplorati onOperationswithinthree3monthsoftheEffectiveDate.UponwrittenapplicationbytheContractormadenot laterthanone1monthpriortotheexpiryoftheInitialExplorationPeriodtheMinistershalliftheContractorhasful filledhisworkandexpenditureobligationsunderthisContractgrantaFirstAdditionalExplorationPeriodoftw o2ContractYears.UponwrittenapplicationbytheContractormadenotlaterthanone1monthpriortotheexpir yoftheFirstAdditionalExplorationPeriodtheMinistershalliftheContractorhasfulfilledallitsworkobligations underthisContractgrantaSecondAdditionalExplorationPeriodoftwo2ContractYears.ProductionSharing ContractBlock11AMinistryofEnergyPage1256In order to enable the Contractor to complete the drilling and testing of an Exploratory Well actually beingdrilledortestedattheendoftheanyAdditionalExplorationPeriodtheMinistershallonwrittenapplicatio nbytheContractormadenotlaterthanthree3monthsbeforetheexpiryofsuchAdditionalExplorationPeriodu nless another period of notice is agreed by the Parties extend the period in which the work is to beexpeditiouslycompletedwhichinanyeventshallnotextendsuchperiodbymorethanfour4months.This Contract shall expire automatically at the end of the Initial Exploration Period or at the end of anyAdditional Exploration Period as extended in accordance with this Contract except as to any DevelopmentArea.IftheContractorreports pursuanttosubclause196hereofthataCommercialDiscoveryh asbeenmadebefore the expiry of the Initial Exploration Period stipulated in subclause 21 hereof or any AdditionalExplorationPeriodthereofthisContractshallnotexpireinrespecttotherelevantDevelopmentAre abutshallcontinue as to such Development Area for Crude Oil for a Development Period term of Twenty Five25yearsfrom the date the Development Plan for that Development Area is adopted under subclause 203hereofprovidedthattheDevelopmentPeriodforaNaturalGasDevelopmentAreashallcontinueforater moftwentyfive35fromthedatetheDevelopmentPlanforsuchNaturalGasDevelopmentAreaisadoptedund

ersubclause203hereof.1TheContractorshall surrender3.SURRENDERaTwentyFive25Percentoftheori
ginalcontractareaatorbeforetheendoftheInitialExplorationPeriodbTwentyFive25Percentoftheremainin
gcontractareaatorbeforetheendoftheFirstAdditionalExplorationPeriod.2345When calculating
surrender under subclause 31 a Development Area shall be excluded from the
originalContractArea.Notwithstandingthetermsofsurrendersetforthundersubclause31hereintheContra
ctormaysurrenderanadditionalpartoftheContractAreaandsuchavoluntarysurrendershallbecreditedagai
nstthenextsurrenderobligationoftheContractorundersubclause31.The shape and size of an area
surrendered shall be approved by the Minister which approval shall not
beunreasonablywithheld.TheContractorshallgiveone1yearswrittennoticeofsurrenderinrespectofaCom
mercialDiscoverywhichisproducingorhasproducedPetroleumandone1monthwrittennoticeofsurrenderi
nrespectofanyotherpartoftheContractArea.IncaseofasurrenderoftheentireContractAreathisContractsh
allterminate.ProductionSharingContractBlock11AMinistryofEnergyPage136Nosurrendershallreduces
hallreducetheminimumamountofexplorationworkandexpenditurefixedinclause4.4.MINIMUMEXPLOR
ATIONWORKANDEXPENDITUREOBLIGATIONS1

TheContractorshallhavetheobligationtofulfilthefollowingminimumworkandexpenditureobligationsaDuri
ngtheInitialExplorationPeriodofTwo2ContractYears1.1MinimumWorkandExpenditureObligationsAcq
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000.00cDuringtheSecondAdditionalExplorationPeriodofTwo2ContractYearsProductionSharingContr
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umdepthof3000matUSD30000000.00TOTALMINIMUMEXPENDITUREDURINGSECONDADDITION
ALEXPLORATIONPERIODUS30000000.0023456Thefulfilmentofalltheminimumworkobligationsinres

pect of each Exploration Period as set forth in subclauses 41a, 41b and 41c shall relieve the Contractor of the corresponding expenditure obligation thereto. If the drilling of an Exploratory Well is discontinued prior to reaching the minimum depth herein specified because that well has encountered the basement an impenetrable substance or any condition which in accordance with the good international petroleum industry practice would make it unsafe or impractical to continue drilling the minimum depth obligation in respect of that well shall be deemed to be fulfilled. A well drilled to evaluate a Discovery under an Evaluation work programme pursuant to subclauses 192 and 193 shall not be considered to be an Exploratory Well for the purpose of fulfilling the required number of Exploratory Wells unless the written consent of the Minister is obtained. The minimum exploration expenditure set forth in subclause 41 is expressed in U.S. dollars of the year of the Effective Date. In any Contract Year of either the Initial Exploration Period or any Additional Exploration Period for the purpose of comparison of the actual costs incurred and paid by the Contractor with the minimum exploration expenditure the actual costs incurred and paid by the Contractor for seismic operations and the drilling of Exploratory Wells during that Contract Year shall be converted into constant U.S. dollars by dividing the costs by the Discount Rate. If during either the Initial Exploration Period or the First Additional Exploration Period the Contractor exceeds the minimum work obligation in accordance with subclause 41 then such excess may be credited toward the respective obligation of the next succeeding Additional Exploration Period or periods. Production Sharing Contract Block 11A Ministry of Energy Page 157812 Upon entry into each exploration period Contractor shall provide bank guarantee of 50 and parent company guarantee of 50 guaranteeing its full minimum work and expenditure obligations for each exploration period guaranteeing the Contractor's minimum work and expenditure obligations under subclause 41 hereof. If at the end of either the Initial Exploration Period or of the First Second Additional Exploration Period or upon the date of termination of this Contract whichever occurs first the Contractor has not fulfilled all its minimum work obligations under subclause 41 hereof the Contractor shall pay the Government the minimum monetary obligation in respect of all the work for the expiring period multiplied by the Discount Rate and calcul

ated on the last month of that Exploration Period and or the shortfall if any between the amount expended in accordance with sub clause 44 and the minimum monetary obligation for the expiring Exploration

Period multiplied by the Discount Rate. 5. SIGNATURE BONUS AND SURFACE FEES The Contractor shall pay a Signature Bonus of US\$310,000.00 on or before the Execution Date of this contract by means of a direct bank transfer to an accepted Ministry bank account and in accordance with applicable law. The Contractor shall pay on or before the beginning of the relevant Contract Year to the Ministry the following surface fees: i Five Dollars USD 5.00 per square kilometre per annum during the Initial Exploration Period ii Ten Dollars USD 10.00 per square kilometre per annum during the First Additional Exploration Period iii Fifteen Dollars USD 15.00 per square kilometre per annum during the Second Additional Exploration Period iv One hundred Dollars USD 100.00 per square kilometre per annum during the Development and Production Periods 3 The surface fees shall be calculated on the basis of the surface area of the Contract Area on the date those payments are due. A fee payable under sub clause 52 is not refundable and late payments shall attract interest in accordance with sub clause 34.2. Production Sharing Contract Block 11 A Ministry of Energy Page 161

The Minister may terminate this Contract by giving the Contractor written notice if the Contractor 6. TERMINATION AND WITHDRAWAL a Failure to make any payment to the Government or the Minister required under this Contract for a period exceeding sixty (60) days or b In material breach of any other obligation under this Contract or c becomes insolvent makes a composition with its creditors or goes into liquidation other than for reconstruction or amalgamation. 23 The period of notice in respect of sub clause 6.1 hereof shall be two (2) months and in any other case three (3) months but if the Contractor remedies the breach within the period of notice the Minister shall withdraw the notice. Where the Minister reasonably believes the Contractor is using its best effort to remedy the default the Minister may extend the notice accordingly. When this Contract is terminated or expires in whole or in part the Contractor shall conclude the Petroleum Operations in the area as to which this Contract has terminated or expired in an orderly manner minimising harm to the Government and third parties. Production Sharing Contract Block 11 A Ministry of Energy Page 171 23 45 67 PART III RIGHTS AND OBLIGATIONS OF THE CO

TRACTOR 7. RIGHTS OF THE CONTRACTOR The Contractor shall have the right to carry out the Petroleum Operations within the Contract Area subject to the provisions of this Contract for the term hereof. The Contractor is granted the right to enter upon the Contract Area and conduct Petroleum Operations there but permission may be granted by the Government to other Persons to search for and mine minerals other than Petroleum so long as they do not interfere with the Petroleum Operations and easements and rights of way may be granted to other Persons for the benefit of land adjacent to the Contract Area. The Ministers shall facilitate on behalf of the Contractor any permit necessary to enable the Contractor to use the water in the Contract Area for the purpose of the Petroleum Operations but the Contractor shall not unreasonably deprive the users of land domestic settlement or cattle watering place of the water supply to which they are accustomed. The Contractor may for the purpose of the Petroleum Operations use gravel sand clay and stone in the Contract Area but not in a Trust land without a licence granted under section 37 of the Trust Land Act or in other private land without the consent of the owner and on a beach, foreshore or reef without the consent of the Minister. Subject to the provisions of section 10 of the Act and of regulation 6 of the Regulations and subject to the provisions of Chapter V and Articles 261 and 262 in the 5th schedule of the Constitution and Part IV of the Trust Land Act the Contractor may exercise all rights granted to him by this Contract. Subject to the approval of the applicable Development Plan the Contractor shall have the right to freely consume or reinject without being subject to any taxes, royalties or other payments Crude Oil and Natural Gas from the Contract Area for the purpose of conducting the Petroleum Operations. As a result of conducting the Petroleum Operations the Contractor shall have the right without any additional payment except for those payments provided for in this Contract to enter into contracts with the other Parties for the services of their personnel or to provide services in relation to the Petroleum Operations. Production Sharing Contract Block 11A Ministry of Energy Page 18b Arrange financing for a portion of the capital costs of the development operation to be undertaken by the Contractor as determined by the Contractor or enter into agreements providing for the transportation and terminaling of Crude Oil and Natural Gas, establish a marketing agreement with one or more of the parties to market the Crude Oil and Natural Gas on behalf of the Contractor on international markets and enter

ter into any other agreements that may be necessary to conduct the Petroleum Operations.

8. GENERAL STANDARDS OF CONDUCT

1 The Contractor shall carry out the Petroleum Operations diligently and in accordance with good international petroleum industry practice.

2 In particular the Contractor shall ensure that all machinery, plant, equipment and installations used by the Contractor in connection with the Petroleum Operations are of proper and accepted construction and are kept in good repair.

Use the resources of the Contract Area as productively as possible and ensure that good international petroleum industry practice is used to prevent Petroleum discovered and produced or mud or any other fluids or substances escaping or being wasted.

c. prevent damage to adjacent strata which bear Petroleum or water and prevent water entering through wells into strata bearing petroleum except where water injection methods are used for secondary recovery operations.

d. properly confine Petroleum in receptacles constructed for that purpose and not place Crude Oil in an earthen reservoir except temporarily in an emergency.

e. Dispose of waste oil, salt water and refuse in accordance with good international petroleum industry practice, avoiding pollution.

3 In conducting the Petroleum Operations the Contractor may use any of its Affiliates, any Affiliate of the entities constituting the Contractor or independent contractors. The Contractor however shall remain responsible for the performance of its obligations.

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A Ministry of Energy Page 19

1234569. JOINT LIABILITY AND INDEMNITY

Where a Contractor consists of more than one Person, their liability shall be joint and several.

The Contractor shall cause as little damage as possible to the surface of a Contract Area and to trees, crops, buildings and other property thereon.

shall forthwith repair any damage caused and shall pay reasonable compensation for any loss suffered as determined by an independent Expert appointed by the parties subject to subclause 95.

The Minister may if he has reasonable cause to believe that the Petroleum Operations may endanger persons or property, cause pollution, harm marine life or interfere with navigation and fishing, order the Contractor to take reasonable remedial measures or order the Contractor to discontinue the relevant Petroleum Operations until such measures or mutually agreed alternatives thereto are implemented.

If Petroleum Operations are su

suspended in accordance with this sub clause 93 during the Exploration Period then the Exploration Period shall be extended by the same number of days as the period of the suspension. The Contractor shall maintain appropriate and adequate third party liability insurance and workmen's compensation insurance and shall provide the Minister with the evidence of those insurances before the Petroleum Operations begin. The Contractor shall indemnify and render the Government harmless from all and any third party claims for loss or damage which but for the conduct of Petroleum Operations by the Contractor or sub Contractor would not have arisen or occurred. Under no circumstances however shall the Contractor be liable for indirect or consequential losses or damages, pool formation or structured damage, loss of reservoir, loss of production or loss of profits arising out of or in connection with this Contract or the Petroleum Operations. In the event of an emergency or extraordinary circumstances requiring immediate action including the safeguarding of lives or property or protection of the environment or for health reasons the Operator on behalf of the Contractor may take all such actions as it deems proper or advisable to protect the joint property

its investments and its employees and shall give written notice to the Government immediately thereafter. Any and all costs incurred in connection with such emergency activities shall be regarded as Petroleum Costs for the purpose of cost recovery under Clause 27 and the Accounting Procedure. 10. WELLS AND SURVEYS 11. Unless such a notice is waived the Contractor shall not drill a well or borehole or recommence drilling after a six month cessation without thirty (30) days prior notification to the Minister which notice shall set forth the Contractor's reasons for undertaking such well and shall contain a copy of the drilling programme. Production Sharing Contract Block 11 A Ministry of Energy Page 2023 The design of a well or borehole and the conduct of drillings shall be in accordance with good international petroleum industry practice. No borehole or well shall be drilled so that any part thereof is less than five hundred (500) metres from boundary of the Contract Area without the consent in writing of the Minister which consent shall not be unreasonably withheld. 4 The Contractor shall not except where there is danger or a risk of significant economic loss abandon a well or remove any permanent form of casing therefrom without giving forty eight (48) hours

prior notification to the Minister and an abandoned well shall be securely plugged to prevent pollution subseal
a major water entering or escaping from the strata penetrated or b Commenced drilling re-enter or plug a well un
less a representative of the Minister has been given a reasonable opportunity to be present. 567 The
Contractor shall state in its application to abandon a well on land whether that well is capable
of providing a water supply. The Contractor shall within two (2) months of termination or expiry of this Contract
surrender of part of the Contract Area deliver up all productive wells in said surrendered area in good repair a
and working order together with all casings and installations which cannot be removed without damaging the well
but the Minister may require the Contractor to plug the well at the Contractor's expense by notifying the Contract
or within thirty (30) days after such termination or expiry is effected or at least three (3) months prior to
surrender of
a Development Area. Where the Contractor applies to permanently abandon an Exploratory Well in which petr
oleum of potentially commercial significance has not been found the Minister may request the Contractor to de
open or sidetrack that well and to test the formations penetrated as a result of such operations or to
drill another exploration
well within the same prospect area subject to the following provisions a Any such additional Petroleum Operati
on shall be at the sole cost, risk and expense of the Minister and shall be paid for in accordance with the Accounti
ng Procedure. The Government shall advance to the Contractor the funds necessary to conduct the operation
s. b The Contractor shall not undertake such additional work if it will interfere with the conduct of the Contractor's
Petroleum Operations or if it is not commercially, technically or operationally feasible. Production Sharing Con
tract Block 11A Ministry of Energy Page 21 c In the event that the Petroleum Operations undertaken
under this sub clause 10 7 result in
a Discovery which the Contractor elects to evaluate and/or develop as a commercial field the Contractor shall re
imburse the Government Six Hundred percent (600%) of the costs and expenses incurred by the Government for
the conduct of the operations and such sum shall be paid within thirty (30) days of the notification made by the Cont
ractor. If the Contractor does not make such election the Government shall have the right to continue the Petrol
eum Operations on this Discovery at the sole cost, risk and expense of the Government. 8 The Contractor shall g

ive the Minister thirty 30 days notice of any proposed geophysical survey of the Contract Area which notices shall contain completed detail of the programme to be conducted. At the request of the Contractor the Minister may waive the notice period.

11. OFFSHORE OPERATIONS 1 The Contractor shall ensure that works and installations erected offshore in Kenya territorial waters and exclusive economic zones shall be a Constructed placed marked buoyed equipped and maintained so that there are safe and convenient channels for shipping b Fitted with navigational aids approved by the Minister c Illuminated between sunset and sunrise in a manner approved by the managing director Kenya Ports Authority and d Kept in good repair and working order.

21 The Contractor shall pay reasonable compensation for any interference in fishing rights caused by the Petroleum Operations.

12. FIXTURES AND INSTALLATIONS AND TITLE TO ASSETS With the written consent of the Minister which consent shall not be unreasonably withheld the Contractor shall have the right to construct operate and maintain roads drill water wells and to place and or construct fixtures and installations necessary to conduct the Petroleum Operations including but not limited to storage tanks trunk pipelines shipment installations pipelines cables or similar lines liquefaction processing

and compression located inside or outside the Contract Area as well as to construct operate and maintain or lease facilities for the transportation of Crude Oil and Natural Gas from the Contract Area. The consent of the Minister may be conditional on the use by other producers of the excess capacity if any of those facilities. Where the Minister and Contractor agree that a mutual economic benefit can be achieved by constructing and operating common facilities however the Contractor shall use its reasonable best efforts to reach

agreement with other producers on the construction and operation of such common facilities. Production Sharing Contract Block 11 A Ministry of Energy Page 22 23 45 12 Other producers may only use the facilities of the Contractor where there exists excess capacity and on payment of a reasonable compensation which includes a reasonable return on investment to the Contractor and provided the use does not interfere with the Contractor's Petroleum Operations. The Minister may in consultation with the Contractor consent to the laying of pipelines

cables and similar lines in the Contract Area by other Persons subject to the consent of the Contractor which consents shall not be unreasonably withheld and by the submission of technical data by the Government demonstrating that such lines shall not interfere with the Petroleum Operations of the Contractor. On termination or expiration of this Contract or surrender of part of the Contract Area the Contractor shall remove the aboveground plant appliances and installations from the Contract Area or the part surrendered other than those that are situated in or related to a Development Area or at the option of the Minister the Contractor shall transfer ownership thereof at no cost to the Government in the condition that they are then in in which latter case the Government shall be responsible for operating maintaining abandoning and decommissioning of such plants appliances and installations. When the rights of the Contractor in respect of a Development Area terminate expire or are surrendered the Contractor shall transfer ownership thereof to the Government at no cost the plant appliances and installations that are situated in the Development Area or that are related thereto unless such plant appliances and installations are or may be utilised by the Contractor in Petroleum Operations under this Contract but the Government may require the Contractor to remove the surface installations at the cost of the Contractor. 13

.LOCALEMPLOYMENTTRAININGANDCOMMUNITYDEVELOPMENTPROJECT The Contractor its contractors and subcontractors shall where possible employ Kenya citizens in the Petroleum Operations and until expiry or termination of this Contract shall train those citizens. The training programmes shall be established with the consultation of the Minister. In addition to the obligation under subclause 131 and commencing on the Effective Date the Contractor shall for the purposes of section 11 of the Act contribute or hold to the order of the Ministry a minimum of Production Sharing Contract Block 11A Ministry of Energy Page 23 One hundred and seventyfive thousand Dollars USD175000.00 per year during the Initial Exploration Period towards the Ministry Training Fund ii One hundred and seventyfive thousand Dollars USD175000.00 per year during the First Additional Exploration Period towards the Ministry Training Fund. iii One hundred and seventyfive thousand Dollars USD175000.00 per year during the Second

Additional Exploration Period towards the Ministry Training Fund. iv The Contractor of Two hundred thousand Dollars USD200000.00 per year commencing with the adoption of the first Development Plan under subclause 203.a

minimum obligation hereunder increased further shall be to 312 The Contractor shall by way of direct payments contribute a minimum of Fifty thousand Dollars USD50000.00 per year towards the local community development projects. 14. DATA AND SAMPLE

SThe Contractor shall keep logs and records of the drilling, deepening, plugging or abandonment of boreholes and wells in accordance with good international petroleum industry practice and containing particulars of the strata and subsoil through which the borehole or well was drilled; b The casing, tubing and downhole equipment and alterations thereof inserted in a borehole or well; c Petroleum, water, workable mineral or mineral workings encountered; and d Any other matter related to the Petroleum Operations that is reasonably required by the Minister. The Contractor shall record in an original or reproducible form of good quality and on seismic tapes where relevant all geological and geophysical information and data relating to the Contract Area obtained by the Contractor and shall deliver a copy of that information and data, the interpretation thereof and the logs and records of boreholes and wells to the Minister in a reproducible form as soon as practicable after that information, those interpretations and those logs and records come into the possession of the Contractor.

Production Sharing Contract Block 11 A Ministry of Energy Page 243412 The Contractor may remove for the purpose of laboratory examination or analysis petrological specimens or samples of petroleum or water encountered in a borehole or well and as soon as practicable shall without charge give the Minister a representative part of each specimen and sampler removed but no specimen or sample shall be exported from Kenya without prior notification to the Minister. The Contractor shall keep records of any supply of information concerning the Petroleum Operations reasonably requested by the Minister if the data or information necessary to comply with the request are readily available. 15. REPORTS The Contractor shall supply to the Minister daily reports on drilling operations and production operations and weekly reports on geophysical operations. The Contractor shall report in writing to the Minister the progress of the Petroleum Operations according to the following schedule a Within one (1) month of the last day of March, June

September and December covering the previous three months. Within three months of the last day of December covering the previous year, within three months of the date of expiry or termination of this Contract, a report under subclause 15.2 shall contain in respect of the period which it covers a detail of the Petroleum Operations carried out and the factual information obtained. A description of the area in which the Contractor has operated. An account of the expenditure on Petroleum Operations in accordance with the Accounting Procedure. A map indicating all boreholes, wells and other Petroleum Operations. Production Sharing Contract Block 11A Ministry of Energy Page 25. e. On expiry or termination of this Contract, details of the Petroleum Operations including all the matters described in paragraphs (a) to (d) and (f). All information required by clause 14 not hitherto supplied.

PAR TIV RIGHTS AND OBLIGATIONS OF THE GOVERNMENT AND THE MINISTER

16. RIGHTS OF THE GOVERNMENT

The Government may acquire a part of the Contract Area for a public purpose other than searching for or extracting Petroleum but not to the extent that will prevent the carrying out of Petroleum Operations within the Contract Area and the Government shall not without good cause acquire a part of the Contract Area on which Petroleum Operations are in progress. The Contractor shall not carry out Petroleum Operations on such an acquired part but may enter upon that part but not materially interfere with the public purpose.

b. Carry out directional drilling from an adjacent part. The Minister or a Person authorized by him in writing may at all reasonable times inspect any Petroleum Operations and any records of the Contractor relating thereto and the Contractor shall provide where available facilities similar to those applicable to its own or to subcontractors' staff for transport to the Petroleum Operations, subsistence and accommodation and pay all reasonable expenses directly connected with the inspection. If there is a breach of an obligation due to be performed under this Contract, the Minister may require the Contractor to perform any obligation under this Contract by giving reasonable written notice and if the Contractor fails to comply with the notice, the Minister may execute any necessary works for which

the Contractor shall pay forthwith. The Minister may give notice to execute works at any time but not later than three months after the termination or expiry of this Contract or the surrender of a part of the Contract Area.

17. OBLIGATIONS OF THE GOVERNMENT

1231 The Government may at the request of the Contractor make available to the Contractor such land as the Contractor may reasonably require for the conduct of Petroleum Operations and Production Sharing Contract Block 11A Ministry of Energy Page 26a Where the land is Trust Land the Government may subject to subclause 172 set apart such Trust Land in the Contract Area or outside the Contract Area in accordance with the Trust Land Act b Where the land is private land the Government may subject to section 10 of the Act acquire the land in accordance with the applicable laws c The Contractor shall pay or reimburse the Government any reasonable compensation that may be required for the setting apart use or acquisition of any land for the Petroleum Operations as settled by an Expert Determination.

2345 Where the Contractor has occupied Trust Land for the purpose of the Petroleum Operations before that land has been set apart the Contractor shall notify the Minister in writing of the need to set apart such land. The Government shall grant or cause to be granted to the Contractor its contractors and subcontractors such wayleave easements temporary occupation or other permissions within and without the Contract Area as are necessary to conduct the Petroleum Operations and in particular for the purpose of laying operating and maintaining pipelines and cables and passage between the Contract Area and the Delivery Point of petroleum. The Government shall at all times give the Contractor the right of ingress to and egress from the Contract Area and the facilities wherever located for the conduct of Petroleum Operations. Subject to the usual national security requirements and the Immigration Act and Regulations of Kenya in particular the Government shall not unreasonably refuse to issue and or renew entry visas or work permits for employees technicians and managers employed in the Petroleum Operations by the Contractor or its subcontractors and their dependants.

PART V WORK PROGRAMME DEVELOPMENT AND PRODUCTION

18. EXPLORATION WORK PROGRAMME

1 The Contractor shall submit and orally present to the Minister one month after the Effective Date a detailed statement of the exploration work programme and budget for

he first Contract Year. Production Sharing Contract Block 11 A Ministry of Energy Page 27234123456 The Contractor shall submit and orally present to the Minister three (3) months before the end of each Contract Year a detailed statement of the exploration work programme and budget for the next Contract Year. The Minister may submit to the Contractor within thirty (30) days of the receipt of the annual exploration work programme and budget suggested modifications and revisions thereof. The Contractor shall consider the inclusion of such suggested modifications and revisions in light of good international petroleum industry practice and shall provide the Minister with the exploration work programme and budget which the Contractor has adopted. After the adoption of the annual exploration work programme and budget the Contractor may make changes to that annual exploration work programme and budget if those changes do not materially affect the original objectives of that exploration work programme and budget and shall state the reasons for those changes to the Minister.

19. DISCOVERY AND EVALUATION WORK PROGRAMME The Contractor shall in accordance with section 9b of the Act notify the Minister of a Discovery and shall report to the Minister all relevant information. If the Contractor considers that the Discovery merits Evaluation it shall submit and orally three (3) months present to the Minister a detailed statement of the Evaluation work programme and budget which shall provide for the expeditious Evaluation of the Discovery and the provisions of subclauses 183 and 184 shall apply to the Evaluation work programme and budget. After the Evaluation work programme and budget have been adopted the Contractor shall diligently evaluate the Discovery without undue interruption. In the event of a Discovery in the last year of the Second Additional Exploration Period the Minister shall at the request of the Contractor extend the term of the Second Additional Exploration Period in respect to the prospective area of the Discovery and for the period of time reasonably required to expeditiously complete the adopted Evaluation work programme and budget with respect to such Discovery and to determine whether or not the Discovery is commercially but in any event such extension to the Second Additional Exploration Period shall not exceed twelve (12) months. The Contractor shall not more than three (3) months after the Evaluation or Market Evaluation Report

is completed report to the Minister the commercial prospect of the Discovery including all relevant technical and economic data. If the Contractor reports under subclause 195 that the Discovery is a Commercial Discovery a Development Plan shall be submitted to the Minister within six 6 months of the completion of the Evaluation work programme or Market Evaluation Report unless otherwise agreed and upon written application of

the Contractor the term of this Contract shall be extended by the Minister if necessary in respect of the area of the Commercial Discovery provisionally established in accordance with the adaptation of a Development Plan.

Production Sharing Contract Block 11 A Ministry of Energy Page 2820. DEVELOPMENT PLAN AND DEVELOPMENT WORK PROGRAMME

1 The Contractor shall prepare in consultation with the Minister the Development Plan based on sound engineering and economic principles and in accordance with good international petroleum industry

practice and considering the Maximum Efficient Rate of production appropriate to the Commercial Discovery

.2 The Development Plans submitted by the Contractor to the Minister shall contain a Details of the proposed

Development Area relating to the Commercial Discovery which shall correspond as closely as possible to the extension of the discovered accumulation in the Contract Area as

determined by the analysis of all the relevant available information b Proposals relating to the spacing drilling and completion of the wells and the facilities

and installations required for the production storage and transportation of petroleum c A production forecast and an estimate of the investment and expenses involved and d An estimate of the time required to complete each

phase of the Development Plan. 3 The Minister and the Contractor shall jointly consider the

Development Plan within sixty 60 days of submission thereof and the Minister may within that period unless otherwise agreed submit

suggested modifications justifications and revisions thereof. The Contractor shall consider the inclusion of such suggested modifications and revisions in the light of good international petroleum industry practice and the

Development Plans shall be adopted by mutual agreement. Where the Minister proposes no modifications and revisions the Development Plan of the Contractor shall be adopted sixty 60 days after its submission unless it is

adopted by mutual agreement of the Parties before that period has elapsed. Production Sharing Contract Block 11A Ministry of Energy Page 29451234 After a Development Plan has been adopted the Contractor shall use its best efforts to proceed promptly and without undue interruption to implement the Development Plan in accordance with good international petroleum industry practice. Development work shall commence six (6) months from the date of adoption of the Development Plan. In connection therewith the Contractor shall submit and orally present to the Minister prior to the first day of October of each year following the adoption of the Development Plan a detailed statement of the annual development work programme and budget for the next Calendar Year and the provisions of subclauses 183 and 184 shall apply to the Development Plan and to the annual development work programme and budget. Where the development operations result in an extension to the area to which the Commercial Discovery relates within the Contract Area the Ministers shall adjust the relevant Development Area to include that extension as determined by the analysis of all the relevant available information.

21. UNITISATION Where there are recoverable reserves of a Commercial Discovery extend into an area adjacent to the Contract Area the Minister may require the Contractor to produce Petroleum therefore in cooperation with the Contractor of the adjacent area. Where non-commercial deposits of Petroleum in the Contract Area are exploited with deposits in an area adjacent to the Contract Area would become commercial the Minister may make a similar requirement to the Contractor of that adjacent area. If the Ministers so require the Contractor shall in cooperation with the Contractor of the adjacent area submit within six (6) months unless otherwise agreed by the Parties a proposal for the joint exploitation of the deposits for the approval of the Minister. The reasonable costs of preparing the proposal shall be divided equally between the Contractor and the adjacent contractor. If the proposal is not submitted or approved the Minister may prepare his own proposal in accordance with good international petroleum industry practice for the joint exploitation of the recoverable reserves. The Minister's proposal may be adopted by the Contractor subject to subclause 214 and subject to the adjacent contractor's acceptance of the same proposal. The provisions of the proposal for joint exploitation shall prevail

over this Contract where those provisions do not reduce the financial benefits to the parties under this Contract.

Production Sharing Contract Block 11A Ministry of Energy Page 30121222. MARGINAL AND NONCOMMERCIAL DISCOVERIES Where the Contractor determines that oil or Natural Gas Discovery is marginal or noncommercial the Contractor may propose a modification to this Contract based on an alternative economic evaluation and after consideration the Minister may accept or reject the proposed modification. Upon making a marginal Discovery of Natural Gas the Contractor and the Government shall commence good faith negotiations of revisions to Clause 27 that would be necessary in order to provide the Contractor with project economics that will provide a reasonable Rate of Return. The parties agree that unless otherwise agreed if the Contractor fails to commence the Evaluation of a Petroleum Discovery within Twelve (12) Months following the notice of Discovery or if within Twelve (12) Months following the completion of an Evaluation work programme and the Contractor considers the Crude Oil Discovery does not merit development the Minister may request the Contractor to surrender the area corresponding to such Crude Oil Discovery and the Contractor shall forfeit any rights relating to any production therefrom. The area subject to such surrenders shall not exceed the extension of the discovered accumulation as determined by the structural closure of the prospective horizon and all other relevant available information. Any such surrender by the Contractor shall be credited in accordance with subclause 33 hereof.

23. NATURAL GAS Where Natural Gas is discovered and the Contractor and the Minister agree that it may be economically processed and utilised other than in secondary recovery operations that processing and utilizations shall follow a Development Plan approved in accordance with clause 20. The Contractor shall return associated Natural Gas not required for use in Petroleum Operations or sold to the subsurface structure but if such Natural Gas cannot be economically used or sold or returned to the subsurface structure the Contractor shall after expiry of sixty (60) days notice to the Minister giving reasons why such Natural Gas cannot be economically used or sold or returned to the subsurface structure be entitled to flare such associated Natural Gas in accordance to good international petroleum industry practice. Notwithstanding anything in this clause to the contrary Natural Gas may be flared at any time if necessary for the

econducting of well and production tests and during any emergency. Production Sharing Contract Block 11A Ministry of Energy Page 3134123412 Where the Contractor does not consider that it is economical to process and utilise associated Natural Gas and where that Natural Gas is not required for use in Petroleum Operations the Minister may at the field separator process and utilise that Natural Gas without compensation but the Government shall pay for all costs and expenses related thereto which shall include but not be limited to any engineering studies new fixtures equipment and installations required for the gathering transport processing and utilisation thereof and the operation and maintenance of same shall be at the sole risk cost and expense of the Government. Where the Contractor considers that it is economical to produce Natural Gas the Contractor agrees to sell Natural Gas to the Government to the volume calculated in accordance with subclause 296 below with both terms of sale including price to be agreed.

24. PRODUCTION LEVELS AND ANNUAL PRODUCTION PROGRAMME The Contractor shall produce Petroleum at the Maximum Efficient Rate in accordance with good international petroleum industry practice. Prior to the first day of October of each year following the commencement of Commercial Production the Contractor shall submit and orally present to the Minister a detailed statement of the annual production programme and budget for the next Calendar Year and the provisions of subclause 183 and 4 shall apply to the annual production programme and budget. The Contractor shall endeavour to produce in each Calendar Year the forecast quantity estimated in the annual production programme. The Crude Oil shall be run to storage constructed maintained and operated by the Contractor and Petroleum shall be metered or otherwise measured as required to meet the purpose of this Contract in accordance with clause 25.

25. MEASUREMENT OF PETROLEUM The volume and quality of Petroleum produced and saved from the Contract Area shall be measured by methods and appliances customarily used in good international petroleum industry practice and approved by the Minister. The Minister may inspect the appliances used for measuring the volume and determining the quality of Petroleum and may appoint an inspector to supervise the measurement of volume and determination of quality. Production Sharing Contract Block 11A Ministry of Energy Page 32341 Where the method of

measurement or appliances used therefore have caused an overstatement or understatement of a share of the production the error shall be presumed to have existed since the date of the last calibration of the measurement devices unless the contrary is shown and an appropriate adjustment shall be made for the period of error. The Minister and the Contractor shall determine the measurement point at which production shall be measured and the respective shares of Petroleum allocated.

26. VALUATION OF CRUDE OIL AND NATURAL GAS

The value of Crude Oil for all purposes under this Contract shall be denominated in United States dollars and shall be calculated each Calendar Quarter as follows: if there have been sales of Crude Oil produced from the Contract Area to third parties at arm's length during that Calendar Quarter, the value shall be the weighted average per unit price actually paid in those sales at the F.O.B. point of export or at the point at which title and risk pass to the buyer, adjusted for grade, gravity and quality of such Crude Oil as well as for transportation costs and other appropriate adjustments for grade, gravity and quality of such Crude Oil transaction where the seller and the buyer are independent of one another and do not have directly or indirectly any common interest; but if there have been no sales of Crude Oil produced from the Contract Area to third parties at arm's length during that Calendar Quarter, the value shall be the fair market value determined as the average per unit prevailing market price actually paid during that Calendar Quarter in arm's length sales for export under term Contracts of at least ninety (90) days between unrelated purchasers and sellers for Crude Oil produced in Kenya and for Crude Oil of comparable quality produced in the nearest major Crude Oil producing and exporting country and adjusted for grade, gravity and quality of such Crude Oil as well as for transportation costs and any other appropriate adjustments. If necessary, a value of Crude Oil shall be determined separately for each Crude Oil or Crude Oil mix and for each point of delivery. The value of Crude Oil shall be mutually agreed at the end of each Calendar Quarter and applied to all transactions that took place during the quarter.

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If the Minister and the Contractor cannot reach an agreement on the value of Crude Oil within thirty (30) days of the end of any Calendar Quarter, such dispute may be submitted for an Expert Determination. Pending the determination of the value of Crude Oil for a Calendar Quarter, the value of Crude Oil determined for the preceding Calendar Quarter will be provisionally applied to make calculation and payment during such Calendar Quarter until the

applicable value for that Calendar Quarter is finally determined pursuant to subclause 26.1. Any adjustment to provisional calculation and payment if necessary will be made within thirty (30) days after such applicable value is finally determined. Natural Gas shall be valued based on the actual proceeds received for sales provided that for sales of Natural Gas between the Contractor and any Affiliate the value of such Natural Gas shall not be less than the then prevailing fair market value for such sales of Natural Gas taking into consideration to the extent possible such factors as the market, the quality and quantity of Natural Gas and other relevant factors reflected in natural gas pricing. For sales of Natural Gas into the domestic market the price shall be set in accordance with

the provisions of subclause 23.5. PART VI COST RECOVERY PRODUCTION SHARING MARKETING AND PARTICIPATION 27. COST RECOVERY PRODUCTION SHARING WINDFALL AND INCOME TAX Subject to the auditing provisions under clause 30 the Contractor shall recover the Petroleum Costs in respect of all Petroleum Operations incurred and paid by the Contractor pursuant to the provisions of this Contract and duly entered in the Joint Account by taking and separately disposing of an amount equal in value to a maximum of Sixty Percent (60%) of all Crude Oil produced from the Contract Area during that Fiscal Year and not used in Petroleum Operations. Such cost recovery Crude Oil is hereinafter referred to as Cost Oil. 2. Petroleum Costs may be recovered from Cost Oil in the following manner: a. Petroleum Costs with the exception of capital expenditures incurred in respect of the Contract Area shall be recoverable either in the Fiscal Year in which these costs are incurred and paid or the Fiscal Year in which Commercial Production occurs whichever is the later and b. capital expenditure incurred in respect of each Development Area shall be recoverable at a rate of 20% based on amortization at that rate starting either in the Fiscal Year in which such capital expenditure are incurred and paid or the Fiscal Year in which Commercial Production commences whichever is the later. Production Sharing Contract Block 11A Ministry of Energy Page 34 For the purpose of this clause capital expenditure shall mean the qualifying expenditure other than intangible drilling costs that is expenditure that has no salvage value including expenditure

on labour fuel repairs maintenance hauling mobilization and supplies and materials other than supplies and materials for well casings or other well fixtures which is for or incidental to drilling cleaning deepening completing or abandoning wells and is incurred in respect of: i) The determination of well locations geological and geophysical studies and topographical and geographical surveys preparatory to drilling; ii) The drilling shooting testing and cleaning of wells; and iii) The clearing draining and levelling of land road building and laying off foundations. c) To the extent that in a Fiscal Year the Petroleum Costs recoverable according to subclauses 272a and 272b exceed the value of all Cost Oil or Cost Gas for such Fiscal Year the excess shall be carried forward for recovery by the Contractor in the next succeeding Fiscal Year or Fiscal Years until fully recovered but in no case after the termination of this Contract. d) To the extent that in a Fiscal Year the Petroleum Costs recoverable according to subclauses 272a and 272b are less than the maximum value of the Cost Oil or Cost Gas as specified in subclause 271 the excess shall become part of and be included in the Profit Oil or Profit Gas as provided for in subclause 273 hereafter. e) For the purpose of valuation of Cost Oil and Cost Gas the relevant provisions of clause 26 hereof shall apply. 3. The total Crude Oil produced and saved from the Contract Area and not used in Petroleum Operations less the Cost Oil as specified in subclauses 271 and 272 shall be referred to as the Profit Oil and shall be shared taken and disposed of separately by the Government and Contractor according to increments of Profit Oil as follows: Production Sharing Contract Block 11A Ministry of Energy Page 35 ONSHORE PROFIT OIL SPLIT TRANCHES

Incremental Production Tranches	Govt. Share	Contractor Share
0-30000 barrels per day	50%	50%
30000-50000 barrels per day	60%	40%
50000-70000 barrels per day	65%	35%
70000-100000 barrels per day	67%	33%
Above 100000 barrels per day	70%	30%

22a) For the purpose of this subclause increments of Profit Oil shall be calculated by considering the total Crude Oil produced and saved from the Contract Area less the quantity of Cost Oil required to satisfy recoverable cost expenses and expenditures according to subclauses 271 and 272. b) Where two (2) or more reservoirs are sufficiently close so that they utilize the same surface installation they shall be considered for the purposes of subclause 273 a) as being one (1) Development Area. When making a proposal for the delineation of a Development Area and its associated Development Plan the Contractor shall consider in priority the option which is the most favourable.

e for the Government in terms of Profit Oil split. c Windfall Profits When the value of crude oil for any calendar quarter calculated in accordance with Clause 26 of the PSC exceeds United States US\$50 per barrel FOB Mombasa hereinafter referred to as the Threshold Price adjusted for the United States of America's Consumer Price Index CPI whose Effective Date will be from the date of the contract execution then a Second Tier Amount is payable by the Contractor to the Government. The Second Tier Amount will be calculated in respect of each Calendar Quarter according to the following formula:

$$R = CSPO \times 26 \times V - \text{Threshold Price}$$

Where R is the Second Tier Amount in US Dollars, V is the value of Crude Oil in U.S. dollars for that Calendar Quarter calculated in accordance with Clause 26 and expressed in US bbl provided that V exceeds the Threshold Price and CSPO is the Contractor Share of Profit Oil for that Calendar Quarter in bbl calculated pursuant to clause 273a. d The Second Tier Amount will be calculated within thirty (30) days following the end of the Calendar Quarter for which it is due. For the purposes of this Contract the Second Tier Amount will be treated as an adjustment to the amount payable as Profit Oil. e The Threshold Price set forth in this subclause 273 c is US\$50 per barrel F.O.B. Mombasa as of Effective Date and shall be adjusted quarterly as set forth below. The Threshold Price during any Calendar Quarters shall be derived by multiplying the Threshold Price by the number hereinafter referred to as the price index which is the sum of one (1) and the decimal equivalent of the percentage increase in the United States Consumer Price Index as reported for the first time in the monthly publication International Finance Statistics of the International Monetary Fund between the month of Effective Date and the month when such valuation is calculated. 4 With respect to subclauses 271, 272 and 273 Cost Oil, Cost Gas, Profit Oil and Profit Gas calculation shall be done quarterly on an accumulative basis. To the extent that actual quantities, costs and expenses are not known, provisional estimates of such data based on the adopted annual production work programme and budget under clause 24 shall be used. Within sixty (60) days of the end of each Fiscal Year a final calculation of Cost Oil, Cost Gas, Profit Oil and Profit Gas based on actual Crude Oil and Natural Gas production in respect of that Fiscal Year and recoverable Petroleum Costs shall be prepared and any necessary adjustments shall be made. 5 Each Contractor shall be subject to and shall comply with the requirements of the income tax law

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Block11A Ministry of Energy Page 37 The portion of the Profit Oil or Profit Gas which the Government is entitled
to take and receive and which is calculated under subclause 27.3 shall be inclusive of all taxes present or future ba
sed on income or profits of the Contractor including specifically tax payable under the Income Tax Act
and dividend tax imposed by Kenya on any distribution of income or profits by the Contractor but
shall exclude the tax paid by
the Contractor on behalf of petroleum services subcontractors. The Government agrees to pay and discharge
as and when due such taxes for account of each Contractor and the Minister agrees to furnish each Contractor
with proper receipts from the Government evidencing the payment of all such taxes on the Contractor's behalf f
or each Fiscal Year. Each Contractor shall prepare and file a Kenya income tax return for each Fiscal Year withi
n four 4 months after the close of each Fiscal Year. The receipts furnished by the Minister evidencing payment o
f such taxes shall correspond to the amount of taxes payable on behalf of the Contractor by the Government. Th
e receipts shall be issued by the duly constituted authority for the collection of Kenya income taxes and
shall be furnished within three 3 months after the date
the Contractor files its Kenya income tax return for the Fiscal Year. All taxes paid by the Government in the name
and on behalf of the Contractor shall be considered income to the Contractor for the Fiscal Year to which the tax
payments relate. 6. If so directed by the Minister the Contractor shall be obligated to lift and market part or the enti
re Government share of Profit Oil Profit Gas and any Government or Appointee Participating Interest share of
Petroleum in a Development Area. If any Party fails to lift and market their share of Petroleum the Contractor no
minated as operator may lift and market such Party's share on their behalf. When the Minister elects not to take a
nd receive in kind any part of the Government share of Profit Oil the Minister shall notify the Contractor three 3 m
onths before the commencement of each Semester of a Calendar Year specifying the quantity of production a
nd such notices shall be effective for the ensuing Semester. Any sale by the Contractor of the Government share
of Profit Oil shall not be for a term of more than one 1 year without the Minister's consent. The Contractor shall
have the right to market the Government's share at the
then prevailing fair market price. The price paid by the Contractor for the Government share of Profit Oil shall be

he price established according to clause 26. The Contractor shall pay the Government on a monthly basis such payments to be made within thirty (30) days after the end of the month in which the production occurred. Production Sharing Contract Block 11A Ministry of Energy Page 387812 At a reasonable time prior to the scheduled date of commencement of Commercial Production the parties shall agree to procedures covering the scheduling, storage and lifting of Petroleum produced from the agreed upon Point of Sale. In the event that the Contractor elects to produce a Natural Gas Discovery the Petroleum Costs incurred by the Contractor and directly attributable to the development and production of such Natural Gas shall be recovered from part thereof. 28. GOVERNMENT PARTICIPATION The Government will have a ten percent (10%) carried participating interest upon declaration of commerciality and thereafter may elect to acquire an additional ten percent (10%) interest in the PSC thus bringing total government participation to twenty percent (20%). The Government may participate either directly or through an appointee if the Government exercises its right to participate in a Development Area the Government and the Contractor shall enter into either a Participation Agreement or an amendment and novation of the Joint Operating Agreement to add the Government or its Appointee as a party to the Joint Operating Agreement within three (3) months after notice to the Contractor under subclause 28.1.3 The Government shall in exercise of its right to participate in a Development Area have a right to a vote in proportion to its Participating Interest with respect to all decisions taken under this Contract and either the Participation Agreement or Joint Operating Agreement as appropriate. Both and separately take and dispose of its Participating Interest share in the Petroleum produced and saved to which the Contractor is entitled under this Contract corresponding to its Participating Interest in that Development Area. Assume its share of Petroleum Costs incurred in respect of that Development Area from the Effective Date of its participation as defined in subclause 28.3 pro rata to its Participating Interest. Own a Participating Interest share in all assets acquired for Petroleum Operations in or related to the Development Area. Production Sharing Contract Block 11A Ministry of Energy Page 3941234 The Government shall

reimburse the Contractor without interest prorata to the Government Participating Interest its share of all costs, expenses and expenditure incurred in respect of the Development Area from the date the Development Plan for that Development Area has been adopted to the date the Government serves notice pursuant to subclause 28.3 exercises its right to participate in that Development Area.

This reimbursement shall be made within three (3) months after the Government serves notice pursuant to subclause 28.3.

29. DOMESTIC CONSUMPTION The Contractor shall have the obligation to supply in priority Crude Oil for domestic consumption in Kenya and shall sell to the Government that portion of the Contractor's share of Production which is necessary to satisfy the domestic supply requirements in accordance with the following provisions. In each Calendar Year the Minister shall notify the Contractor not less than three (3) months prior to the beginning of that Calendar Year of the domestic supply requirement. The maximum amount of Crude Oil that the Minister may require from the Contractor's share of production shall be calculated each Calendar Quarter and shall be equal to the excess of total Crude Oil domestic consumption in Kenya multiplied by a fraction the numerator of which is the average Crude Oil production from the Contract Area and the denominator of which is the total Crude Oil production from all producers in Kenya over the amount of Crude Oil available to the Government from the Government's share of Crude Oil from all production sharing Contracts in Kenya including the Government's share of production under clause 27 and in the form of Government participation share under clause 28. For the purpose of this subclause domestic consumption does not include Crude Oil refined in Kenya for export. When the Contractor is obligated to supply Crude Oil or Natural Gas for domestic consumption in Kenya the price paid by the Government shall be calculated in accordance with clause 26. Such sales to the Government shall be invoiced monthly and shall be paid within thirty (30) days of receipt of the invoice unless other terms and conditions are mutually agreed. With the written consent of the Minister the Contractor may comply with this clause by importing Crude Oil and exporting the same amount but appropriate adjustments shall be made in price and volume to reflect transportation costs differences in quality gravity and terms of sale provided that the Contractor may also comply with this Clause with respect

to Natural Gas amounts required under subclause 296 by importing alternative fuels and exporting an like amount of Natural Gas. Production Sharing Contract Block 11A Ministry of Energy Page 40561234 In this clause Government includes an Appointee and Contractor does not include the Government where the Government has participated under clause 28. In each Calendar Year the Minister shall notify the Contractor not less than three 3 months prior to the beginning of that Calendar Year of the domestic Natural Gas supply requirement. The maximum amount of Natural Gas that the Minister may require from the Contractor's share of production shall be calculated each Calendar Quarter and shall be equal to the excess of total domestic Natural Gas consumption in Kenya multiplied by a fraction the numerator of which is the average Natural Gas production from the Contract Area and the denominator of which is the total Natural Gas production from all producers in Kenya over the amount of Natural Gas available to the Government from the Government's share of Natural Gas from all production sharing contracts in Kenya including in the form of Government's share of production under Clause 27 and in the form of Government participation share under Clause 28 under this Contract. For the purpose of this subclause 296 domestic consumption does not include Natural Gas liquefied or compressed in Kenya for export.

PART VII BOOKS ACCOUNTS AUDITS IMPORTS EXPORTS AND FOREIGN EXCHANGE 30. BOOKS ACCOUNTS AND AUDITS The Contractor shall keep books and accounts in accordance with the Accounting Procedure and shall submit to the Minister a statement of those accounts not more than three 3 months after the end of each Calendar Year. At the request of the Minister the Contractor shall appoint an independent auditor of international standing approved by the Government to audit annually the books and accounts of the Contractor and report thereon and the cost of such audit shall be at the charge of the Contractor and cost recoverable. The Government may audit the books and accounts in accordance with the provisions of the Accounting Procedure within two 2 Calendar Years of the period to which they relate and shall complete that audit within one 1 Calendar Year. In the absence of an audit within two 2 Calendar Years or in the absence of notice to the Contractor of a discrepancy in the books and accounts within three 3 Calendar Years of the period to which the audit relates the Contractor's books and accounts shall be deemed correct.

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fEnergyPage4131.PREFERENCETOKENYANGOODSANDSERVICES123TheContractoritscontractorsandsubcontractorsshallgivepreferencetoKenyanmaterialsandsuppliesforuseinPetroleumOperationsaslongastheirpricesqualityquantitiesandtimelinessofdeliveryarecomparablewiththepricesqualityquantitiesandtimelinessofdeliveryofnonKenyanmaterialsandsupplies.The Contractor its contractors and subcontractors shall give preference to Kenyan contractors for servicesconnected with Petroleum Operations as long as their prices quality of performance and timeliness arecomparablewiththepricesqualityofperformanceandtimelinessofnonKenyan servicecontractors.The Contractor its contractors and subcontractors shall provide supplies and services from bases in Kenyawherepracticable.4TheContractorshalla on or before the beginning of each Calendar Year to which it applies submit to the Minister atentativescheduleofthecontemplatedserviceandsupplycontractswithanestimatedvalueexceedingthe equivalentofFiveHundredThousandUSD500000UnitedStatesDollarspercontracttobeentered into during the forthcoming Calendar Year showing the anticipated tender date andapproximatevalueandthegoodsandservicestobeprovidedb for contracts with an estimated value exceeding the equivalent of Five Hundred ThousandUSD 500000 United States Dollars per contract undertake to select its contractors and subcontractorsfromadequatelyqualifiedcompaniesbymeansofcompetitivebiddingorbyappropriatesole sourcinginaccordancewithgoodinternationalpetroleumindustrypracticeAssoonaspracticableaftertheirexecutionprovidetotheMinisteracopyofeachcontractrequiringapaymentinacurrencyotherthanKenyaShillingsandabriefdescriptionoftheeffortsmadetofindaKenyansupplierorservicecontractorThe minimumamountspecifiedunderthissubclause314maybechangedfromtimetotimebymutualagreement.Production SharingContractBlock11AMinistryofEnergyPage4232.EXPORTSANDIMPORTS1234Except as to the petroleum to be delivered to the Government pursuant to the terms of this Contract theContractorshallownandreceiveitsshareofPetroleumproducedfromtheContractAreaandshallbeentitledtolifttakeexportandsellorotherwisedisposeofsuchPetroleumoutsideofKenyawithoutrestrictionandfreeoftaxeschargesfeesdutiesorleviesofanykindortootherwisefreelydisposeofthesame.TheContractorand

its contractors and subcontractors engaged in carrying out Petroleum Operations under this Contract shall be permitted to import into Kenya all the services, materials, equipment and supplies including but not limited to machinery, vehicles, consumable items, movable property and any other articles to be used solely in carrying out Petroleum Operations under this Contract. Such services, materials, equipment and supplies shall be exempt from all Customs Duties, VAT and import declaration fees provided that the Contractor and its contractors and subcontractors shall give preference to Kenyan goods and services in accordance with clause 31 hereof. In relation to materials, equipment and supplies imported or to be imported pursuant to subclause 32.2 when a responsible representative of the Ministry has ascertained that they are to be used solely in carrying out Petroleum Operations under this Contract, the Contractor and its contractors and subcontractors shall be entitled to make such imports without any approval of import licence provided however that an application has been duly made to any exchange control approvals subject to the provision of clause 33 hereof for any inspection outside of Kenya by general superintendence or other inspecting body acting for the time being appointed by the Government. The actual costs of Contracts for technical and other services entered into by the Contractor for Petroleum Operations and for materials purchased by the Contractor for use in Petroleum Operations shall be recoverable provided that those services and materials are reasonably required for Petroleum Operations and provided further that the prices paid by the Contractor are not higher than those currently prevailing in normal arms-length transactions of the open market for comparable services and materials. Production Sharing Contract Block 11A Ministry of Energy Page 43/56/78 Each expatriate employee of the Contractor, its contractors and subcontractors shall be permitted to import and shall be exempt from all Customs Duties with respect to their reasonable importation of household goods and personal effects including one (1) automobile provided however that such properties are imported within three (3) months of their arrival or such longer period as the Government may in writing determine. The Contractor and its contractor and subcontractors and their expatriate employees may sell in Kenya all imported items which are no longer needed for Petroleum Operations. However, if such imports were exempt

from Customs Duties the sellers shall fulfil all formalities required in connection with the payment of duties taxes fees and charges imposed on such sales. Subject to subclauses 126 and 127 Contractor and its contractors and subcontractors and their expatriate employees may export from Kenya exempt of all export duties taxes fees and charges all previously imported items which are no longer required for the conduct of Petroleum Operation under this Contract. customs duties as that term is used herein shall include all duties taxes on import except those charges paid to the Government for actual services rendered which are repayable as a result of the importation of the item or items under consideration.

33. EXCHANGE AND CURRENCY CONTROL SClauses 331 332 and 333c were deleted following the repealing of the Exchange Control Act Chapter 113 of the law of Kenya however clauses 333a 333b and 334 have been retained as they are still applicable.

3 Subject to the obligation to give preference to Kenyan goods and services as stipulated under clause 31 the Contractor shall have the right to enter all contracts and subcontracts necessary to carry out Petroleum Operations without prior approval by the Central Bank of Kenya or any other Government agency. The Government reserves the right to inspect the records or documentation related to such contracts and subcontracts and in accordance with clause 30 to appoint independent auditors to examine the accounts of the Contractor and if the Government requests the Contractor shall provide a copy of such contracts within thirty 30 days provided however that where the Government disputes a specific substantivematerial provision in the contract the value in dispute shall not be included until the dispute has been resolved in respect of a qualifying expenditure under the Income Tax Act and Production Sharing Contract Block 11 A Ministry of Energy Page 44 b the Certificate of Approved Enterprise.

4 The Government shall grant to the Contractor a certificate of Approved Enterprise in accordance with the Foreign Investments Protection Act Chapter 518 of the Law of Kenya. The amount recognized by the certificate as having been invested shall be the actual amount for the time being invested by the Contractor as set forth in its books of account maintained and audited in accordance with this Contract provided however that the Contractor shall not repatriate any proceeds of sale of an asset forming part of either a qualifying expenditure under the Income Tax Act or b any asset subject to a Certificate of Approved Enterprise without written

approval and thenecessary amendments to the relevant certificate. Proceeds arising from any other source may

berepatriatedafteraseniorOfficeroftheMinistrydulyauthorizedinthatbehalfhascertifiedthatsuchrepatriationisinorder.5Inadditiontotherightsexpressedinsubclause333theContractorshallhavetherighttoretain abroadtheproceedsfromallsalesofPetroleumtowhichitisentitledandtorepatriateallcapitalloanprincipalpr ofitsandotherincomeorexpensearisingoutofPetroleumOperationsbestablish and maintain interest bearing bank accounts in Kenya and in foreign countries and toimportintoKenya fundsrequiredforPetroleumOperationsinforeignexchangeandmakepaymentsoutsideof KenyaforgoodsworksandservicesofwhatevernatureinconnectionwiththeconductofPetroleumOperatio nsdpaywage salariesallowancesandbenefitsofitsemployeespartlyorwhollyoutsideofKenyawhichshall alsoapplytotheContractorsAffiliatesandsubcontractors.

PARTVIII GENERAL

34. PAYMENTS

1 AllsumsduetotheGovernmentortheContractorshallbepaidinUnitedStatesdollarsorothercurrencyagreedto bythe GovernmentandtheContractor.

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Any lat epayments shall attract interest at LIBOR plus 300 basis points.

35. ASSIGNMENT

12 After notice to the Minister an Contractor may assign part or all of its rights and obligations under this Contract to an Affiliate without the pri or approval of the Minister provided such assignments shall result in the assignor and the assignee being jointly and severally liable for all of the assignor's obligations hereunder. An Contractor may only assign to a Person ot her than an Affiliate part or all of its rights and obligations under this Contract with the consent of the Minister whic h shall not be unreasonably withheld and which shall be granted or refused within thirty 30 days of receipt by the Minister of the notice from the Contractor that it intend to make such an assignment but the Minister may requir esuch an assignee to provide a guarantee for the performance of the obligations of the Contractor.

3 The Contr actor shall report to the Minister any Change in Control in its corporate structure.

36. MANAGER ATTORNEY AND JOINT OPERATION AGREEMENT

1231 The Contractor shall notify the Minister before the Petroleum Operations begin of the name and address of the person resident in Kenya who will supervise the Petroleum Operations and prior notice of any subsequent changes shall be given to the Minister. The Contractor shall appoint an advocate resident in Kenya with the power of representation in all

matters relating to this Contract of which appointment the Ministers shall be notified before the Petroleum Operations begin and prior notice of any subsequent changes shall be given to the Minister. Where the Contractor consists of more than one Person the Contractor shall deliver to the Minister a copy of the Joint Operating Agreement between those Persons as soon as it is available.

37. **CONFIDENTIALITY** All the information which the Contractor may supply to the Government under this Contract shall be supplied at the expense of the Contractor and the Government shall keep that information confidential and shall not disclose it other than to a Person employed by or on behalf of the Government except with the consent of the Contractor which consent shall not be unreasonably withheld.

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Notwithstanding subclause 37.1 the Minister may use any information supplied for the purpose of preparing and publishing reports and returns required by law and for the purpose of preparing and publishing reports and surveys of a general nature for internal use. The Minister may publish any information which relates to a surrendered area at any time after the surrender and in any other case three (3) years after the information was received unless the Minister determines after representations by the Contractor that a longer period shall apply. The Government shall not disclose without the written consent of the Contractor to any Person other than a Person employed by or on behalf of the Government knowhow and proprietary technology which the Contractor may supply to the Minister. Except as may be necessary to obtain the appropriate governmental approvals none of the Parties shall disclose the content of this Contract except to its Affiliates independent contractors and consultants bona fide third party purchasers of an interest under this Contract as required by law without the prior written consent of the other Parties. Subject to legal or regulatory requirements applicable to the Contractor the Parties shall cooperate in developing joint publicity statements to be released at an agreed time. After the Effective Date all public announcements by the Contractor about the Petroleum Operations shall be issued through the Contractor with the approval of the Government.

38. **FORCE MAJEURE** In this clause Force Majeure means an occurrence beyond the reasonable control of the Minister or the Government or the Contractor which prevents any of them from performing their obligation under this Contract.

ractincludingbutnotlimitedtotheoccurrencesetoutinclause381.Force Majeure shall include among other things Acts of God unavoidable accidents acts of war or conditions attributable to or arising out of war declared or undeclared insurrections riots and other civil disturbances hostile acts of hostile forces constituting direct and serious threat to life and property and all other matters or events of a like or comparable nature beyond the control of the Parties concerned. Where the Minister the Government or the Contractor is prevented from complying with this Contract by force majeure the Person affected shall promptly give written notice to the other and the obligations of the affected Person shall be suspended provided that the Person shall do all things reasonably within its power to remove such cause of force majeure. Upon cessation of the force majeure event the Person no longer affected shall notify the other Person. Production Sharing Contract Block 11 A Ministry of Energy Page 4745 Where the Person not affected disputes the existence of force majeure that dispute shall be referred to arbitration in accordance with clause 41. Where an obligation is suspended by force majeure for more than one (1) year the parties may agree to terminate this Contract by notice in writing without further obligations. 6 The term of the Contract shall be automatically extended for the period of the force majeure. 39. WAIVER A waiver of an obligation of the Contractor shall be in writing signed by the Minister and no waiver shall be implied if the Minister does not exercise a remedy under this Contract. 40. GOVERNING LAW 123 This Contract shall be governed by interpreted and construed in accordance with the Law of Kenya. The Contractor agrees that it will obey and abide by all laws taxes duties levies and regulations in force in Kenya. If after the Execution Date of this Contract the economic benefits of a party are substantially affected by the promulgation of new laws and regulations or of any amendments to the applicable laws and regulations of Kenya the parties shall agree to make the necessary adjustments to the relevant provisions of this Contract observing the principle of the mutual economic benefits of the parties. The Parties shall renegotiate and amend this Contract in good faith so as to achieve the same economic benefits for the Contractor as would have been anticipated had there not been any adverse economic effects. The Parties shall meet within thirty (30) days after the Government's receipt of the notice from the Contractor regarding the adverse economic effects. If the Parties are unable to agree upon the modifications that are required to

this Contract in order to resolve the adverse economic impact on the Contractor within ninety (90) days after the expiration of the preceding thirty (30) day period or within another time frame as may be agreed by the Parties. The matter may be referred to arbitration by either the Contractor or the Government in accordance with Clause 41.1. Production Sharing Contract Block 11A Ministry of Energy Page 48

41. ARBITRATION

1 Except as otherwise provided in this Contract any question or dispute arising out of or in relation to or in connection with this Contract shall as far as possible be settled amicably. Where no settlement is reached within thirty (30) days from the date of the dispute or such a period as may be agreed upon by the parties the dispute shall be referred to arbitration in accordance with the UNCITRAL arbitration rules adopted by

the United Nations Commission on International Trade Law.

2 The number of arbitrators shall be three (3) and shall be appointed as follows: each party shall appoint one (1) arbitrator and so notify the other party of such appointment and those two (2) arbitrators shall appoint the third arbitrator. If any of the arbitrators shall not have been appointed within thirty (30) days either party may request in writing the Secretary General of the International Centre for Settlement of Investment Disputes to appoint the arbitrator or arbitrators not yet appointed and to designate an arbitrator to be the Chairman of the arbitral tribunal. The Secretary General shall forthwith send a copy of that request to the other party. The Secretary General shall comply with the request within thirty (30) days from the receipt thereof or such longer period as the parties may agree. The Secretary General shall promptly notify the parties of any appointment or designation made by him pursuant to the aforesaid request.

c Arbitrators shall be chosen from countries other than those of which the parties are nationals.

d If an arbitrator fails or is unable to act his successor will be appointed in the same manner as the arbitrator whom he succeeds.

34 The arbitrations shall take place in Cape Town, South Africa and shall be in English. The decision of the majority of the arbitrators shall be final and binding on the parties.

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5 Any judgement upon the award of the arbitrators may be entered in any court having jurisdiction in respect thereof.

42. ABANDONMENT AND DECOMMISSIONING OPERATIONS

1 Decommissioning Costs

a The Decommissioning Plan is to form part of the Development Plan

and shall include as schedule for the amortization of costs and cost recovery of costs which are estimated to be incurred when the development is decommissioned. b The Contractor shall exercise its good faith judgment to book sufficient accruals for future abandonment and decommissioning operations to cover the expenses which are expected to be incurred under the Decommissioning Plan. The Contractor shall examine on an annual basis the estimated costs of abandonment and decommissioning operations and if appropriate revise them. c The Contractor shall commence booking accruals for abandonment and decommissioning costs in the first Calendar Quarter in which the ratio of cumulative production to overall recoverable reserves reaches sixty percent (60%) unless otherwise agreed in the Development Plan. d All abandonment and decommissioning costs shall be covered as Petroleum Costs at the time that the accrual is entered in the books. e Contractor shall book an accrual on a Calendar Quarter basis for the amount of future abandonment and decommissioning costs according to the following formula:
$$FTA \cdot ECA \cdot AFB \cdot X \cdot CPP \cdot PRR$$
 Where FTA is the amount to be accrued for future abandonment and decommissioning costs in respect of the relevant Calendar Quarter. ECA is the total estimated cost of abandonment and decommissioning operations established pursuant to this Abandonment and Decommissioning Clause. CPP is the volume of Petroleum produced during the Calendar Quarter in which the abandonment and decommissioning accrual was booked. Production Sharing Contract Block 11 A Ministry of Energy Page 50 PRR is the Contractor's estimated remaining recoverable reserves at the end of the Calendar Quarter in which the abandonment and decommissioning accrual was booked as such estimates may be revised by Contractor from time to time. AFB is the accrued abandonment and decommissioning cost balance at the end of the previous Calendar Quarter. 2 Commencement of Abandonment and Decommissioning Operations Abandonment and decommissioning will be scheduled to occur after a Discovery reaches its Economic Limit. Economic Limit shall mean that point in the life of field where expected Revenue to Contractor from Petroleum Operations is insufficient to cover the operating costs to continue Petroleum Operations in accordance with the requirements of the Contract. In addition Revenue means the expected revenues derived from the sale of Petroleum together with any firm tariff income

earned by the field facilities if any. b. On or before the start of the 720 calendar day period prior to the expected start date of abandonment and decommissioning the Minister shall notify the Contractor which of the facilities and assets identified in the Development Plan shall not be abandoned and decommissioned but which shall revert to the ownership of the Government in accordance with Clause 12 of this Contract. No further funds to cover abandonment and decommissioning costs shall be reserved or accrued for the facilities and assets so identified and a corresponding adjustment shall be made if necessary by the Contractor. c. If the Minister decides not to use the said assets he shall have the right to require the Contractor to remove them at the latter's expense in accordance with the said Decommissioning Plan it being understood that the abandonment and decommissioning operations shall be carried out by the Contractor in accordance with good international petroleum industry practice this Contract and in accordance with the time schedule and conditions defined in the Decommissioning Plan which shall have been approved. 3. Abandonment and Decommissioning upon Termination of Development Area a. If the Contractor recommends abandonment and or decommissioning of facilities assets or wells belonging to it in connection with a termination of a Development Area pursuant to subclause 35 of this Contract the Government may elect to take ownership of and continue using such facilities assets and wells by giving the Contractor written notice of such decision within sixty (60) calendar days of the Government's receipt of the Contractor's notice of relinquishment. Upon so notifying the Contractor which notification is effective as of the effective date of the Contractor's relinquishment the Government shall take ownership of and be responsible for abandonment and decommissioning of such facilities assets and wells. Production Sharing Contract Block 11 Ministry of Energy Page 51 If the Government does not elect to continue using such facilities assets or wells the Contractor shall be responsible for their abandonment and decommissioning upon termination of this Contract or of the Development Area within the corresponding Development Area if earlier. Contractor may in consultation with Government defer the abandonment and decommissioning operations for a reasonable length of time if

this would result in operational efficiencies which minimize the cost for all parties. 4 Facilities Assets and Wells Which the Government Continues to Use With respect to any facilities assets or wells which the Government elects to own pursuant to this Contract or pursuant to these Abandonment and Decommissioning provisions, the Government shall conduct such continued use and/or abandon or decommission in accordance with generally accepted international petroleum industry practice and in such a manner that does not interfere with continuing Petroleum Operations and b The Government may abandon and decommission such facilities assets and wells as and when the Government dees. 5 Disbursement of Funds for Abandonment and Decommissioning Costs a The Contractor will advise the Government on an annual basis its best estimate of the projected date of abandonment and decommissioning of the Discovery based on the then current estimate of when the Economic Limit will be reached according to the then current production forecast and realized Petroleum prices. b As and when the Contractor commences booking accruals pursuant to these provisions the Contractor will cause the accrued costs of abandonment and decommissioning operations to be set aside in a separate US interest bearing escrow account in the joint names of the Contractor and the Government established at a mutually acceptable financial institution in London England to be used solely for paying the decommissioning costs. The account is to be funded on a quarterly basis by the Contractor constituting the Contractor and the Government in proportion to the Contractor's then current Participating Interest under this Contract and out of its share of ongoing Cost Oil Cost Gas Profit Oil and Profit Gas attributable to the Contractor and the Government entities or by cash payment if production is insufficient. A final reconciliation shall be submitted to all Entities and the Government following completion of all abandonment and decommissioning operations and adjustments made in accordance with subclause 4.26 below. Production Sharing Contract Block 11 A Ministry of Energy Page 526 Adjustments to Accruals for Abandonment and Decommissioning Costs a If excess accruals which were booked for abandonment and decommissioning costs remain following completion of all abandonment and decommissioning operations then such excess funds shall be distributed to Contractor and Government in the same proportion as the cumulative Profit Oil or

Profit Gas distribution as appropriate to Government and Contractor under Clause 27 of this Contract during the years that the accruals for abandonment and decommissioning costs were booked by Contractor. b Any abandonment and decommissioning cost accruals which have been booked for purposes of removing facilities or assets that the Government deems should not be removed shall be paid

by Contractor to Government concurrently with the transfer of ownership of such facility asset or well to the Government. The Government represents that the transferred funds shall only be used in conjunction with its abandonment and decommissioning operations. If amounts accrued for abandonment and decommissioning costs are insufficient to complete abandonment and decommissioning activities additional funds for such activities shall be provided from a portion of Crude Oil or Natural Gas which Contractor is entitled to receive under this Contract from any Development Area or if no production is available by cash payment by the Entities and the Government in the same ratio as would be applicable for distribution of excess amounts under subclause 4.26a. Production Sharing Contract Block 11 Ministry of Energy Page 531 Any notice and other communication under this Contract shall be in writing and shall be delivered by hand sent by registered post or by facsimile to the following address of the other. 43. NOTICE To the Government To the Government Ministry of Energy FAO Hon. Minister of Energy Nyayo House Kenyatta Avenue PO Box 30582. 00100 Nairobi Kenya Tel 254 203 101 12 Fax 254 202 283 14 To the Contractor President CEO ERH CAGC Profond Ltd. 5444 Westheimer Road Suite 1440 HOUSTON TX 77056 USA Tel 713 626 4700 Fax 713 626 4704 A notice shall be effective on receipt. Any notice if sent by facsimile shall be deemed to be received by the party to whom it was addressed on the first business day after the day upon which the facsimile was received. Any notice if by personal delivery to any party shall be deemed to be received by the addressee on the date of delivery if that date is a business day or otherwise on the next business day following. In the event that a notice sent by facsimile includes a request for confirmation of the receipt thereof such a confirmation shall be sent no later than one business day after receipt of the notice. The Government and the Contractor may at any time and from time to time change its authorized representative or its address herein on giving the other ten (10) days notice in writing to such effect. 23 Production Sh

aringContractBlock11AMinistryofEnergyPage5444.HEADINGANDAMENDMENTS1234Headings

are inserted in this Contract for convenience only and shall not affect the construction or interpretation hereof. This Contract shall not be amended modified or supplemented except by an instrument in writing signed by the duly authorized representatives of the parties and constitutes the entire agreement among the Parties. In the event of a conflict between the provisions of this Contract and its Appendices the _____ provisions _____ of this Contract shall prevail. In the event one of the provisions of this Contract is or becomes invalid illegal or unenforceable such provision shall be deemed to be severed from this Contract and the remaining provisions of this Contract shall continue in full force and effect.

5 This Contract shall be executed in six (6) originals four (4) for the Government and two (2) for the Contractor.

Production Sharing Contract Block 11A Ministry of Energy Page 55 Signed on the day and year first before written For the Government The Minister Signatures Kiraitu Murungi Name KIRAITU MURUNGI Title MINISTER In the Presence of Witness Signatures Patrick M. Nyoike Name PATRICK M. NYOIKE Title PERMANENT SECRETARY Production Sharing Contract Block 11A Ministry of Energy Page 56 For the Contractor Two Directors Signatures Peter Ntephe Name PETER NTEPHE Title DIRECTOR PRESIDENT CEO Signatures Sylvan Odobulu Name SYLVAN ODOBULU Title DIRECTOR VICE PRESIDENT CONTROLLER In the Presence of Witness Signatures Peter K. Thuo Name PETER K. THUO Title TECHNICAL CONSULTANT Production Sharing Contract Block 11A Ministry of Energy Page 57 APPENDIX A THE CONTRACT AREAS BLOCK 11A The Area to which the Petroleum Agreement relates Production Sharing Contract Block 11A Ministry of Energy Page 58 Point T148aT148bT148cT148dT148eT125T126T127PointT128T129T130T131T132T133T134T135T136T137T138T139T140T141T142T143T144T145T146T147T148 Longitude Latitude 34 34 34 34 34 35 35 34 35 56 49 44 34 22 0 0 56 Longitude 56 52 52 46 46 43 43 38 38 35 35 32 32 27 26 26 22 22 19 19 0 51.504E 47.028E 40.164E 38.64E 42.456E 0E 0E 30.012E 30.012E 44.004E 44.004E 17.004E 17.004E 3E 3E 44.988E 44.988E 30.984E 30.984E 49.992E 49.992E 4.032E 18.528E 21.984E 36.012E 36.012E 22.008E 22.008E 0.972E 5 4 4 4 4 3 3 3 3 3 2 2 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 5 Latitude 5 59 54 46 36 42 36 36 28 28 58 58 8 8 22 22 42 42 51 51 29 29 40 1 1 9

12.012N21.228N39.78N5.412N40.752N10.008N45N45N5.988N5.988N23.016N23.016N7.008N7.008N41.988N41.988N10.008N10.008N54N54N38.4N38.292N58.512N36.984N36.984N11.016N11.016N6.624N40.44N

Production Sharing Contract Block 11 A Ministry of Energy Page 59 APPENDIX B ACCOUNTING PROCEDURE PART I GENERAL PROVISIONS 1.1 Interpretation. 1.2 Accounting obligation of the Contractor. 1.3 Language and units of accounts. 1.4 Audits. 1.5 Revision of Accounting Procedure. PART II COSTS EXPENSES EXPENDITURE AND CREDITS OF THE CONTRACTOR 2.1 Surface rights. 2.2 Labour and related costs. 2.3 Materials. 2.4 Transportation and employee relocation costs. 2.5 Services. 2.6 Damage and losses to joint property. 2.7 Insurance. 2.8 Legal expense. 2.9 Duties and taxes. 2.10 Office camps and miscellaneous facilities. 2.11 General and administrative expenses. 2.12 Other expenditure. 2.13 Credits under the Contract. 2.14 No duplication of charges and credits.

Production Sharing Contract Block 11 A Ministry of Energy Page 60 PART III FINANCIAL REPORTS TO THE MINISTER PART I GENERAL PROVISIONS The purpose of this Accounting Procedure is to establish methods and rules of accounting for Petroleum Operations and the principles set forth herein shall apply to Petroleum Operations pursuant to the production sharing contract hereinafter referred to as the Contract to which this Appendix is attached. 1.1 INTERPRETATION 1.1.1 DEFINITIONS Controllable Material means material which the Operator subjects to record control and inventory. A list of types of such material shall be furnished to the Government and non-Operator. Joint Account means the set of accounts maintained by the Operator to record all expenditure and other transactions under the provisions of the Contract. Such accounts will distinguish between exploration evaluation development and production costs. After adoption of a Development Plan a separate Joint Account shall be maintained for each Development Area. Joint Property means all property where legal title is acquired and held in connection with Petroleum Operations under the Contract. Material means personal property including supplies and equipment where legal title is acquired and held for use in Petroleum Operations. Non-Operator means the entities constituting the Contractor other than the Operator and the

Government when it participates. Operator means the party designated to conduct the Petroleum Operations

Words not defined herein but which are defined in the Contract shall have the meanings ascribed to them therein.

1.1.2 PRECEDENCE OF DOCUMENT In the event of conflict between the provisions of this Accounting Procedure and the provisions of the Contract the provisions of the Contract shall prevail.

1.2 ACCOUNTING OBLIGATIONS OF THE CONTRACTOR Production Sharing Contract Block 11A Ministry of Energy

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1.2.1. The Contractor shall maintain financial accounts necessary to record in reasonable detail the transactions relating to Petroleum Operations which shall be prepared in accordance with generally accepted standards of

the international petroleum industry as more particularly but not exclusively set out in this Accounting Procedure.

1.2.2. The Contractor shall provide the Government with a description of its accounting classifications and the Contractor shall use such classifications when preparing its accounts.

1.2.3. The Contractor shall provide detail of the financial accounts in the form of monthly statements which shall reflect all charges and credits related to Petroleum Operations to be prepared on accrual basis so that expenditure is recorded as incurred when title to goods passes or when work is executed and to present the total accounts for the Contract Area and each Development Area and the share of the Operator and each Non Operator.

1.3. LANGUAGE AND UNITS OF ACCOUNTS

1.3.1. All books of accounts shall be maintained in the English language and in United States dollars.

Where necessary for clarification the Contractor may also maintain accounts and records in other language and

currencies provided that such accounts and records shall be prepared in accordance with US GAAP accounting rules and shall be consistent with the generally accepted standards of the international petroleum industry.

1.3.2. It is the intent of this Accounting Procedure that neither the Government nor the Contractor should experience an exchange gain or loss at the expense of or to the benefit of the other. However should there be any gain or loss from exchange of currency it will be credited or charged to the accounts under the Contract.

1.4. AUDITS AND INSPECTION RIGHTS OF THE GOVERNMENT

1.4.1. The Government upon at least thirty (30) days advance written notice to the Contractor shall have the right at its sole expense to audit the Joint Account and related records for any Calendar Year or portion thereof within the twenty four (24) month period following

at the end of such year. Notice of any exception to the Contractor's accounts of any Calendar Year must be submitted to the Contractor within three years from the end of such year.

1.4.2. For the purposes of auditing the Government may examine and verify at reasonable times all charges and credits relating to the Petroleum Operations such as books of account accounting entries Material records and inventories vouchers payrolls invoices and any other documents correspondence and records necessary to audit and verify the charges and credits. Furthermore the auditor shall have the right in connection with such audit to visit and inspect at reasonable times all sites plants facilities warehouses and offices of the Contractor in Kenya directly or indirectly serving the Petroleum Operations in Kenya including visiting personnel associated with those operations.

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1.4.3. All adjustments resulting from an audit agreed shall be rectified promptly in the Contractor's accounts. Any unresolved dispute arising in connection with an audit shall be referred to arbitration in accordance with clause 41 of the Contract.

1.4.4. At the request of the Minister the Contractor shall appoint an independent auditor of international standing approved by the Minister to audit annually the accounts and records of the Petroleum Operations and report thereon and the cost of such audit and report shall be chargeable to the Joint Account and cost recoverable.

1.5. REVISION OF ACCOUNTING PROCEDURE

1.5.1. By mutual agreement between the Government and the Contractor this Accounting Procedure may be revised from time to time by an instrument in writing signed by the parties.

1.5.2. The parties agree that if any procedure established herein proves unfair or inequitable to any party the parties shall meet in good faith and endeavour to agree on the changes necessary to correct that unfairness or inequity.

PART II COSTS EXPENSES EXPENDITURE AND CREDITS OF THE CONTRACTOR

Subject to the provisions of the Contract the Contractor shall bear and pay the following costs and expenses necessary to conduct Petroleum Operations. Such Petroleum Costs are recoverable by the Contractor in accordance with the provisions of the Contract.

2.1. SURFACE RIGHTS

2.1.1. All direct costs necessary to acquire and to maintain surface rights to the Contract area when such costs are paid by the Contractor according to the provisions of the Contract.

2.2. LABOUR AND RELATED COST

2.2.1. Salaries and wages of employees of the operator and its Affiliates for portion of their time spent performing management

administrative legal accounting treasury tax employee relations computer services engineering geological and all other functions for the benefit of Petroleum Operations whether temporarily or permanently assigned to the Contract Area as well as the cost of employee benefits customary allowances and personal expenses incurred under the usual practice of the Operator and its Affiliates and amount imposed by

governmental authorities which are applicable to such employees. Production Sharing Contract Block 11 AM inistry of Energy Page 632.3. MATERIAL 2.3.1. Value of Material charged to the accounts Contract. The

cost of Material equipment and supplies purchased or furnished by the Operator for use in Petroleum Operations shall be charged to the Joint Account on the basis set forth below. So far as it is reasonably practical and consistent with efficient and economical operations only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and for approved work programmes and the accumulation of surplus stock shall be avoided. 2.3.1.1. Except as otherwise provided in subpart 2.3.1.2 below Material purchased leased or rented shall be charged at the actual net cost incurred by the Operator. Net cost shall include but shall not be limited to such items as vendors invoice price transportation duties fees and applicable taxes less all discounts actually received. 2.3.1.2. Material purchased or transferred from the Contractor or its Affiliates shall be charged at the

price specified here below a New Material condition A shall be valued at the current international net cost which shall not exceed the price prevailing in normal arms length transactions on the open market. b Used Material c conditions B C and D. i Material which is in sound serviceable condition and is suitable for reuse without reconditioning shall be classified as condition B and priced at seventy five percent 75 of the current price of new Material defined in a above. ii Material which cannot be classified as condition B but which after reconditioning will be further serviceable for its original functions shall be classified as condition C and priced at fifty percent 50 of the current price of new Material as defined in a above. The cost of reconditioning shall be charged to the reconditioned Material provided that the value of condition C Material plus the cost of reconditioning do not exceed the value of condition B Material. condition D and priced at a value commensurate with its use. iii Material whi

ch cannot be classified as a condition B or condition C shall be classified as Production Sharing Contract Block 1

1A Ministry of Energy Page 64 2.3.2. INVENTORIES 2.3.1.1. At reasonable intervals inventories shall be

taken by the Operator of all Controllable Material.

The Operator shall give ninety (90) days written notice of intention to take such inventories to allow the Minister and non-Operator to be represented when any inventory is taken. Failure of any party to be represented after due

notice given shall bind such party to accept the inventory taken by the Operator. 2.3.2.2. The Operator shall clearly

state the principles upon which valuation of the inventory has been based. 2.3.2.3. Whenever there is a sale or

change of interest in the Joint Property a special inventory may be taken by the Operator provided the seller and purchaser of such interest to bear all of the expenses thereof. In such cases both the seller and the purchaser

shall be entitled to be represented and shall be governed by the inventory so taken. 2.4. TRANSPORTATION AND EMPLOYEE RELOCATION COSTS 2.4.1. Transportation of Material and other related costs such as

origin services expediting crating dock charges forwarders charges surface and air freight and customs clearance and other destination services. 2.4.2. Transportation of employees as required in the conduct of Petroleum

Operations including employees of the Operator's Affiliates whose salaries and wages chargeable under sub parts 2.2.1 and 2.5.2. 2.4.3. Relocation costs of the Contract Area vicinity of employees permanently or temporarily

assigned to Petroleum Operations. Relocation costs from the Contract Area vicinity except when an employee is reassigned

to another location classified as a foreign location by the Operator. Such costs include transportation of employee families and their personal and household effects and all other relocation cost in accordance with

the usual practice of the Operator and its Affiliates. 2.5. SERVICES 2.5.1. The actual cost of contract services professional consultants and other services performed by third parties other service provided by the entities constituting the

Contractor or their Affiliates but the prices paid by the Contractor shall not be higher than those generally charged for comparable services. 2.5.2. Costs of technical services such as but not limited to engineering and related data processing performed by the Contractor

and its Affiliates for the direct benefit of Petroleum Operations engineering and related

and its Affiliates for the direct benefit of Petroleum Operations engineering and related

data processing performed by the Contractor provided such costs shall not exceed those currently prevailing if performed by third parties in normal arms length transaction for like services. Production Sharing Contract Block 11 A Ministry of Energy Page 65

2.5.3. Costs of use of equipment and facilities for the direct benefit of the Petroleum Operations furnished by third parties Contractor or its Affiliates at a rate commensurate with the costs of ownership or rental and the cost of operation thereof but such rates shall not exceed those currently prevailing in the general vicinity of the Contract Area in normal arms length transactions on the open market for like services and equipment.

2.6. DAMAGES AND LOSSES TO JOINT PROPERTY

2.6.1. All costs or expenses necessary for the repair or replacement of Joint Property resulting from damages or losses incurred by fire flood storm theft or any other cause except insofar as those costs and expenses are caused by the willful misconduct of the Operator. The Operator shall furnish the Government and non Operators written notice of damages or losses for each damages or loss in excess of United States Dollars Fifty Thousand U.S\$50,000.00 as soon as after the loss as practicable.

2.7. INSURANCE

2.7.1. Premium for insurance required under the Contract provided that a party not participating in such insurance shall not share in the cost unless such insurance is compulsory under the law of Kenya and provided further that if such insurance is wholly or partly placed with an Affiliate of the Contractor such premium shall be recoverable only to the extent generally charged by competitive insurance companies other than an Affiliate of the Contractor.

2.7.2. Actual expenditure incurred in the settlement of all losses claims damages judgments and other expenses for the benefit of the Petroleum Operations.

2.8. LEGAL EXPENSES

2.8.1. All costs or expenses of litigation or legal service otherwise necessary or expedient for the protection of the Joint Property or the interest in the Contract Area including but not limited to legal counsel salaries and fees court costs cost of investigation or procuring evidence and amounts paid in settlement or satisfaction of any such litigation or claims. These services may be performed by the Operator's legal staff or an outside firm as necessary.

2.9. DUTIES AND TAXES

2.9.1. All duties taxes except taxes based on income fees and governmental assessments of every kind and nature which have been paid by the Entities with respect to the Contract. Production Sharing Contract Block 11 A Ministry of Energy Page 66

2.10. OFFICE CAMPS AND ADMINISTRATIVE

EXPENSES 2.10.1. Cost of establishing, maintaining and operating any office, sub-offices, camps, warehouse housing and other facilities directly serving Petroleum Operations. The cost shall be allocated to the operations served on an equitable basis.

2.11. GENERAL AND ADMINISTRATIVE EXPENSES 2.11.1. These charges shall be made monthly for services of all personnel and offices of the Operator and its Affiliates outside Kenya and those not otherwise provided herein. It shall include service and related office cost of personnel performing management, administrative, legal, accounting, treasury, tax, employee relations, computer service, purchasing, engineering, geological, geophysical and all other functions for the direct benefit of Petroleum Operations. The charges shall be made as follows: This charge will be at the rate of Three Percent (3%) of total costs per month during any period in which exploration operations are being conducted. For the period commencing on the date that the contractor reports a commercial discovery to the Government to the discovery to Government as required in clause 19.5 of the contract, if terminated, the provisional rates shall be Three Percent (3%) of total costs. The charges shall be as follows: The provisional charges for such costs are based upon operators' cost experience and estimates of cost to be incurred in conduct of the petroleum operations and are subject to quarterly adjustment as operators' costs indicate are necessary and equitable. Within ninety (90) days following the end of each quarter, the operator shall determine the actual cost incurred in performing such services and shall charge or credit the joint account for the difference between the actual cost incurred for the quarter and the provisional rate charged during the quarter. On request to the Government, the operator shall make available at its home office all supporting documents used for the determination of the charges. Such documents shall include but shall not be limited to time allocation reports prepared by employees providing services described in subpart 2.11.1, cash vouchers supporting cash expenses included in overhead pool, inter-company billings, supporting charges for services provided by operators' affiliates, e.g., building rental, telecommunications paid by the operator's parent company, summary or impersonalized computer runs, supporting salaries, wages and employee benefits and others such documents.

ments as may be mutually agreed. Production Sharing Contract Block 11 A Ministry of Energy Page 672. 12. O

THERE EXPENDITURE 2.12.1. Other reasonable expenditure not covered or dealt with in the foregoing provisions which are incurred by the Operator and/or the other entities constituting the Contractor and their respective Affiliates for the necessary proper economical and efficient conduct of Petroleum Operations. 2.12.2. Interest incurred on loans raised by the Contractor for capital expenditure in Petroleum Operations under the Contract at a rate not exceeding prevailing commercial rates may be recoverable as Petroleum Costs. 2.13. **CREDITS UNDER THE CONTRACT** The net proceeds of the following transaction will be credited to the account under the Contract: a) The net proceeds of any insurance or claim in connection with the Petroleum Operations or any assets charged to the accounts under the Contract; b) Revenue received from outsiders for the use of property or assets charged to the accounts under the Contract; c) Any adjustment received by the Contractor from the suppliers, manufacturers or their agents in connection with defective equipment or Material the cost of which was previously charged by the Contractor under the Contract; d) Rentals, refunds or other credits received by the Contractor which apply to any charge which has been made to the accounts under the Contract; e) Proceeds from all sales of surplus Material or assets charged to the account under the Contract; and f) The prices originally charged to the accounts under the Contract for inventory Material subsequently exported from Kenya. 2.14. **NODUPLICATION OF CHARGES AND CREDITS** Notwithstanding any provision to the contrary in this Accounting Procedure, it is the intention that there shall be no duplication of charges or credits in the accounts under the Contract. Production Sharing Contract Block 11 A Ministry of Energy Page 68

PART III FINANCIAL REPORTS TO THE MINISTER 3.1. The reporting obligations provided for in this Part III shall unless the contrary is stated apply to the Operator. 3.2. The Operator shall submit annually to the Minister the following: 3.2.1. The annual work programme and budget three months before the beginning of the year to which they apply and the budget shall be analyzed by item within the exploration programme, Evaluation programme, development programme and production programme and show for each major budget item with reasonable detail the following: a) Latest forecast

cumulative costs anticipated at the start of the budget year b Cumulative expenditure anticipated at the end of each quarter of the budget year and c Expenditure anticipated in future years to complete the budget item. 3.2.2. As scheduled, the service and supply contracts to be entered into during the forthcoming year exceeding the equivalent of Five Hundred Thousand U.S. Dollars U.S. 500,000.00 per contract showing the anticipated tender date and approximate value and the goods or services to be provided 3.2.3. The audit report required by subpart 1.4.4 of this Accounting Procedure stating whether in the opinion of the auditors of the Contract a The last annual expenditure report records the expenditure of the Contractor truly and fairly in accordance with the provisions of the Contract b The report on petroleum revenues submitted truly and fairly determined the arms length value of disposal of petroleum during the year. 3.3. the Operator shall submit quarterly within thirty (30) days of each quarter to the Minister 3.3.1. a report of expenditure and receipts under the Contract analyzed by budget item showing a Actual expenditure and receipts for the quarter in question b Actual cumulative cost to date Production Sharing Contract Block 11 A Ministry of Energy Page 69 c Latest forecast cumulative cost at the year end d Variations between budget costs and actual costs and explanation thereof and e With effect from adoption of the Development Plan the total payroll costs segregated between Kenyan and non-Kenyan personnel and the total expenditure segregated between Kenyan and non-Kenyan goods and services. 3.3.2. A cost recovery statement containing the following information a Recoverable Petroleum Costs carried forward from the previous quarter if any b Recoverable Petroleum Costs incurred and paid during the quarter c Total recoverable Petroleum Costs for the quarter plus a above d Quantity and value of Cost Oil taken and separately disposed of by the Contractor for the quarter e Amount of Petroleum recovered for the quarter f Amount of recoverable Petroleum Cost to be carried forward into the next quarter if any and g Value of Government's share of production taken by the Contractor pursuant to clause 27 of the Contract. 3.4. A copy of each contract for goods or services valued in excess of Five Hundred Thousand U.S. Dollars USD 500,000.00 shall be provided to the Minister as soon as practicable after its execution. 3.5. After the commencement of production the Operator shall within fifteen (15) days after the end of each month submit a production report to the Minister showing for each Development Area the quantity of Petroleum a Held in stock at the beginning of the month b Produced during the month c Lifted and by whom d Lost and consumed in Petroleum

mOperationsandProductionSharingContractBlock11AMinistryofEnergyPage70eHeldinstocksattheen
dofthemonth.3.6.Aliftingpartyshallsubmitwithin fifteen 15 days after the end of each month a report to the Mini
ster stating a The quantities and sales value of arms length petroleum sales made in that month b The quantities
sales value and arms length value of disposal of petroleum other than by sale at arms length during the month a
nd c The total Petroleum revenue for that month. Production Sharing Contract Block 11 A Ministry of Energy Pa
ge 71 APPENDIX C PARTICIPATION AGREEMENT Interpretation 2 Participation interests and commence
ment 3 Operator and duties of operator 4 Operating committee and work programmes 5 Costs and expenses 6
Payments to operator 7 Material and equipment 8 Relationship of the parties and tax provisions 9 Surrender sa
nd transfers 10 Disposal of production 11 Solerisk operations 12 Confidentiality 13 Liability 14 Governing law 1
5 Arbitration 16 Force majeure 17 Notices 18 Term 19 Final provisions Exhibit A Accounting procedure. Produ
ction Sharing Contract Block 11 A Ministry of Energy Page 72 PARTICIPATION AGREEMENT This Participa
tion Agreement made and entered into on this day of by and between the Gov
ernment of the Republic of Kenya hereafter referred to as the Government represented for the purpose of this a
greement by the Minister for the time being responsible for energy hereinafter referred to as the Minister and E
RH C Energy AG C Profond Limited hereinafter referred to as the Contractor. WHEREAS the Government and
the Contractor have entered into a production sharing contract referred to as the Contract to which this Append
ix is attached WHEREAS the Government may desire to exercise its option under clause 28 of the Contract and W
HEREAS the Parties wish to set forth the terms and conditions under which the Government has agreed to parti
cipate in the Petroleum Operations in the event such an option is exercised NOW THEREFORE the Parties agr
ee as follows 1 INTERPRETATION 1. In this participation Agreement words in the singular includes the
plural and vice versa and
except where the context otherwise requires A F E means an authorization for expenditure Government inclu
des an appointee as defined in sub clause 28.2 of the Contract Joint account means the accounts
maintained by the operator to record all transactions related
to operations in the participation area under this Participation Agreement Joint property means all property
acquired and held for use in connection with operations under

this Participation Agreement Nonoperator means a party other than the operator Operating committee means the committee established by Article 4 hereof Operator means the party designated to conduct the petroleum operations pursuant to Article 3 hereof and its successors Production Sharing Contract Block 11 A Ministry of Energy Page 73 Participating interest means the respective undivided interest of each of the parties as it may exist at any given time in the participation area and under this Participation Agreement Participation area means a development area in which the Government elects to participate under the Contract Participation dates means the effective date of participation by the Government as defined in sub clause 28.3 of the Contract Participation work programme means a programme of the petroleum operations under this Participation Agreement Parties means collectively the Government and the entities consulting the Contractor or their respective successors or assignees. party means any one of the parties Year means calendar year.

2. Words not defined in this Participation Agreement but which are defined in the Contract have the meanings given to them in the Contract.

3. In the event of any conflict between the Contract and this Participation Agreement the Contract shall prevail and this Participation Agreement shall be deemed amended accordingly.

2. PARTICIPATING INTERESTS

1. When and if the Government elects pursuant to clause 28 of the contract to participate in petroleum operations in a participation area the Contractor constituting the contractor shall assign proportionately to the Government a part of its interest in the development area so that the rights, interest and obligations of the contractor and the Government in such area shall be owned and borne as of the participation date in undivided interests as follows: Government... or such lesser amount as may be elected in accordance with clause 28 of the Contract Contractor... or such greater amount as may remain after the Government's selection.

2. In the event a party shall transfer in whole or in part its Participating interest pursuant to clause 35 of the Contract and Article 9 of this Participation Agreement the participating interest of the parties therein shall be revised accordingly.

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3. OPERATOR AND DUTIES OF OPERATOR

1. The operator shall be the party acting as operator on the participation date and the operator shall have the rights and obligations of an operator in respect of its participating interest.

2. The operator shall serve as operator until it resigns or is removed pursuant to the provisions of

this Article or until it ceases to hold a participating interest thereunder. In the event that an operator assigns the whole of its participating interest hereunder to one of its affiliates such affiliate shall become operator hereunder in the former's place.

3. Upon the affirmative vote of all the non-operator parties the operator shall be removed as operator in case of any one of the following:

- a. Bankruptcy of the operator or its parent company;
- b. Assignment for the benefit of the operator's creditors;
- c. Appointment of a receiver or manager with respect to the whole or any part of the property or assets of the operator;
- d. Entitlement of any person other than an affiliate of the operator to appoint a majority of the members of the board of directors of the operator by the reason of any act, default or neglect of the operator;
- e. Failure without justification by the operator to pay a sum due to or in the name of the joint account for more than sixty (60) days;
- f. The operator's material breach of this Participation Agreement which remains unremedied for more than thirty (30) days after the operator is notified by non-operator parties of such breach;
- g. Reduction in the operator's participating interest to percent or less.

4. An operator may at any time resign as operator by giving to the other parties notice in writing of such resignation. Such resignations shall be effective one hundred eighty (180) days after the date of notice thereof or on the date on which a successor operator appointed by the parties other than the operator shall be ready and able to assume the obligations of operator in accordance with all the provisions of this Participation Agreement whichever shall first occur.

5. Should an operator so resign or be removed as successor operator shall immediately be appointed by the operating committee. A party having been removed as operator may not vote to succeed itself as operator. Such appointment parties holding not less than the percentage figure of the remaining participating interests set out in Article 4.6. For the purpose of this Article operator includes any of its affiliates holding a participating interest in this Participation Agreement.

Production Sharing Contract Block 11A Ministry of Energy Page 756.

Removal or resignation of an operator shall not in any way affect its rights or obligations as a non-operator party to this Agreement. On the effective date of removal or resignation the operator shall deliver to the successor operator any and all funds, equipment, materials, apparatus, tenancies, books, records, data, interpretation, information and rights acquired by and in the custody of the operator for the joint account of the parties including

g available petroleum not delivered to the parties shall with the successor or operator prepare an inventory of joint property adjusting the joint account accordingly and shall cooperate as far as possible in effecting a smooth transfer of operating responsibilities. 7. An operator that is removed under Article 33g hereof may charge to the joint account all reasonable and necessary expenditure incurred in demobilizing and repatriating personnel and equipment. 8. The operator shall have control of the petroleum operations in the participation area and shall have exclusive custody of all material, equipment and other property acquired therefore and shall perform the duties under this Participation Agreement diligently and in accordance with good international petroleum industry practice and sound and accepted engineering management and accounting principles. The operator shall not be liable to any nonoperator for any acts or omissions, claims, damages, losses or expenses in connection with or arising out of this Participation Agreement or the contractor petroleum operations, save those caused by gross negligence or wilful misconduct of the operator. 9. The operator shall consult with nonoperators and advise them on all matters arising from the petroleum operations. b. Comply with the decisions of the operating committee. c. Keep the participating interests and all property acquired or used free from liens except for those authorized by Article 6 hereof and d. Pay the costs of the petroleum operations under this Participation Agreement promptly and make proper charge to nonoperators. 10. The operator shall submit a copy of an AFE to the nonoperators for each budget item of capital expenditure in the approved participation work programme and budget that costs more than U.S. dollars. U.S. Production Sharing Contract Block 11A Ministry of Energy Page 76 Where it is necessary to complete an expenditure in a budget item in the approved participation work programme the operator may exceed the budget for the budget item by the lesser of ten per cent therefor U.S.D. and shall report promptly such excess expenditure to the nonoperators. The operator may spend not more than U.S. dollars USD .. on petroleum operations in the

participation are not included in an approved participation work programme provided that such expenditure shall not be for items previously rejected by the operating committee. The operator shall report promptly that expenditure to the nonoperator and if it is approved in accordance with Article 46 the operator may make further expenditure thereon or on other items not exceeding U.S. dollars U.S. in that year. The limits in this Article 310 may be changed from time to time by the operating committee. In the case of emergency the operator may make such immediate expenditure and take such immediate action as may seem necessary for the protection of life or property or the prevention of pollution and such emergency expenditures shall be reported promptly to the parties by the operator. 11. A nonoperator may inspect the participation area, the petroleum operations and the books, records and other information of the operator pertaining thereto. The operator shall supply to a nonoperator by telephone, telefax, telegraph or telex daily reports on drilling and such other reports in writing normally provided by an operator to a nonoperator in the international petroleum industry including but not limited to reports on well tests and core analysis and copies of drilling logs, well surveys and velocity surveys. The operator shall furnish any other information reasonably requested by a nonoperator if such information is readily available. 12. The operator shall obtain and maintain all insurance required by law and such other insurance as the operating committee may from time to time determine provided that in respect of such other insurance any party may elect not to participate provided such party gives notice to that effect to the operator. The cost of insurance in which all the parties are participating shall be for the joint account and the cost of insurance in which less than all the parties are participating shall be charged to such parties individually. The operator shall in respect of any insurance promptly inform the parties participating therein when it is taken out and supply them with copies of the relevant policies when the same are issued and arrange for the parties participating therein according to their respective participating interest to be named as coinsureds on the relevant policies with a waiver of subrogation in favour of the parties and Production Sharing Contract Block 11A Ministry of Energy Page 77 c. Duly file all claims and take all necessary and proper steps to collect any proceeds and if all the parties are participating therein credit them to the joint account or if less than all the parties are participating therein credit them to the participating parties. Subject as stipulated above any of the parties

may obtain such insurance as it deems advisable for its own account at its own expense provided such insurance is acceptable under the applicable law. If the operator is unable to obtain such other insurance required by the operating committee it shall so advise the parties and thereafter it shall be discharged of its obligation to obtain such insurance. The operator shall take all reasonable steps to ensure that all contractors including subcontractors performing work in respect of the petroleum operations and the joint property obtain and maintain all insurance required by the law and obtain from their insurers a waiver of subrogation in favour of the parties.

13. The operator may prosecute defend and settle claims and litigations arising out of the petroleum operations and may compromise or settle such claims or litigations which involve an amount not exceeding the equivalent of one hundred thousand U.S. dollars U.S. 100 000 without the approval of the operating committee. Any claim or litigation involving an amount in excess of the equivalent of one hundred thousand U.S. dollars U.S. 100 000 shall be reported promptly to the nonoperators and a nonoperator shall have the right to be represented by its own counsel at its expense in the compromise settlement or defence of such claims or litigation.

14. The operator shall fulfil the reporting obligations of the Contractor as specified in the [Contract] unless otherwise stipulated in this Participation Agreement and the Contract.

4. OPERATING COMMITTEE AND WORK PROGRAMMES

1. The parties shall establish an operating committee to supervise and control the petroleum operations. The operating committee shall consist of one representative appointed by each of the Parties provided always that more than one of the Parties may appoint the same representative who shall represent them separately. Production Sharing Contract Block 11 A Ministry of Energy Page 78 Each party shall as soon as possible after the date of this Participation Agreement give notice to all the other parties of the name of its representative and of an alternate on the operating committee. Such representative may be replaced from time to time by like notice. Representatives may bring to meetings of the operating committee such advisers as they consider necessary. The representative of a Party or in the absence of the representative his alternate shall be deemed authorized to represent and bind such party with respect to any matter which is

within the powers of the operating committee. The representative of the party which is the operator shall be the chairman of the operating committee and shall report the proceedings.

2. Except as otherwise provided in this Participation Agreement the powers and duties of the operating committee shall include:

- a. The consideration and determination of all matters relating to general policies, procedures and methods of operation hereunder;
- b. The approval of any public announcement or statement regarding this Participation Agreement or the petroleum operations;
- c. The consideration, revision and approval or disapproval of all proposed participation work programmes, budgets and AFEs prepared and submitted to it pursuant to the provisions of this Participation Agreement;
- d. The determination of the timing and location of all wells drilled under this Participation Agreement and any change in the use or status of a well;
- e. The determination of whether the operator will represent the parties regarding any matters or dealings with the Minister, any other governmental authorities or third parties in so far as the same relate to the petroleum operations, provided that there is reserved to each party the unfettered right to deal with the Minister or any other governmental authorities in respect of matters relating to its own participating interest and for the consideration and if so required the determination of any other matter relating to the petroleum operations which may otherwise be designated under this Participation Agreement for reference to it.

3. The operator shall when requested by a representative of any party call a meeting of the operating committee. The operator may do so at any time to keep the parties informed on the petroleum operations.

4. A request to call a meeting of the operating committee shall state the purpose of that meeting and except in an emergency the operator shall give the parties at least fifteen (15) days written notice with an agenda of the meeting but where a meeting is called in an emergency the operator shall give as much notice thereof as possible by telephone, telex or telegraph and except with the consent of all the parties the business of a meeting shall be only that for which it was called.

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The operator may instead of calling a meeting submit matters to the parties by written notice upon which each party may vote within the period prescribed in the notice which shall not be less than three (3) days.

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any operating committee meeting held during the period of the default but shall be bound by all decisions of the operating committee made during such period and the defaulting party's participating interest shall be deemed to be vested pro rata in the nondefaulting parties for voting purposes during the continuation of the default. Production Sharing Contract Block 11 A Ministry of Energy Page 819. Where a party fails to pay an amount required to be paid hereunder and remains in default for ninety (90) days the participating interest share of the defaulting party may be declared forfeit by the nondefaulting parties unless the amount due is an advance and the defaulting party provides an irrevocable letter of credit or other security acceptable to the operator for the amount due. 10. When the participating interest share of a defaulting party is declared forfeit the operator shall give notice thereof to all the parties and that share shall vest rateably unless otherwise agreed in the nondefaulting parties without payment of compensation and the defaulting party shall at its sole expense take all steps necessary to vest that share accordingly and the defaulting party hereby appoints the operator to act as its attorney to execute any and all documents required to effect such transfer. Notwithstanding the transfer of a defaulting party's participating interest share in accordance with the foregoing the defaulting party shall remain liable for its proportionate share of the commitments incurred before its rights lapsed. 11. Where a party is in default of payment the remaining parties shall advance the operator on demand a share of that payment in proportion to the participating interests of those parties. Any payments received from a defaulting party shall be credited to the accounts of the nondefaulting parties who advanced funds on behalf of the defaulting party. 7. MATERIAL AND EQUIPMENT 1. All material and equipment acquired by the operator for petroleum operations hereunder shall be owned by the parties in undivided shares in the proportion of their respective participating interests. 2. Except as may be otherwise approved by the operating committee the operator shall purchase for the joint account of the parties only such material and equipment as are reasonably required in the conduct of operation provided for in approved participation work programmes or revision thereof the operator shall not stockpile material or equipment for future use without the approval of the operating committee. 3. Jointly acquire

ed material or equipment declared by the operator to be surplus shall be disposed of in such manner as the operating committee may direct or if the book value thereof does not exceed..... U.S. dollars U.S..... the operator shall dispose of same in such manner as the operator shall deem appropriate provided however that each Party may if practicable separately take or sell and dispose of its interest in such material or equipment or may by notice in writing and subject to revocation at will authorize the operator for a period or periods of not more than one year each to sell such material and equipment for the account of the party or parties giving such authorization. Each party shall have the right to purchase at the prevailing market price in the area material or equipment which the operator has declared to be surplus and which the operator intends to dispose of on the open market. Production Sharing Contract Block 11 A Ministry of Energy Page 824. Subject to the provision of clause 12 of the Contract upon termination of this Participation Agreement the operator shall salvage for the jointly owned material and equipment which can reasonably be salvaged to be disposed of as provided in Article 73 hereof.

8. RELATIONSHIP OF THE PARTIES AND TAX PROVISIONS

1. The parties declare that it is not their intention by entering into this Participation Agreement to create or be considered as a partnership or any other similar Contractor.

2. Each party shall be responsible for and shall pay its own taxes to the Kenyan authorities on its operations hereunder.

3. It is recognized that a party hereunder may be subject to the laws of its place of incorporation in addition to the laws of Kenya. For United States Federal income tax purposes each of the parties hereto which is subject to United States Income Tax laws U.S. Party hereby elects to be excluded from the application of all of the provisions of Subchapter K chapter 1 Subtitle A of the United States Internal Revenue Code of 1954 as permitted and authorized by Section 761 of that Code and the regulations promulgated thereunder. Should there be any requirement that each U.S. Party evidence this election each U.S. Party agrees to execute such documents and furnish such other evidence as may be required by the United States Federal Internal Revenue Service. Upon the request of any U.S. Party the Operator shall provide data necessary for filing United States tax returns.

9. SURRENDER AND TRANSFERS

1. Any party desiring that all of the participation area be surrendered voluntarily

shall notify the other parties in writing accordingly specifying its reasons thereof and thereafter a Each party shall within thirty 30 days after receipt of the notice inform the other parties in like manner whether it concurs in or opposes the proposed surrender but all the parties concur in the proposed surrender the participation area shall be surrendered as soon as possible under the Contract if one or more of the parties shall oppose the proposed surrender the party or parties desiring to surrender shall upon request by the opposing parties transfer and convey without warranty of title free and clear of all liens charges and encumbrances and without right to compensation all of its or their interests in the participation area and material left thereon to said opposing party or parties each in the proportion that its or their participating interest hereunder bears to the sum of the participating interests of all the opposing parties or as otherwise agreed by the opposing parties. The transferring party or parties shall bear Production Sharing Contract Block 11 A Ministry of Energy Page 83 its or their participating interest shares of cost expenses and liabilities incurred hereunder which are attributable to the participation area for the period prior to the effective date of such transfer of interest its or their participation interest shares of all costs and expenses incurred by the operator after such date under any contracts entered into by the operator in execution of a participation work programme theretofore approved by the operating committee and its or their participating interest shares of any accrued obligations under the contract which are not included rights or other obligations in connection therewith. A transfer under paragraph c above shall be effective as among the parties thirty 30 days after the opposing parties receipt of the transferring party's first mentioned notice proposing surrender. Thereafter until such transfer has received whatever approvals may be necessary under the provisions of the Contract or applicable law the transferring Party or parties shall hold at most legal but not equitable title to the interests transferred for the benefit of the opposing party or parties. The transferring party or parties receiving the interests transferred shall execute and deliver such documents and do such other acts as may be necessary to give legal effect to such transfer to obtain all approvals thereof as may be required from the Minister and otherwise to effectuate the purpose of this

Paragraph. e Notwithstanding the foregoing if the operating committee determines that percent or more of the estimated discovered and recoverable reserves under the participation area have been produced no party shall be allowed to surrender or required to transfer interest in this Participation Agreement and the Contract without the unanimous consent of all parties.

2. No transfer of any interest under this Participation Agreement and the Contract shall be made by any party otherwise than in respect of an undivided interest in all or part of its participating interest in this participation Agreement and the Contract and in accordance with the following provisions of this Article 9.3.

If any party shall receive a bona fide offer for the purchase of all or a portion of an offeree party's participation interest in this Participation Agreement and the participation area which the offeree party is willing to accept the offeree party shall give notice thereof in writing to the other parties.

Production Sharing Contract Block 11 A Ministry of Energy Page 84 a Such notices shall set forth the identity of the offeror, the terms and conditions including monetary and other considerations offered in good faith and all other relevant particulars.

b For a period of thirty (30) days next following the receipt of such notice the other parties shall have an option to purchase the entire interest proposed to be sold on the same terms offered by the offeror or as set forth in the respective offer.

c If more than one of the parties should exercise its right to purchase said interest each shall have the right to acquire such interest in the proportion that the Participating Interest thereunder of such party bears to the sum of the Participating interests of all the parties exercising such right except as they may otherwise agree.

d If within such a period of thirty (30) days none of the other parties shall exercise its right to purchase said interest the sale to said offeror may be made under the terms and conditions set forth in the notice given provided that the sale shall be consummated within six (6) months from the date of such notice and that the sale and any transfers shall be in accordance with the Contract and applicable law.

e For the purpose of this paragraph an offer to purchase shall also include an acceptance of a Contractor's offer to sell.

4. The limitations of Article 9.3 shall not apply to transfer of a participating interest by a party to an affiliate of such party or by the Contractor to an acceptable assignee as defined in the Contract or by the Government to an appointee or from an appointee to another appointee nor shall they apply to a transfer of

a

participating

interest effected as a result of merger, consolidation, reorganization or sale of capital stock of the parent company of a Party. 5. Every transfer of a participating interest in the participation area shall be made expressly subject to this Participation Agreement and shall include a corresponding interest in jointly acquired equipment and facilities.

No transfer of an interest thereunder shall be effective unless made by an instrument in writing duly executed by the parties thereto in accordance with applicable law and until the same has received all consents required under this Participation Agreement and the Contract. A transfer shall provide that the transferor remains liable for obligations incurred before the date of transfer and such obligations shall in addition become the obligations of the transferee. Whereafter the transfer, the transferee or transferor owns a participating interest of less than five percent, they shall be jointly represented. 6. A transfer other than to an affiliate or an appointee shall be of sufficient financial standing to meet its participating interest share of its obligations under the Contract and this Participation Agreement. In the event of a transfer of a participating interest to an affiliate of a party, the transferor party shall remain responsible for the full performance by the affiliate of the obligations undertaken by said party under this Participation Agreement and the Contract and if such affiliate ceases to be an affiliate, the participating interest shall be transferred back to the party. Production Sharing Contract Block 11 Ministry of Energy Page 857. In this Article, transfer means a transfer, assignment, sale or other disposal of the interest of a party. 10. DISPOSAL OF PRODUCTION 1. Each party shall separately own, take in kind and dispose of its participating interest share of that portion of the petroleum produced and saved from the participation area to which the Contractor is entitled under clause 27 of the Contract. 2. Within six (6) months following the signing of this Participation Agreement, the parties shall, in accordance with the provisions of the Contract and in light of the gathering and transportation facilities available under the adopted development plan, in good faith, establish a set of rules governing the scheduling, lifting and other necessary provisions for the crude oil off-takes of the parties consistent with good international petroleum industry practice, which shall provide among other things such detailed terms and procedures as required for: a) Short-term production forecasts; b) Nomination and calculation of entitlements; c) Scheduling of deliveries; d) Lift

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ed in the proposing party's notice within the period thereof provided such project is considered as being approved by the operating committee and the provisions of Article 48 of this Participation Agreement shall apply. Production Sharing Contract Block 11 A Ministry of Energy Page 875. In the event that less than all the parties elect to participate in the project the parties which elected to participate hereafter referred to as sole risk parties shall be entitled to have the sole risk project carried out. The interest of each sole risk party in a sole risk project shall be in proportion to its participation interest in this Participation Agreement or in such other proportion as the sole risk parties may agree. Any sole risk project shall be carried out at the sole risk cost and expense of the sole risk parties in the proportion of their respective interests.

6. A sole risk project shall be carried out by the operator on behalf of the sole risk parties under the provisions of this participation agreement. No sole risk project may be commenced after one hundred and eighty (180) days following the expiration of the notice period prescribed in Article 11.3 but the operator shall commence work as promptly as reasonably possible if the notice period of seventy-two (72) hours set forth in Article 11.3 applies. The operator shall complete the sole risk project with due diligence provided that it does not jeopardize or unreasonably interfere with petroleum operations carried out under the Contract and adopted by the operating committee pursuant to Article 4 of this Participation Agreement. The sole risk parties may use for the sole risk project any production handling processing and/or transporting facilities which are joint property subject to a determination by the operating committee as to usage fees availability of capacity and production compatibility.

7. In connection with any sole risk project the sole risk project will be carried out under the overall supervision and control of the sole risk parties in lieu of the operating committee. The computation of costs and expenses of the sole risk project incurred by the sole risk parties shall be made in accordance with the principles set out in Exhibit A attached hereto. The operator carrying out the sole risk project shall maintain separate books records and accounts including bank accounts for the sole risk project which shall be subject to the same right of examination and audit by the sole risk parties. The costs and expenses of the sole risk project shall not be reflected in the statements and

billing rendered by the operator for petroleum operations under the Participation Agreement and Production Sharing Contract Block 11 A Ministry of Energy Page 88

8. If the operator is carrying out a sole risk project on behalf of the sole risk parties, the operator shall be entitled to request the sole risk parties in connection with the sole risk project to advance their share of the estimated expenditure and shall not use joint account funds or be required to use its own funds for the purpose of paying the costs and expenses of the sole risk project. Furthermore, the operator shall not be obliged to commence or, having commenced, to continue the sole risk project unless and until relevant advances have been received from the sole risk parties.

8. The sole risk parties shall indemnify and hold harmless the other parties against all actions, claims, demands and proceedings whatsoever brought by any third party arising out of or in connection with the sole risk project and shall further indemnify the other parties against all damages, costs, losses and expenses, whether directly or indirectly caused to or incurred by them as a result of anything done or omitted to be done in the course of carrying out such sole risk project.

9. Subject to the provision of Article 11.10 below, the sole risk project, including data and information, is wholly owned by the sole risk parties in accordance with the provisions of the Contract, but the sole risk parties shall keep the other parties informed about the project. In the event that such project results in an increase of production of petroleum from the participation area, the portion of such increase which is available to the Contractor shall be owned solely by the sole risk parties. Each of them shall have the right and obligation to take in kind and separately dispose of its proportional share of supplementary petroleum production.

10. Any party or parties which are not participating in the sole risk project may, by giving thirty (30) days' notice to the sole risk parties, become participants in such project at any time after the sole risk parties have recovered from the supplementary petroleum production the following sum of money to which they are entitled on the project:

In the case of a project under Article 11.2a hereof, six hundred percent (600%) of the Sole Risk cost of such project plus one hundred percent (100%) of the cost of operating such well incurred by the Sole Risk Parties.

In the case of a project under Article 11.2b hereof, percent (.....) of the Sole Risk cost of such project plus one hundred percent (100%) of the cost of operating such facilities. The value of the supplementary production to which a Sole Risk Party is entitled shall be the market value in sales at arms length determined

ed in accordance with clause 26 of the Contract. From and after the election of any party or parties to become participants in such project all relevant wells facilities equipment and other property appurtenant thereto shall be owned jointly by the participating parties and each of the participating parties shall be entitled to receive its proportional share of the supplementary petroleum production. Production Sharing Contract Block 11 A Ministry of Energy Page 89 12. CONFIDENTIALITY 1. All information related to the petroleum operations shall be confidential and shall not be disclosed to a person other than a party except to an affiliate of the Government and other public authorities to the extent necessary for the purpose of any applicable law or stock exchange to which a party is obliged to make disclosure. Contractors consultants legal counsel or arbitrators of a Party where disclosure is essential a bona fide prospective purchaser of an interest of a Party in the Contract but that purchaser

shall undertake to treat that information as confidential and where disclosure is essential or a person to whom disclosure has been agreed by the Parties. 2. A party making a disclosure to a person described in paragraph 1 or f shall give ten 10 days written notice thereof to the other parties. 3. The parties shall consult with each other prior to the release of any public statement or press release and except to the extent required by law rule or regulation of any government authority or stock exchange no party shall make any public statement or press release without the approval of all the other parties which shall not be unreasonably withheld. The operator shall utilize its best efforts to coordinate all such public statements to the end that all Parties may effect simultaneous press releases. 4. The obligations of the parties under this Article 12 are continuing obligations and any party ceasing to be a party to this Agreement shall remain bound by this Article until this Agreement is no longer in force between any remaining parties and the Contract has expired. 13. LIABILITY 1. The parties shall be severally liable in accordance with their respective participating interest to third parties. Production Sharing Contract Block 11 A Ministry of Energy Page 90 2. Where the Government has nominated an Appointee as defined in clause 281 of the Contract and the appointee defaults the Government shall be liable. 3. If because of the operation of the joint and several liability provisions contained in the Contract anyone of the Parties hereto shall be required to pay in full to the Government or any other party any sum which it

liability were several would be required separately from each of the Parties or from one other party only then the Parties shall notify forthwith and request immediate payment of the Parties proportionate share according to its Participating interest. If within ten (10) days from receipt of said notice the other Parties shall fail to make payment as provided above such Parties shall be in default and the provisions of Article 6 above shall apply this being without prejudice to any other legal remedies available to the non defaulting Parties against the defaulting Parties.

14. **GOVERNING LAW** This Participation Agreement shall be governed by and be construed in accordance with the law of Kenya.

15. **ARBITRATION** A dispute under this Participation Agreement shall be referred to arbitration in accordance with clause 41 of the Contract.

16. **FORCE MAJEURE** 1. In this Article 16 Force Majeure shall include Acts of God unavoidable acts of war or conditions attributable to or arising out of war declared or undeclared laws rules regulations and orders by any government or governmental agency strikes lockouts or other labour or political disturbances insurrection riots and other civil disturbances hostile acts of hostile forces constituting direct and serious threat to life and property and all other matters or events of a like or comparable nature beyond the control of the Party concerned other than rig availability which prevents any of them from performing their obligations under this Participation Agreement.

2. In this clause Force Majeure means an occurrence beyond the reasonable control of the Minister or the Government or the contractor which prevents any of them from performing their obligation under this contract.

3. Where a party is prevented from performing an obligation under this Participation Agreement by force majeure that party shall give written notice to the other Parties and the obligation of the affected Party shall be suspended for the period of the force majeure.

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4. The affected party shall promptly notify the other parties when the period of force majeure terminates.

5. No Party may claim force majeure as a reason for the failure to timely pay any monies pursuant to this Participation Agreement.

6. Where any Party disputes the existence of force majeure that dispute may be referred to arbitration as provided in clause 44 of the Contract.

17. **NOTICES** 1. All notices and other communications provided for in this Participation Agreement shall be made in writing and shall be delivered by hand

or sent by registered airmail as appropriate return receipt requested or by telegram or telex with confirmation by mail to the Parties at the following addresses To the Government Ministry of Energy FAO Hon. Minister of Energy Nyayo House Kenyatta Avenue PO Box 30582. 00100 Nairobi Kenya Tel 00254 20310112 Fax 00254 20228314 To the Contractor President CEO ERHCE Energy AGC Profond Limited 5444 Westheimer Road Suite 1440 HOUSTON TX 77056 USA Tel 713 626 4700 Fax 713 626 47042. Notices given by registered airmail shall be deemed received on the dates shown on the return receipt. Notices given by telegram or telex shall be presumed received on the working day at the place of receipt following the time of transmission. Production Sharing Contract Block 11A Ministry of Energy Page 923. Any party may at any time and from time to time change its authorized representative or its address herein on giving the other Parties ten (10) days notice in writing to such effect. to the Contract. 18. TERM 1. This Participation Agreement shall come into force on the participation date and shall remain in force until it is terminated by the written consent of all the parties. b. All the Participating interests are vested in one Party or the expiration or termination of the Contract. 2. Before this Participation Agreement is terminated there shall be a final accounting and settlement of the Joint Account. 19. FINAL PROVISIONS 1. Headings are inserted in this Participation Agreement for convenience and shall not affect the construction or interpretation hereof. 2. This Participation Agreement shall not be amended, modified or supplemented except by an instrument in writing signed by the parties. 3. Subject to the provisions hereof this Participation Agreement is binding upon and shall apply to the successors and assignees of the parties hereto and each of them respectively. IN WITNESS WHEREOF the Parties hereto have signed this Participation Agreement on the day and year first above written. Production Sharing Contract Block 11A Ministry of Energy Page 93 EXHIBIT A ACCOUNTING PROCEDURE Attached to and made a part of the Participation Agreement. Section 1 General Provisions 1.1 Interpretation 1.2 Statements, billings and adjustments 1.3 Advances and payments 1.4 Audits SECTION 1 GENERAL PROVISIONS The purpose of this accounting procedure is to establish equitable methods for determining charges and credits applicable to operations under the Agreement. It is the intent of the Parties that no Party shall lose or profit by reason of its duties and responsibilities as either operator or as non-operator and that no duplicate charges to the joint

nt account for the same work shall be made. The parties agree that if any procedure established herein proves to be unfair or inequitable to any party the parties shall meet and in good faith endeavour to agree on the changes necessary to correct that unfairness or inequity.

1.1.1. In this Exhibit 1.1. INTERPRETATION: The Agreement means the Participation Agreement of which this Exhibit forms part; the Contract means the production sharing contract to which the Agreement is attached.

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ii Words and expressions defined in the Agreement, the Contract and its appendices have the meanings therein ascribed to them.

1.1.2. In the event of any conflict between the provisions of the Agreement and this exhibit the provisions of the Agreement shall prevail.

1.1.3. By mutual agreement between the parties this accounting procedure attached to the Agreement may be revised from time to time by an instrument in writing signed by the parties.

1.2. STATEMENTS, BILLINGS AND ADJUSTMENTS

1.2.1. The operator shall maintain financial accounts necessary to record in reasonable detail the transactions relating to petroleum operations under the Agreement which shall be prepared in accordance with generally accepted standards of the international petroleum industry. The operator shall upon request by the Party furnish a description of its accounting classifications.

1.2.2. Each party to the Agreement is responsible for preparing its own accounting and tax reports and paying its own tax obligations to meet Kenyan requirements. The operator shall furnish the non-operators with all reports, statements, billings and accounting documents necessary to maintain their own accounting records.

1.2.3. The operator shall bill the non-operators on or before the last day of each month for their proportionate share of expenditure for the preceding month. Such billings shall be accompanied by statements of all charges and credits to the joint account summarized in reasonable detail by appropriate accounting classifications indicative of the nature thereof except that items of controllable material and unusual charges and credits shall be detailed.

1.2.4. The operator shall upon request by non-operators furnish a description of such accounting classifications.

1.2.5. Amounts included in the billings shall be expressed in the currency in which the operators' records are maintained. In the conversion of currencies when accounting for advances or payments in different currencies as provided for in subsection 1.3. or any other currency transactions affecting operations under the Agreement it is the intent that none of the parties shall experience an exchange gain or loss at the expense of or to the benefit

of the other Parties. It is agreed that any loss or gain to the joint account resulting from the exchange of _____ currency _____ required for operations under the Agreement or from the translations required shall be charged or credited to the joint account. The operator shall furnish the parties with a description of the procedure applied by the operator to accomplish said translation or exchange of currencies and provide currency exchange data _____ sufficient _____ to _____ enable _____ non _____ operators to translate the billing to the currency of the nonoperator's accounts.

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1.2.6. of billings by nonoperator shall not prejudice the right of any nonoperator to protest or question the correctness thereof; however, all bills and statements rendered to nonoperators by the operator during any year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such year unless within the said twenty-four (24) month period a nonoperator takes written exception thereto and makes claim on the operator, which shall be made unless it is made within the same prescribed period. The provisions of this Subsection shall not prevent adjustment resulting from a physical inventory of the joint property or from a third party claim.

1.3. ADVANCES AND PAYMENT

1.3.1. If operators request nonoperator shall advance to the operator their share of estimated cash requirements for the succeeding month's operation in accordance with Article 6 of the Agreement. Operator shall make written request for the advance to nonoperators at least twenty (20) days prior to the first banking day of such succeeding month. The advances shall not be due and payable before the first banking day of the month for which the advance is requested. The request shall set out the funds in the currencies to be expended as estimated by the operator to be required. Then nonoperator shall on or before the due date make corresponding advances in the currencies requested by depositing such funds to operator's account at a bank as may be from time to time designated by the operator.

1.3.2. Should the operator be requested to pay any large sum of money for operations under the Agreement which were unforeseen at the time of providing the nonoperators with said monthly estimates of its requirements, the operator may make a written request of the nonoperators for special advances covering the nonoperator's share of such payments. Nonoperator shall advance to operator their share of such advances within fifteen (15) days after date of such notice.

1.3.3. If nonoperator's advances exceed their share of actual expenditure

the next succeeding cash advance after such determination shall be reduced accordingly. However, nonoperators may request that excess advances be refunded. The operator shall make such refund within fifteen (15) days after the date of such notice. Production Sharing Contract Block 11A Ministry of Energy Page 96

1.3.4. If nonoperator advances are less than their share of actual expenditure, the deficiency shall, at operator's option, be added to subsequent cash advance requirements or be paid by nonoperators within fifteen (15) days following operator's billing to nonoperators of such deficiency.

1.3.5. If the operator does not request nonoperators as provided in subpart 1.3.1. to advance their share of estimated cash requirements, nonoperators shall pay their share of actual expenditure within fifteen (15) days following date of operator's billing.

1.3.6. Payments of advances or billings shall be made on or before the due date and if not so paid, the unpaid balances shall be treated as provided under Article 6 of the Agreement.

1.4. AUDITS

1.4.1. A nonoperator upon at least thirty (30) days advance written notice to the operator and other nonoperator shall have the right at its sole expense to audit the joint account and related records for any year or portion thereof within the twenty-four (24) month period following the end of such year; however, the conducting of an audit shall not extend the time for the taking of written exception to and the adjustment of accounts as provided for in subpart 1.2.5. The operator shall make every reasonable effort to cooperate with the nonoperators and the nonoperator shall make every reasonable effort to conduct audits in a manner which will result in a minimum of inconvenience to the operator.

1.4.2. All adjustments resulting from an audit agreed between the operator and the nonoperator conducting the audit shall be rectified promptly in the joint account by the operator and reported to the other nonoperator.

Any unresolved dispute arising in connection with an audit shall be referred to arbitration in accordance with Article 15 of the Agreement.

1.4.3. Except as otherwise provided in the Contract, the cost of any audit or verification of the joint account that is for the benefit of all parties shall be chargeable to the joint account if the parties mutually agree.

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SECTION 2 CHARGEABLE CO

STSEXPENDITUREANDCREDITSTheoperatorshallcharge the joint account for all those costs and expenditure necessary to conduct petroleum operations under the agreement pursuant to the provisions of subpart 2.12. inclusive of appendix B to the Contract. The operator shall credit the joint account for all the proceeds resulting from petroleum operations under the Agreement pursuant to the provisions of subpart 2.31. of Appendix B to the Contract. Production Sharing Contract Block 11 A Ministry of Energy Page 98 EXHIBIT D Deed of Transfer Model Form DEED OF ASSIGNMENT between ERHC ENERGY KENYA LIMITED and CEPSA KENYA LIMITED 59 THIS DEED OF ASSIGNMENT is made on 2013 between 12 ERHC ENERGY KENYA LIMITED a company registered in accordance with the laws of Kenya under registration number CPR201286952 ERHC CEPSA KENYA LIMITED a company registered in accordance with the laws of Kenya under registration number CPR2013113607 CEPSA. WHEREAS A.B.C. EHRC is the sole Contractor in a production sharing contract between ERHC and the Government of the Republic of Kenya covering Block 11 A in the northwestern region of Kenya dated 28th June 2012. ERHC has agreed to transfer and assign to CEPSA fifty five percent (55%) of its rights as the Contractor in the Block 11 A PS Contract and operatorship of Block 11 A. The Cabinet Secretary of the Ministry of Energy of Kenya has in a letter dated [] given his consent to the execution of this Deed of Assignment. IT IS AGREED AS FOLLOWS 1.1.1 DEFINITIONS AND INTERPRETATION Definitions Unless the context otherwise requires the words and expressions defined in the PSC shall bear the same meanings ascribed to them in the PSC wherever used in this Deed including recital to this Deed. 1.1.1 Business Day means [] 1.1.21.1.31.1.41.21.2.11.2.1.11.2.1.21.2.1.31.2.1.41.2.1.51.2.1.61.3 Cabinet Secretary in the Ministry of Energy formerly Minister is the senior most civil servant and accounting officer in the Ministry of Information Communications and Technology PSC means production sharing contract between ERHC and the Government of the Republic of Kenya covering Block 11 A dated 28th June 2012 Parties means the parties to this Agreement. Interpretation In addition to the definitions in clause 1.1 unless the context requires otherwise the singular includes the plural and vice versa a person includes reference to a body corporate or other legal entity any written law includes that law as amended or reenacted from time to time any

agreement or other document includes that agreement or other document as varied or replaced from time to time a clause is to the relevant clause of this agreement any party includes that party's successors and assigns. Clause headings are inserted for convenience only and shall be ignored in construing this agreement. NOW THIS DEED WITNESSETH THAT 2. With effect from [] ERHC hereby assigns to

CEPSA an undivided fifty five per cent 55

Participating Interest in all the rights and interests and by way of novation transfers all its liabilities and obligations pursuant to and in respect of the PSC the Transferred Interest to hold the same and subject to performance

and observance by CEPSA of the terms and conditions contained in the PSC and on the part of the Contractor thereof as herein described to be performed and observed insofar as they relate to the Transferred Interest. Page 23.4.5.5

15.26.7. ERHC confirms that the rights and privileges of the Government of Kenya under the PSC shall not be prejudiced by the provisions of this Deed of Assignment. ERHC and CEPSA jointly and severally covenant with

and in favour of the Minister that they will perform and observe the terms and conditions contained in the PSC and on the part of the Contractor thereof as herein described to be performed and observed. For the purpose of this Deed of

Assignment all notices shall be sent to the following addresses: If to ERHC [] Tel [] Email [] Attention [] If to CEPSA [] Tel [] Email [] Attention [] This Deed of Assignment may be executed in any number of counterparts

with the same effect as if

the signatures on the counterparts were upon a single engrossment of this Deed of Assignment provided that this Deed of Assignment shall not be effective until all the counterparts have been executed. The construction and

validity and performance of this Deed of Assignment shall be governed by the Law of Kenya and each party hereby submits to the non-exclusive jurisdiction of the Kenyan Courts. Page 3 IN WITNESS WHEREOF the

parties hereunto affixed their respective common seals the day and year first above written. THE COMMON SEAL OF ERHC WASH HEREUNTO AFFIXED IN THE PRESENCE OF

DIRECTOR SECRETARY DIRECTOR THE COMMON SEAL OF CEPSA

WASH HEREUNTO AFFIXED IN THE PRESENCE OF

DIRECTOR SECRETARY DIRECTOR Page 4 CONSENT By executing this Deed of Assignment the

Cabinet Secretary of the Ministry of Energy does on behalf of theGovernment of Kenya consent and approve to the assignment of the Transferred Interest by ERHC to CEPSA inaccordancewiththeprovisionsofthePSC.APPROVEDBYTHEMINISTRYOFENERGYCabinetSecreta
ryDatePage5QueenslandCommonwealth Aluminium Corporation Pty. Limited Agreement Act 1957Current as at 11 September 2015QueenslandCommonwealth Aluminium Corporation Pty. Limited Agreement Act 1957Contents12344A4B4C4D4E5Short title
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.Page3333455555 6 80 84 88Schedule 5Proposed further agreement
. . 100Commonwealth Aluminium Corporation Pty. Limited Agreement Act 1957[s 1]Commonwealth Aluminium Corporation Pty. Limited Agreement Act 1957An Act with respect to an agreement between the State ofQueensland and Commonwealth Aluminium Corporation Pty.Limited; and for purposes inental thereto and consequentthereon12Short titleThis Act may be cited as the Commonwealth AluminiumCorporation Pty. Limited Agreement Act 1957.Execution of agreement authorisedThe Premier and Chief Secretary is hereby authorised tomake for and on behalf of the State with CommonwealthAluminium Corporation Pty. Limited a company dulyincorporated in the said State and having its registered officeat 240 Queen Street Brisbane in the said State the agreementa copy of which is set out in schedule 1 the agreement.NoteSince the making of the agreement Commonwealth AluminiumCorporation Pty. Limited has changed its name to Rio Tinto

Aluminium Limited.³ Executed agreement to have force of law Upon the making of the agreement the provisions thereof shall have the force of law as though the agreement were an enactment of this Act.⁴ Variation of agreement¹ The agreement may be varied only Current as at 11 September 2015 Page 3 Authorised by the Parliamentary Counsel Commonwealth Aluminium Corporation Pty. Limited Agreement Act 1957 [s 4A] ab by further agreement between the State and the other parties to the agreement; and under the authority of an Act.² A variation of the agreement purported to be made other than under subsection 1 is of no effect.³ The Minister must notify the date of the making of each further agreement by gazette notice.⁴ The agreement as varied has the force of law as if it were an enactment of this Act.^{4A} Application of GST to rents after 30 June 2005¹ This section applies to rent payable after 30 June 2005 under ab this Act; or the agreement; or a lease granted under or mentioned in the agreement.² If the rent is for a supply for which GST is payable the rent payable is the total of ab the rent that would have been payable if the rent were not for a supply for which GST is payable; and ¹⁰ of the rent that would have been payable if the rent were not for a supply for which GST is payable.³ Subsection 2 applies despite abc sections 2 to 4; or the agreement; or the Mineral Resources Act 1989.⁴ A reference in this section to the agreement includes any amendment of the agreement. Page 4 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Commonwealth Aluminium Corporation Pty. Limited Agreement Act 1957 [s 4B] ^{4B} Declaration for Commonwealth Act A special bauxite mining lease is declared not to be personal property under the Personal Property Securities Act 2009 Cwlth.^{4C} Authorisation of variation by further agreement The agreement may be varied by further agreements corresponding to the proposed further agreements set out in schedules 2 and 3.^{4D} Authorisation of variation by further agreement The agreement may be varied by further agreement corresponding to the proposed further agreement set out in schedule 4.^{4E} Authorisation of variation by further agreement The agreement may be varied by further agreement corresponding to the proposed further agreement set out in schedule 5.⁵ Regulation making power The Governor in Council may make regulations under this Act. Current as at 11 September 2015 Page 5 Authorised by the Parliamentary

CounselCommonwealth Aluminium Corporation Pty. Limited Agreement Act 1957Schedule 1Schedule 1The agreementsection 2NoteConsistent with the provisions of the Act this schedule contains onlythe proposed agreement authorised to be entered into by the Act asoriginally enacted. It does not purport to be either the agreementactually entered into or that agreement as amended from time to time.

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6 PRODUCTION SHARING CONTRACT 30 October 2006 This Agreement which has been

approved by the Joint Commission is a Production Sharing Contract and is subject to the Treaty and

the Petroleum Mining Code BETWEEN the Timor Sea Designated Authority established under the

Treaty party of the first part; AND Minza Oil Gas Limited Registration No. 93827 a corporation

organised and existing under the laws of Jersey the Contractor party of the second part; both

referred to individually as a Party or collectively as the Parties. Whereas A. B. C. D. petroleum

existing within the Joint Petroleum Development Area is a resource to be exploited jointly by

TimorLeste and Australia; the Designated Authority with the Joint Commissions approval has the

power to enter into Production Sharing Contracts; the Designated Authority wishes to promote

Petroleum Operations in the Contract Area and the Contractor desires to join and assist the

Designated Authority in exploring for developing and exploiting Petroleum in the Contract Area for

the benefit of the people of TimorLeste and Australia; and the Contractor has the financial capability

and the technical knowledge and technical ability to carry on the Petroleum Operations in a manner

wholly consistent with the Treaty the Code and this Agreement and has a record of compliance with

principles of good corporate citizenship. NOW THEREFORE it is agreed 30 October 2006 Page 7

Article 1 Interpretation 1.1 Definitions In this Agreement Accounting Records has the meaning given

in Clause 1.2 of Annex C; Agreement means this Production Sharing Contract; Appraisal means any

appraisal activities including appraisal wells the purpose of which at the time such activity is

commenced is to appraise and evaluate the extent volume or the quality of Petroleum reserves

contained in a Discovery including the commerciality of them and all related activities; Appraisal

Costs has the meaning given in Clause 2.2 of Annex C; Approved Contract means a contract made

by the Contractor and approved by the Designated Authority as a part of a Development Plan; Associated Gas means Natural Gas commonly known as gascap gas which overlies and is in contact with significant quantities of Crude Oil in a Reservoir and solution gas dissolved in Crude Oil in a Reservoir; Capital Costs has the meaning given in Clause 2.3 of Annex C; Code means the Petroleum Mining Code agreed and adopted by TimorLeste and Australia pursuant to Article 7a of the Treaty as amended varied modified or replaced from time to time and regulations made and directions given under it; Commercial Discovery means a discovery of Petroleum that the Contractor declares commercial as contemplated in subArticle 4.10; Commercial Production commences when commissioning and test production having been concluded the first day of the first period of thirty 30 consecutive days during which the average level of regular production delivered for sale on the twenty five 25 highest production days in the thirtyday period reaches a level of regular production delivered for sale determined by the Designated Authority; Committee has the meaning given in subArticle 14.1; Contract Area means the area specified in Annexes A and B but not any part of it which has been relinquished under Article 3; Contract Year means a period commencing on the Effective Date or on any anniversary of it and ending immediately before the next anniversary of it; Cost Recovery Statement has the meaning given in Clause 7 of Annex C; Crude Oil Field means a a single Reservoir; or 30 October 2006 Page 8 b multiple Reservoirs all grouped on or related to the same geological structure or stratigraphic conditions which contain hydrocarbons in a liquid state in the Reservoir with or without Associated Gas and from which Crude Oil and Associated Gas may be produced; Decommission means in respect of the Contract Area or a part of it as the case may be to abandon decommission transfer remove andor dispose of structures facilities installations equipment and other property and other works used in Petroleum Operations in the area to clean up the area and make it good and safe and to protect the environment; Decommissioning Costs Reserve means the cumulative amount of monies provided in each Calendar Year for the funding of the Decommissioning Plan pursuant to paragraph 4.14d; Decommissioning Plan means a plan of works and an estimate of expenditures therefor for Decommissioning including environmental

engineering and feasibility studies in support of the plan; Decommissioning Security Agreement means an agreement between the Designated Authority and the Contractor as mentioned in subArticle 4.15; Development means operations designed to recover Petroleum from a Reservoir for commercial purposes and includes design construction installation drilling but excludes drilling for the purposes of Exploration or Appraisal and all related activities; Development Work Programme and Budget has the meaning in subArticle 4.12; Development Area has the meaning given in subArticle 4.10; Development Plan means a development plan for a Development Area as referred to in subArticle 4.11; Discovery means a discovery of Petroleum in a Reservoir in which Petroleum has not previously been found that is recoverable at the surface in a flow measurable by conventional petroleum industry testing methods; Effective Date has the meaning given in subArticle 2.3; Exploration means any exploration activities including geological geophysical geochemical and other surveys investigations and tests and the drilling of core holes stratigraphic tests exploration wells and other drilling and testing operations for the purpose of making a Discovery and all related activities; Exploration Costs has the meaning given in Clause 2.1 of Annex C; Exploration Work Programme and Budget has the meaning in subArticles 4.1 4.2 and 4.3; Field means a Natural Gas Field or a Crude Oil Field from which Petroleum may be produced; Force Majeure has the meaning given in Article 18; Gas Retention Area has the meaning given in subArticle 3.5; 30 October 2006 Page 9 ICC means the International Chamber of Commerce; Ineligible Costs has the meaning given in Clause 2.8 of Annex C; Loan Facility means any overdraft loan or other financial facility or accommodation including any acceptance credit bond note bill of exchange or commercial paper finance lease hire purchase agreement trade bill forward sale or purchase agreement or conditional sale agreement or other transaction having the commercial effect of a borrowing; Miscellaneous Receipts has the meaning given in Clause 2.7 of Annex C; Natural Gas Field means a a single Reservoir; or b multiple Reservoirs grouped on or related to the same geological structure or stratigraphic conditions; in which NonAssociated Gas exists naturally under Reservoir conditions of temperature and pressure; NonAssociated Gas means Natural Gas which is not Associated Gas;

Operating Costs has the meaning given in Clause 2.4 of Annex C; Production means any Petroleum exploitation or export activities but not Development; Production Statement has the meaning given in Clause 5.1 of Annex C; Quarter means a period of three months beginning on January 1 April 1 July 1 or October 1 of each Calendar Year; Recoverable Costs has the meaning given in Article 6; Security means a a standby letter of credit issued by a bank; b an ondemand bond issued by a surety corporation; c a corporate guarantee; or d any other financial security acceptable to the Designated Authority and issued by a bank surety or corporation acceptable to the Designated Authority and having a credit rating indicating that it has sufficient worth to pay its obligations in all reasonably foreseeable circumstances; Treaty means the Timor Sea Treaty between the Government of TimorLeste and the Government of Australia signed on 20th May 2002; United States Dollars means the lawful currency of the United States of America; Uplift has the meaning given in Clause 2.6 of Annex C; 30 October 2006 Page 10 Value of Production and Pricing Statement has the meaning given in Clause 6 of Annex C; and Work Programme and Budget means a work programme for Petroleum Operations and budget therefor approved in accordance with this Agreement.

1.2 Headings As used herein headings are for convenience and do not form a part of and shall not affect the interpretation of this Agreement.

1.3 Further Interpretation In this Agreement unless the contrary intention appears a b c the words including and in particular shall be construed as being by way of illustration or emphasis only and shall not be construed as nor shall they take effect as limiting the generality of any preceding words; a reference to an Article subArticle paragraph subparagraph or to a Clause or an Annex is to an Article subArticle paragraph subparagraph of or to a Clause or an Annex to this Agreement; a reference to an agreement including this Agreement or instrument is to the same as amended varied novated modified or replaced from time to time; d person includes a corporation or other legal entity; e f the singular includes the plural and vice versa; any gender includes the other; g an agreement includes an arrangement whether or not having the force of law; h i j k l a reference to the consent or approval of the Designated Authority means the consent or approval in writing of the Designated Authority and

in accordance with the conditions of that consent or approval; law includes the Treaty and the Code; reference to any English legal concept term action remedy method of judicial proceeding legal document legal status court or official is in any jurisdiction other than England and Wales a reference to what most nearly approximates in that jurisdiction to that reference; contiguous area means a SubBlock or a number of SubBlocks each having a point in common with another such SubBlock; where a word or expression is defined cognate words and expressions shall be construed accordingly; m terms capitalised but not defined herein shall have the meaning defined in the Code; 30 October 2006 Page 11 and this Agreement shall inure to the benefit and burden of the Parties their respective successors and permitted assigns. 1.4 Annexes If there is a conflict the main body of this Agreement prevails over an Annex. 1.5 Joint and Several Liability If the Contractor is more than one person the obligations and liabilities of the Contractor under this Agreement are the obligations and liabilities of them all jointly and severally. 1.6 Operator a The appointment of an Operator by the Contractor shall be subject to prior approval by the Designated Authority where i ii there is more than one Authorised Person in respect of a particular Authorisation and the person appointed as Operator is one of those Authorised Persons; or the person appointed as Operator is not an Authorised Person. b c Except with the prior approval of the Designated Authority as required under paragraph 1.6a the Contractor shall not permit any person to exercise any function of an Operator. For all purposes of this Agreement the Operator shall represent the Contractor and the Designated Authority may deal with and rely on the Operator. The obligations liabilities acts and omissions of the Operator are additionally the obligations liabilities acts and omissions of the Contractor. d The Operator shall establish its head operations office in TimorLeste. e Any change in Operator shall be subject to the prior approval of the Designated Authority. f Where the Designated Authority determines that an Operator is no longer competent to be an Operator the Designated Authority with the approval of the Joint Commission may by written notice to the Operator and to the Contractor revoke its approval. Article 2 Scope and Term 2.1 Scope a This Agreement and the rights interests and benefits of the Contractor and the obligations and liabilities of the Designated

Authority under it are subject to the Treaty and the Code. The Contractor and the Designated Authority shall comply 30 October 2006 Page 12 with the terms of the Treaty the Code regulations and directions made in accordance with the Code and this Agreement. b Subject to this Agreement the Contractor shall and has the exclusive right to carry on Petroleum Operations at its sole i cost risk and expense; ii shall provide all human financial and technical resources therefor; and iii shall as further provided in this Agreement share in Petroleum from the Contract Area. c d The Contractor is not authorised to carry on Petroleum Operations in any part of the JPDA outside the Contract Area other than in accordance with an Access Authorisation granted to it by the Designated Authority under Article 9 of the Code. This Agreement does not authorise the Contractor to process Petroleum beyond the Field Export Point and no expenditure in respect of further processing shall be a Recoverable Cost.

2.2 Conditions Precedent a This Agreement is conditional on i ii iii iv the appointment of an Operator in accordance with subSection 4.5 of the Code; if the Contractor is more than one person the conclusion of a Joint Operating Agreement and such agreement coming into full force and effect subject only to satisfaction of this condition; the Contractor providing the Designated Authority with a Security in form and satisfactory to the Designated Authority for the performance of the Contractors minimum work and expenditure obligations in accordance with subArticles 4.1 4.2 and 4.3; and the Contractor demonstrating to the satisfaction of the Designated Authority that it has complied with its obligations under subArticle 17.2 in regard to insurance. b If the conditions mentioned in paragraph 2.2a are not fulfilled before the sixtieth 60th day after the date of this Agreement this Agreement shall terminate and be of no further force or effect.

2.3 Effective Date and Term a The effective date of this Agreement is the date on which all of the conditions precedent set out at subArticle 2.2 have been satisfied Effective Date. The Designated Authority shall notify the Contractor in writing that the conditions precedent have been satisfied. b This Agreement shall terminate on the first to occur of 30 October 2006 Page 13 i ii iii iv all of the Contract Area being relinquished pursuant to Article 3; the Parties so agreeing; termination pursuant to subArticle 2.4; or the Treaty ceasing to be in force.

2.4 Grounds for Termination a Where a

Contractor i ii iii iv has not complied with any plan approval condition or term to which this Agreement is subject; has not complied with the Code; has knowingly provided false information to the Designated Authority in connection with this Agreement; has not paid any amount payable by it under the Code or under this Agreement within a period of three 3 months after the day on which the amount became payable; or v is subject to or commits an Insolvency Event the Designated Authority may with the approval of the Joint Commission on that ground by instrument in writing served on the Contractor terminate this Agreement. b The Designated Authority shall not terminate this Agreement due to one or more of the relevant grounds identified in subparagraphs 2.4aiiv unless there has been a material breach by the Contractor of one of those grounds. c Where this Agreement expressly grants the Designated Authority a right to terminate this Agreement that right shall be exercised in accordance with the requirements of subArticles 2.4 and 2.5. 2.5 Designated Authority to give Notice Except in relation to an Insolvency Event in which case the Designated Authority may terminate this Agreement forthwith the Designated Authority shall not terminate this Agreement unless a b c it has by instrument in writing served on the Contractor given not less than thirty 30 days notice of its intention to so terminate this Agreement; it has in the instrument specified a date on or before which the Contractor may submit in writing to the Designated Authority any matters that it wishes to be considered; and it has taken into account any information provided under paragraph 2.5 b and any action taken by the Contractor or other parties to remove that ground or to prevent the recurrence of similar grounds. 30 October 2006 Page 14 2.6 Surviving Obligations a b Termination of this Agreement for any reason including the passage of time in whole or in part shall be without prejudice to rights and obligations expressed in the Code or this Agreement to survive termination or to rights and obligations accrued thereunder prior to termination including Decommissioning and all provisions of this Agreement reasonably necessary for the full enjoyment and enforcement of those rights and obligations shall survive termination for the period so necessary. If the Contractor is more than one person and circumstances arise in which the Designated Authority may terminate an Authorisation the Designated Authority may on such

conditions as it may elect to terminate this Agreement only in respect of those persons whose acts or omissions or in relation to whom acts omissions or events have occurred which have led to such circumstances arising if i ii it is satisfied that the other persons did not connive in such acts omissions or events and could not reasonably have been expected to prevent them occurring; and it is satisfied that it is fair and reasonable to do so in all the circumstances and the other persons agree including as to such conditions.

Article 3 Relinquishment of Blocks

3.1 Periodic Relinquishment of Exploration Area

a The Contractor shall relinquish b c i ii at the end of the third 3rd Contract Year not less than twenty five 25 percent of the SubBlocks in the original Contract Area; and at the end of the fifth 5th Contract Year not less than a further twenty five 25 percent of the SubBlocks in the original Contract Area. At the end of any Contract Year and subject to paragraph 3.1e the Contractor may relinquish some or all of the SubBlocks in the Contract Area. Any SubBlocks so relinquished will be credited against the next relinquishment obligation of the Contractor under paragraph 3.1a. The Contractor shall consult with and give not less than thirty 30 days notice to the Designated Authority of the SubBlocks which at any time it wishes to relinquish. Except with the consent of the Designated Authority i ii those SubBlocks must form one discrete area; and the SubBlocks not relinquished must form one or more discrete areas all of sufficient size and convenient shape to enable Petroleum Operations to be conducted thereon.

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Page 15 d If the Contractor does not relinquish SubBlocks at the time and in the manner required by this subArticle 3.1 all of the Contract Area shall be deemed relinquished at the end of the Contract Year concerned. e Without the consent of the Designated Authority and notwithstanding subArticle 3.1 the Contractor may not relinquish all of the SubBlocks in the Contract Area if it has not then fulfilled its obligations under subArticles 4.1 4.2 and 4.3 or is then in breach of any provision of this Agreement.

3.2 Final Relinquishment of Exploration Area

a b At the end of the seventh 7th Contract Year the Contractor shall relinquish all of the Contract Area other than such part thereof as is a Development Area. If at the end of the seventh 7th Contract Year a Discovery has been made but there has been insufficient time for the Contractor acting and having acted in accordance with this

Agreement to appraise it the obligation of the Contractor under subArticle 3.2 shall be postponed i ii iii for such SubBlocks and to such depths as the Designated Authority may determine to be reasonably necessary to encompass the Field plus a reserve margin sufficient to cover the probable extent of the field; for such period as is reasonably necessary to permit the Contractor to appraise or to complete the Appraisal of the Discovery; and as a consequence of that Appraisal for the Contractor to decide whether to declare a Commercial Discovery and if it does so for the Designated Authority to declare a Development Area in respect of it. 3.3 Relinquishment of Development Area a Except with the consent of the Designated Authority and subject to paragraph 3.3b below a Development Area shall be deemed to be relinquished on the first to occur of i ii production from the Development Area ceasing permanently or for a continuous period of twelve 12 months or if because of Force Majeure as is determined by the Designated Authority in consultation with the Contractor under subArticle 18.5; and the twenty fifth 25th anniversary of the date on which the first 1st Development Plan in respect of the Development Area was approved by the Designated Authority. b Where the Contractor has entered into contracts for the sale of Natural Gas which have been approved as part of a Development Plan then relinquishment shall be no earlier than the expiry date of those contracts. c Without the consent of the Designated Authority the Contractor may not otherwise relinquish all or any part of a Development Area. 30 October 2006 Page 16 3.4 Termination of Agreement and Continuing Obligations in respect of Relinquished Area a b This Agreement shall terminate in respect of a part of the Contract Area which is relinquished. Relinquishment of all or a part of the Contract Area is without prejudice to the obligations of the Contractor to Decommission. 3.5 Gas Retention Area a b c If the Appraisal of a Discovery of NonAssociated Gas demonstrates that the Discovery although substantial is not then either alone or in combination with other Discoveries commercially viable but is likely to become so within five 5 years the Designated Authority may at the request of the Contractor declare a Gas Retention Area in respect of it for that period. On request of the Contractor and after demonstration that the grant of an extended period is likely to result in the declaration of a Commercial Discovery the Designated

Authority may extend the period of the Gas Retention Area for such longer period and on such conditions as is considered appropriate by the Designated Authority. This Article 3 but not subArticle 3.3 applies to and in respect of a Gas Retention Area as it does to and in respect of a Development Area for as long as during that period the Contractor diligently seeks to make it commercially viable and demonstrates to the Designated Authority that it is doing so. The Gas Retention Area consists of those SubBlocks forming a single contiguous area that encompass the Natural Gas Field plus a reserve margin sufficient to cover the probable and possible extent of it but the Designated Authority may exclude deeper formations in which no Discovery has been made. The Designated Authority at any time and from time to time and whether of its own volition or at the request of the Contractor may i ii iii add SubBlocks then in the Contract Area to; remove SubBlocks from; or vary by depth within the Contract Area a Gas Retention Area as may be required to ensure that it encompasses the Natural Gas Field. The Contractor shall relinquish any part of the Contract Area removed from a Gas Retention Area as a consequence of such removal or other variation if it occurs after the time for the relinquishment provided for in paragraph 3.2a. d The Gas Retention Area shall be deemed to have been relinquished on the earlier of i ii iii expiry of the period mentioned in paragraph 3.5 a; the Contractor ceasing to meet its obligations under paragraph 3.5 b; and the Contractor declaring a Commercial Discovery in respect of it and the Designated Authority declaring a Development Area as a consequence thereof. 30 October 2006 Page 17 3.6 Oil Retention Area If the Appraisal of a Discovery of a Crude Oil Field demonstrates that the Discovery although substantial is not then either alone or in combination with other Discoveries commercially viable but is likely to become so within five 5 years the Designated Authority may in its absolute discretion at the request of the Contractor declare an Oil Retention Area in respect of it or any part thereof for that period on such terms and conditions as the Designated Authority considers appropriate. Article 4 Work Programmes and Budget 4.1 Commitment in Initial Period In each Contract Year mentioned below the Contractor shall carry out an Exploration Work Programme and Budget of not less than the amount of work specified for that Contract Year Surveys Purchase of 2051 kilometres of multiclient

2D seismic. Wells Nil Nil Acquisition and processing of a minimum of 500 kilometres of new 2D fullfold high quality seismic data. Nil Nil Contract Year 1 2 3 Data Evaluation Interpretation and reprocessing of existing seismic data. Systematic review of the hydrocarbon potential of the Contract Area through integrated geological geophysical structural geochemical and other studies. Interpretation of new and existing seismic data. Systematic review of the hydrocarbon potential of the Contract Area through integrated geological geophysical structural geochemical and other studies. Interpretation of new and existing seismic data. Systematic review of the hydrocarbon potential of the Contract Area through integrated geological geophysical structural geochemical and other studies. 30 October 2006 Page 18 4.2 Commitment in Second Period In each Contract Year mentioned below and unless the Contractor has relinquished all of the Contract Area not being a Development Area Oil Retention Area or a Gas Retention Area before the start of the fourth 4th Contract Year the Contractor shall carry out an Exploration Work Programme and Budget of not less than the amount of work specified for that Contract Year Contract Year 4 5 Data Evaluation Preparation of well prognosis. Confirmation of drilling location for 1 exploration well. Nil Surveys Nil Nil Wells Nil 1 exploration well to a depth regarded as sufficient by the TSDA to fully investigate all exploration prospects of the chosen location. 4.3 Commitment in Third Period In each of the sixth 6th and seventh 7th Contract Years and unless the Contractor has relinquished all of the Contract Area not being a Development Area Oil Retention Area or a Gas Retention Area before the start of the Contract Year concerned the Contractor shall carry out such Exploration Work Programme and Budget of not less than the amount of work specified for that Contract Year Surveys Nil Wells Nil Nil Nil Contract Year 6 7 Data Evaluation Systematic review of the hydrocarbon potential of the Contract Area through integrated geological geophysical structural geochemical and other studies including the integration of new well data. Systematic review of the hydrocarbon potential of the Contract Area through integrated geological geophysical structural geochemical and other studies including the integration of new well data. 30 October 2006 Page 19 4.4 Performance of Exploration Work Programme and Budget a b If any well forming part of the Exploration Work Programme and

Budget provided for in this Article 4 is abandoned for any reason other than a reason specified in paragraph 4.4 b before reaching the defined objectives of such well the Contractor shall drill a substitute well. In this event the First Second or Third Exploration Period as the case may be shall be extended by a period of time equal in length to the time spent in preparing for and drilling the substitute well including mobilisation and demobilisation of the drilling rig if applicable. Unless otherwise agreed by the Designated Authority any well which forms part of the Exploration Work Programme and Budget provided for in this Article 4 shall be drilled to such depth as is necessary for the evaluation of the geological formation established by the available data as the target formation and which Good Oil Field Practices would require the Contractor to attain unless before reaching such depth i ii iii iv v vi vii a formation stratigraphically older than the deepest target formation is encountered; basement is encountered; further drilling would present an obvious danger such as but not limited to the presence of abnormal pressure or excessive losses of drilling mud; impenetrable formations are encountered; Petroleum bearing formations are encountered which require protecting thereby preventing planned depths from being reached; the Contractor and the Designated Authority agree to terminate the drilling operation; or the Designated Authority confirms that the drilling obligation has been fulfilled. In such circumstances the drilling of any such well may be terminated at a lesser depth and shall be deemed to have satisfied the Contractors obligations in respect of that well. c Where a well which forms part of the Exploration Work Programme and Budget provided for in this Article 4 results in a Discovery and the Contractor informs the Designated Authority pursuant to subArticle 4.9 that the Discovery merits Appraisal that well will be deemed to have met its objective and to have satisfied the Contractors obligations in respect of that well. 4.5 Consequences of NonPerformance a If in a Contract Year the Contractor carries out less Exploration than is required of it under the Exploration Work Programme and Budget the Designated Authority may i require that the shortfall be added to the Exploration to be carried out in the next Contract Year; 30 October 2006 Page 20 ii iii require payment of the estimated cost of the Exploration not carried out in that Contract Year; or terminate this Agreement and require

payment of the estimated cost of the Exploration not carried out in that Contract Year. b c If in a Contract Year the Contractor carries out more Exploration than is required of it the excess shall be credited against Exploration to be carried out in the following Contract Year and to the extent in excess of that Exploration shall be further carried forward. For the purposes of the foregoing provisions of this Article 4 and of Article 6 and Annex C and except with the consent of the Designated Authority no work in a Development Area will be regarded as Exploration except to the extent in respect of a formation shallower or deeper than the Field concerned and in which no Discovery has been made.

4.6 Work Programmes and Budgets Subject to subArticle 4.7 the Contractor shall carry out Petroleum Operations substantially in accordance with Work Programmes and Budgets approved by the Designated Authority. Such an approval by the Designated Authority is without prejudice to any other obligation or liability of the Contractor under this Agreement.

4.7 Emergency and Other Expenditures Outside Work Programmes and Budgets a Without further approval by the Designated Authority the Contractor may overexpend by ten percent 10 on any line item in an approved Work Programme and Budget for a Contract Year. b Without further approval by the Designated Authority the total of all overexpenditures under paragraph 4.7a under that Work Programme and Budget for that Contract Year shall not exceed ten percent 10 of the total expenditures in that Work Programme and Budget. c d e The Contractor shall promptly inform the Designated Authority if it anticipates or should reasonably anticipate that any such limit in paragraph 4.7b will be exceeded and seek in the manner provided in this Article 4 an amendment to the appropriate Work Programme and Budget. In determining whether to approve the overexpenditures contemplated at paragraphs 4.7a and b the Designated Authority shall consider whether such increases are necessary to complete the programme of works provided that such increase is not the result of any failure of the Contractor to fulfill its obligations under this Agreement. Nothing in subArticle 4.6 or paragraph 4.7a precludes or excuses the Contractor from taking all necessary and proper measures for the protection of life health the environment and property if there is an emergency including a significant fire explosion Petroleum release or sabotage; inent involving loss

of life serious injury to an employee contractor or third party or serious property damage; strikes and riots; or evacuation of the Operators personnel. As soon as reasonably practicable the Operator will inform the Designated Authority of the details of the emergency and of the actions it has taken and intends to take.

4.8 Exploration a b c The Contractor shall submit for the approval of the Designated Authority an Exploration Work Programme and Budget for each Calendar Year. From time to time the Contractor may submit for the approval of the Designated Authority amendments to the Exploration Work Programme and Budget. The Contractor is not obliged to carry out more Exploration in a Contract Year than is required by subArticles 4.1 4.2 and 4.3.

4.9 Discovery and Appraisal a b c d e The Contractor shall notify the Designated Authority of a Discovery and shall provide the Designated Authority with such information in respect of it as the Code requires. As soon as reasonably practicable after a Discovery is made the Contractor shall advise the Designated Authority whether or not having regard to paragraph 4.9e the Discovery merits Appraisal. At such time and in such manner as the Designated Authority requires the Contractor shall submit for the approval of the Designated Authority an Appraisal Work Programme and Budget for each Calendar Year. From time to time the Contractor may submit for the approval of the Designated Authority amendments to the Appraisal Work Programme and Budget. An Appraisal Work Programme and Budget for a Calendar Year will be such as would be undertaken by a person seeking diligently to appraise in accordance with this Agreement a Discovery with a view to determining if it is either alone or in combination with other Discoveries a Commercial Discovery.

4.10 Commercial Discovery a b c The Contractor may at any time and having regard to paragraph 4.10b declare that a Commercial Discovery has been made. The declaration is to be made in such manner and be accompanied by such supporting data and information as the Designated Authority requires including the Contractors proposal as to that part of the Contract Area to be declared a Development Area. The Designated Authority shall declare those SubBlocks which encompass the Field in which the Commercial Discovery has been made plus a reserve margin sufficient to cover the probable extent of the Field to be a Development Area but may exclude deeper formations in

which no Discovery has been made. The Designated Authority at any time and from time to time of its own volition or that of the Contractor may 30 October 2006 Page 22 i ii iii add SubBlocks then in the Contract Area to; remove SubBlocks from; or vary by depth within the Contract Area a Development Area as may be required to ensure that it encompasses the Field concerned but not unless the Designated Authority and the Contractor otherwise agree after the first Development Plan in respect of the Development Area has been approved. The Contractor shall relinquish any part of the Contract Area removed from a Development Area as a consequence of such removal or other variation if it occurs after the time for the relinquishment provided for in paragraph 3.2a. 4.11 Development Plan a b c Not more than twelve 12 months after the declaration of a Development Area and in the manner required by the Designated Authority the Contractor shall submit for the approval of the Designated Authority a Development Plan for the Development Area. From time to time the Contractor may submit for the approval of the Designated Authority amendments to the Development Plan. A Development Plan will be assessed on the basis of whether it would be undertaken by a person seeking diligently to develop and exploit in accordance with this Agreement the Petroleum in the Development Area in accordance with Good Oil Field Practice and in a way that promotes further investment and contributes to the long term development of TimorLeste and Australia. d Except with the consent of the Designated Authority and without prejudice to the generality of paragraph 4.11a a Development Plan shall include i ii a description of the proposed reservoir development and management programme; details of aa the geological and the reservoir work done together with the production profiles simulated in order to reach the best depletion alternative; bb the production treatment and transportation facilities to be located in the JPDA; cc dd facilities for transporting the Petroleum from the Contract Area and the JPDA; and facilities wherever located which are connected to any facilities mentioned in subparagraphs bb and cc above and which or the operation of which might affect the integrity management or operation thereof; iii the production profiles for all hydrocarbon products including possible injections for the life of the Development including the commencement of Production and the specific rates of Petroleum

production; 30 October 2006 Page 23 iv v vi vii the projected start of Commercial Production; the Decommissioning Plan in such detail as the Designated Authority requires including a calculation of the Decommissioning costs the annual contribution to the Decommissioning Costs Reserve and the Contractors proposal for the Decommissioning Security Agreement; an environmental management covering the life of the Development; impact statement and proposals for environmental a Contractors proposal for ensuring the safety health and welfare of persons in or about the proposed Petroleum Operations; viii the Contractors proposals for aa the use of TimorLeste goods and services; bb training and employment of nationals and permanent residents of TimorLeste; having regard to occupational health and safety requirements; and cc processing Petroleum; ix x xi the estimated capital expenditure covering the feasibility fabrication installation commissioning and preproduction stages of the Development; an evaluation of the commerciality of the Development including a full economic evaluation; the Contractors and if more than one person each such persons proposals for financing; xii summary details and copies of aa bb all contracts and arrangements made or to be made by the Contractor for the sale of Natural Gas; for information purposes only all contracts and arrangements made or to be made by persons in respect of that Natural Gas downstream of the point at which it is to be sold by the Contractor and which are relevant to the price at which and other terms on which it is to be sold by the Contractor or are otherwise relevant to the determination of the value of it for the purposes of this Agreement but not beyond the point at which it is first disposed of in an arms length transaction; and cc all contracts and arrangements made or to be made by the Contractor in respect of facilities downstream of the Field Export Point for transporting processing liquefying storing handling and delivering that Natural Gas; and xiii such other data and information including in respect of insurance to be obtained by the Contractor and buyers and shippers of Petroleum as the 30 October 2006 Page 24 Code requires and as the Designated Authority otherwise requires and is relevant to the Development Plan. e The Designated Authority shall not approve a Development Plan or an amendment to it unless i ii a Decommissioning Security Agreement has been concluded in respect of the Development Area; and

the Designated Authority has consulted with the Joint Commission in relation to the Development Plan or amendment.

4.12 Development Work Programmes and Budgets a b c At such time and in such manner as the Code requires and as the Designated Authority otherwise requires the Contractor shall submit for the approval of the Designated Authority a Development Work Programme and Budget for each Development Area for each Calendar Year. At any time and from time to time the Contractor may submit for that approval amendments to it. A Development Work Programme and Budget for a Calendar Year shall be substantially in accordance with the Development Plan for the Development Area. The Designated Authority may not unreasonably withhold its approval of a Development Work Programme and Budget properly submitted by the Contractor.

4.13 Approved Contracts a b c The Contractor may not sell or otherwise dispose of Natural Gas from the Contract Area other than pursuant to an Approved Contract or as otherwise may be provided in the Development Plan or in this Agreement. The Contractor may not use any facilities downstream of the Field Export Point for transporting processing treating liquefying storing handling or delivering Petroleum other than under the terms of an Approved Contract. The Contractor may not amend waive or fail to enforce any provision of an Approved Contract without the approval of the Designated Authority.

4.14 Decommissioning a b The Contractor shall submit to the Designated Authority for its approval pursuant to subparagraph 4.11dv a Decommissioning Plan for the Development Area and a schedule of provisions for the Decommissioning Costs Reserve. The Decommissioning Plan shall be revised and resubmitted to the Designated Authority for its approval at such times as are reasonable having regard to the likelihood that the Decommissioning Plan including cost estimates thereunder may need to be revised. c The Contractor shall carry out the Decommissioning Plan substantially in accordance with its terms.

30 October 2006 Page 25 d Estimates of the monies required for the funding of the Decommissioning Plan shall be charged as Recoverable Costs beginning in the Calendar Year following the Calendar Year in which Commercial Production first occurs. The amount charged in each Calendar Year shall be calculated as follows i ii iii iv v vi vii The total Decommissioning costs at the expected date of Decommissioning

shall first be calculated. There shall be deducted from such total Decommissioning costs the additions made taken as the Decommissioning Costs Reserve made and Recoverable Costs in all previous Calendar Years together with interest on such Recoverable Costs calculated to the approved date of Decommissioning at the actual or forecast rate of Uplift whichever is applicable. to The residual Decommissioning costs resulting from the calculations under subparagraph 4.14di and ii shall then be discounted to the Calendar Year in question at the forecast rate of Uplift for each Calendar Year remaining until the Calendar Year of Decommissioning. The discounted total of residual Decommissioning costs shall then be divided by the total number of Calendar Years remaining prior to the Calendar Year of Decommissioning itself including the Calendar Year in question. The resultant amount shall be the addition to the Decommissioning Costs Reserve for the Calendar Year in question. It is the intention of this provision that the total accumulated provision allowed the Calendar Year of Decommissioning at the rate of Uplift will equal the total Decommissioning costs. interest calculated including to If the amount in subparagraph 4.14dv is a negative amount then such amount shall be treated as a reduction of Recoverable Costs for the Calendar Year in question. 4.15 Decommissioning Security a b c Prior to Decommissioning Security pursuant to the Decommissioning Security Agreement shall be provided by the Contractor in an amount equal to the sum of provisions made to the Decommissioning Costs Reserve and taken as Recoverable Costs in all previous years together with interest on such Recoverable Costs calculated to the end of the previous Calendar Year at the actual rate of Uplift. After Decommissioning commences the Designated Authority shall at the end of each Calendar Year review the amount of Security required for the outstanding Decommissioning and shall take into consideration any Decommissioning costs that have already been incurred. Failure of the Contractor to provide Security and otherwise to fulfill its obligations under the Decommissioning Security Agreement shall be a breach of this Agreement. 30 October 2006 Page 26 Article 5 Conduct of Work 5.1 Proper and Workmanlike Manner a b The Contractor shall carry out Petroleum Operations and shall procure that they are carried out in a proper efficient and workmanlike manner and in accordance with the

Code this Agreement and Good Oil Field Practice. In particular the Contractor shall carry out Petroleum Operations and procure that they are carried out in such a manner as is required by paragraph 5.1a to i ii protect the environment ensure that Petroleum Operations result in minimum ecological damage or destruction and clean up pollution; ensure the safety health and welfare of persons in or about the Petroleum Operations; iii maintain in safe and good condition and repair all structures facilities installations equipment and other property and other works used or to be used in Petroleum Operations; iv on the earlier of aa termination of this Agreement; and bb when no longer required for Petroleum Operations; and in either case cc except with the consent of the Designated Authority; or dd unless this Agreement otherwise provides abandon decommission transfer remove and/or dispose of all structures facilities installations equipment and other property clean up the Contract Area and make it good and safe and protect the environment to the satisfaction of the Designated Authority. v vi control the flow and prevent the waste or escape of Petroleum water or any product used in or derived by processing Petroleum; prevent the escape of any mixture of water or drilling fluid with Petroleum or any other matter; vii prevent damage to Petroleum-bearing strata in or outside the Contract Area; viii except with the consent of the Designated Authority keep separate aa each Reservoir discovered in the Contract Area; and bb such of the sources of water discovered in the Contract Area as the Designated Authority directs; 30 October 2006 Page 27 ix prevent water or any other matter entering any Reservoir through wells in the Contract Area except when required by and in accordance with the Development Plan and Good Oil Field Practice; x minimise interference with navigation and fishing; and xi remedy in a timely fashion any damage caused to the environment.

5.2 Access to Contract Area Subject to law and to this Agreement the Contractor may enter and leave the Contract Area at any time for the purposes of Petroleum Operations.

5.3 Health Safety and the Environment a Within three 3 months of the Effective Date the Contractor shall submit to the Designated Authority for its approval plans in regard to i ii the health safety and welfare of persons in or affected by Petroleum Operations; and the protection of the environment including the marine environment and the atmosphere and the prevention of pollution in order to

reduce the risks to the personnel and the environment so they are as low as reasonably practicable. The plans shall be reviewed annually and amended from time to time as may be necessary to ensure its continuing compliance with Good Oil Field Practice. b Notwithstanding anything elsewhere contained in this Agreement the Contractor shall clean up pollution resulting from Petroleum Operations to the satisfaction of the Designated Authority and meet the costs of so doing to the extent done by anyone else including the Designated Authority.

5.4 Goods Services Training and Employment

The Contractor shall take reasonable steps to comply with the proposals which accompanied its application under subSection 5.4 of the Code for this Agreement in respect of training employment and the acquisition of goods and services such proposals are specifically listed at Annex D and shall a b c give persons based in TimorLeste a real opportunity to compete for delivery of goods and services provided they are offered on competitive terms and conditions; with due regard to occupational health and safety requirements give preference in employment in Petroleum Operations to nationals and permanent residents of TimorLeste; and within thirty 30 days of the end of each Calendar Year submit to the Designated Authority a report demonstrating compliance with the above obligations.

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5.5 Flaring

Except with the consent of the Designated Authority or in an emergency the Contractor shall not flare Petroleum.

5.6 Operator and its SubContractors

The Operator and only the Operator may carry out Petroleum Operations and may do so by itself its agents and subcontractors. This subArticle 5.6 does not relieve the Contractor of any obligation or liability under this Agreement; and the carrying out of Petroleum Operations by its agents or contractors does not relieve the Operator or the Contractor of any obligation or liability under this Agreement.

Article 6 Recoverable Costs

6.1 Generally

a b The Contractors accounts shall be prepared and maintained in accordance with Annex C. Only costs and expenses incurred by the Operator in carrying on Petroleum Operations including additions to the Decommissioning Costs Reserve and unless the Contractor is only one person and the Contractor and the Operator are that person properly charged to the Contractor under an agreement made between them and consented to by the Designated Authority are Recoverable Costs but without

prejudice to any other provision of this Agreement which would result in any such cost or expense not being a Recoverable Cost.

6.2 Recoverable Costs In any Calendar Year Recoverable Costs are subject as further provided in Annex C the sum of those of the following that are not ineligible costs

a the sum of

- i Recoverable Exploration Costs; Recoverable Appraisal Costs;
- ii Recoverable Capital Costs; and
- iv Recoverable Operating Costs;

b c additions to the Decommissioning Costs Reserve if any allowable in that Calendar Year; Recoverable Costs in the previous Calendar Year to the extent in excess of the value of the Contractors share of Petroleum under subparagraph 7.1bi in that previous Calendar Year; plus

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d a Quarterly amount equal to the product of the rate of Uplift and the Quarterly balance of outstanding Recoverable Costs; less Miscellaneous Receipts and less any deductions pursuant to paragraph 7.4a.

Article 7 Sharing Of Petroleum

7.1 Determination of Shares In each Calendar Year the Parties shall take and receive the following shares of every grade and quality of Petroleum as and when it is delivered at the Field Export Point

- a the Designated Authority
 - i ii five 5 percent; plus its share of any balance as mentioned in paragraph 7.1c;
- b the Contractor
 - i ii ninety five 95 percent but not more than is equal in value to Recoverable Costs for the Calendar Year concerned; plus its share of any balance as mentioned in paragraph 7.1c;
- c any Petroleum not taken by the Contractor under subparagraph 7.1bi shall be shared as to forty 40 percent by the Designated Authority and as to sixty 60 percent by the Contractor.

7.2 Option of Designated Authority

- a b Unless the Designated Authority elects otherwise as per paragraph 7.2b the Contractor shall take and receive and dispose of in common stream with its own share and on terms no less favourable to the Designated Authority than the Contractor receives for its own share the Designated Authoritys entire share of Petroleum. The Designated Authority may make an election to take and separately dispose of the Designated Authoritys share of Petroleum. Unless the Contractor otherwise agrees which agreement will not be unreasonably withheld the Designated Authority may not so elect other than
- i ii in respect of all or the same percentage of all of the Designated Authoritys shares of Crude Oil for and throughout each Calendar Year on not less than ninety 90 days prior written notice to the Contractor before the

start of the Calendar Year concerned; and in respect of the Designated Authority's share of Natural Gas in connection with its approval of Approved Contracts. 30 October 2006 Page 30 7.3 Lifting a b Subject to this Agreement the Contractor may lift dispose of and export from the JPDA its share of Petroleum and retain the proceeds from the sale or other disposition of that share. The Contractor and the Designated Authority shall from time to time make such agreements between them as are reasonably necessary in accordance with Good Oil Field Practice and the commercial practices of the international petroleum industry for the separate lifting of their shares of Petroleum. 7.4 Title and Risk a b c d Petroleum shall be at the risk of the Contractor until it is delivered at the Field Export Point. Without prejudice to any obligation or liability of the Contractor as a consequence of a failure of the Contractor to comply with its obligations under the Code and this Agreement including subArticle 5.1 Petroleum which is lost after it is recovered at the wellhead and before it is delivered at the Field Export Point shall be deducted from the Contractor's Recoverable Costs under subArticle 6.2. Title in the Contractor's share of Petroleum shall pass to it when and risk therein shall remain with the Contractor after it is delivered at the Field Export Point. Title in the Designated Authority's share of Petroleum taken by the Contractor pursuant to subArticle 7.2 shall pass to the Contractor when and risk therein shall remain with the Contractor after it is delivered at the Field Export Point. The Contractor shall defend indemnify and hold harmless the Designated Authority and/or the members of the Joint Commission from all claims and demands asserted in respect of Petroleum wherein the risk is with the Contractor. 7.5 Payment on Account a b Unless the Designated Authority has made an election under paragraph 7.2b the Contractor shall pay to the Designated Authority an amount equal to the Designated Authority's share of all amounts received by the Contractor for the Petroleum within thirty six 36 hours of receipt. In the event that the Contractor has not received payment for Petroleum within sixty 60 days of production it nonetheless will make a provisional payment to the Designated Authority of the estimated value of the Designated Authority's share of such Petroleum. Article 8 Valuation of Petroleum 8.1 Point and type of Valuation Petroleum shall be valued as if it were sold in an arms length transaction f.o.b. or equivalent at the Field Export Point.

30 October 2006 Page 31 8.2 Value of Crude Oil The value of Crude Oil a b Sold f.o.b. or equivalent at the Field Export Point in an arms length transaction is the price payable for it; Sold in an arms length transaction other than f.o.b. or equivalent at the Field Export Point is the price payable for it less such fair and reasonable proportion of such price that relates to the transportation processing and delivery of the petroleum downstream of the Field Export Point up to the actual point of sale; or c Sold other than as mentioned in paragraphs 8.2a and b shall be the fair and reasonable market price thereof having regard to all relevant circumstances. 8.3 Value of Natural Gas The value of Natural Gas shall be the price payable under the Approved Contract or as otherwise may be provided in the Development Plan or in this Agreement with such fair and reasonable adjustments as required to reflect the point and type of valuation in subArticle 8.1 or where a Contractor enters into a sale other than at armslength. 8.4 Price Payable In this Article 8 the price payable is the price that is or would be payable by the buyer if the Petroleum were delivered by the Contractor and taken by the buyer without set off counterclaim or other withholding of any nature. Article 9 Payments 9.1 Fees The Contractor shall pay to the Designated Authority fees and other payments as provided for in the Code. 9.2 Payment Mechanism All payments under this Agreement shall be made in United States Dollars unless otherwise agreed and within ten 10 days after the end of the month in which the obligation to make the payment is incurred to a bank specified by the Party to whom the payment is due. 9.3 Late Payment Any amount not paid in full when due shall bear interest compounded on a monthly basis at a rate per annum equal to one month term London Interbank Offer Rate LIBOR for United States Dollar deposits as published in London by the Financial Times or if not so published then as published in New York by The Wall Street Journal current from day to 30 October 2006 Page 32 day plus five percentage 5 points on and from the due date for payment until the amount together with interest thereon is paid in full. 9.4 Minimum Payment If this Agreement is terminated for any reason before the end of the third Contract Year the Contractor shall on such termination pay to the Designated Authority those fees which it would have paid under subArticle 9.1 if termination had not occurred until the end of the third Contract Year. Article 10

Provision of Goods and Services 10.1 Notice a b Except with the consent of the Designated Authority the Contractor shall draw to the attention of suppliers based in TimorLeste and Australia in such manner as the Designated Authority agrees all opportunities for the provision of goods and services for Petroleum Operations. Subject to subArticle 10.2 the Contractor shall before awarding any contract for goods or services obtain the written approval of the Designated Authority. Approval from the Designated Authority shall be deemed thirty 30 days after written notice of an intention to award is given by the Contractor unless otherwise notified in writing to the Contractor. 10.2 Contracts Not Requiring Designated Authoritys Approval The Contractor may make contracts for goods and services for Petroleum Operations without the Designated Authoritys consent but not if for property to be leased to the Contractor where a b the contract or related series of contracts is expected to involve expenditure of less than two million 2000000 United States Dollars or such higher amount that may be specified by regulation; or the contract or related series of contracts is expected to involve expenditure of less than five million 5000000 United States Dollars or such other amount that may be specified by regulation and the goods or services are required in respect of a Development Plan the cost of which is expected to exceed one hundred million 100000000 United States Dollars or such higher amount that may be specified by regulation. 10.3 Tender Invitations a All invitations to tender made for the purpose of procuring goods and services shall be published in two 2 of the newspapers with broadest circulation in TimorLeste and Australia or as agreed with the Designated Authority. 30 October 2006 Page 33 b Notwithstanding subArticle 10.2 and except with the consent of the Designated Authority all goods and services shall be procured on an arms length basis by competitive tendering and the Contractor before inviting any tender for goods or services shall consult with the Designated Authority in respect of i ii the list of bidders which the Contractor proposes to invite to tender; and the bid package to accompany the invitation which shall include aa a draft contract; bb the scope of work; cc a technical proposal form; dd a commercial proposal form; ee the use of TimorLeste ; and ff the basis upon which bids will be evaluated. In addition the Contractor shall submit a statement to the Designated Authority regarding the need for the goods or

services concerned and their relationship to the approved Work Programme and Budget the estimated value of the contract and the contracting schedule. c d If the Designated Authority grants an exception to the obligation at paragraph 10.3b it shall publish its reasons for doing so. Costs for goods and services procured on other than an arms length basis the price payable for which is in excess of one hundred thousand 100000 United States Dollars shall be established in accordance with the provisions of Annex C. 10.4 Emergencies The foregoing provisions of this Article 10 do not apply in the circumstances mentioned in paragraph 4.7e to the extent they would hinder the Contractor from taking all necessary and proper measures as therein mentioned. 10.5 Other Information to be Provided a b c The Contractor shall submit to the Designated Authority copies of all contracts for the supply of goods and services for use in relation to Petroleum Operations promptly after their execution. The Contractor shall promptly after awarding a contract for the supply of goods and services in relation to Petroleum Operations following a tender as mentioned in subArticle 10.3 provide the Designated Authority with a detailed report on the reasons for the award. From time to time if requested by the Designated Authority the Contractor shall upon completion of a specific contract relating to the provision of goods and services in relation to Petroleum Operations the price payable under which is in excess of 30 October 2006 Page 34 one hundred thousand dollars 100000 United States Dollars submit to the Designated Authority an appraisal and completion report covering details of the actual expenditures made and of the manpower goods and services utilised in the performance of the contract. d From time to time if requested by the Designated Authority the Contractor shall within sixty 60 days after such request submit to the Designated Authority details of goods and services actually procured both from suppliers based inside and outside TimorLeste and Australia. Article 11 Title to Equipment 11.1 Property a Subject to subArticle 11.2 all structures facilities installations equipment and other property and other works used or to be used in Petroleum Operations shall be and remain the property of the Contractor while so used or held for use unless Contractor requests and obtains approval from the Designated Authority for an alternative arrangement. b Paragraph 11.1a does not apply to property leased to the

Contractor or leased by or belonging to third parties providing services. 11.2 Retention a b c The Designated Authority may upon termination of this Agreement in respect of all or a part of the Contract Area elect to acquire any property or other works as mentioned in paragraph 11.1a installed on or used exclusively in respect of that area by giving the Contractor a notice to that effect. The Contractor shall have no further obligation or liability in respect of any property or other works acquired by the Designated Authority pursuant to paragraph 11.2a but without prejudice to obligations and liabilities accrued prior thereto and will repay to the Designated Authority all amounts included in the Decommissioning Costs Reserve claimed by the Contractor under Article 6 in respect of it before the acquisition and shall subject to paragraph 11.2c claim no further such amounts in respect of it. In respect of any property which has not been fully cost recovered the Designated Authority shall upon electing to acquire such property pursuant to this subArticle pay to the Contractor an amount equal to the unrecovered costs of the property including Uplift calculated at the date of the election. For the purposes of this subArticle it is assumed that costs are recovered in the order in which they were incurred. 30 October 2006 Page 35 Article 12 Consultation and Arbitration 12.1 Arbitration a b If a dispute arises between the Designated Authority and the Contractor relating to the interpretation and performance of this Agreement and relevant provisions of the Treaty and the Code the Parties shall attempt to resolve that dispute by means of negotiation. If such a dispute cannot be resolved by negotiation within a period of ninety 90 days of notification by either Party of a dispute either Party may submit that dispute to arbitration in accordance with the terms set out in this Article 12. 12.2 Procedure a b Arbitration shall be conducted in accordance with the Rules of Arbitration of the International Chamber of Commerce ICC. The Designated Authority and the Contractor shall each appoint one arbitrator and those two arbitrators shall appoint a third. If either Party fails to appoint an arbitrator within thirty 30 days after receipt of a written request to do so such arbitrator shall at the other Partys request if the Parties do not otherwise agree be appointed upon application to ICC. If the first two arbitrators appointed fail to agree on a third within thirty 30 days of the second arbitrator being appointed the third arbitrator shall if the Parties do not

otherwise agree be appointed at the request of either Party upon application to ICC. If an arbitrator fails or is unable to act that arbitrator's successor shall be appointed in the same manner as the arbitrator who is replaced. c The majority decision of the arbitrators shall be final and binding on the Parties. An award made may be enforced in any court having jurisdiction for the purpose. 12.3 Location and Language The place of arbitration shall be Singapore. The language of the arbitration shall be English. 12.4 Commercial Arrangement Waiver of Sovereign Immunity a This Agreement is a commercial agreement. b Both the Designated Authority and the Contractor waive any claim to sovereign immunity which they may have both as to process and execution. 12.5 Obligations Continue During Arbitration The obligations of the Parties under the Agreement shall continue pending the resolution of any matter submitted to arbitration. 30 October 2006 Page 36 Article 13 Financial and Technical Data Records and Reports 13.1 Ownership a The Designated Authority shall have title to all technical data and information acquired in respect of i ii iii the sea bed or subsoil in the JPDA; Petroleum therein; and the superjacent waters in the course of or as a result of Petroleum Operations. b Paragraph 13.1a includes all raw data and information including cores cuttings samples and all geological geophysical geochemical drilling well production and engineering data and information that the Contractor collects and compiles through Petroleum Operations. It does not include data obtained from special studies carried out by or for the Contractor that uses special proprietary software or procedures. It also does not include interpretations that have particular commercial or regional significance to a Contractor over and above that which is necessary for the commercial evaluation and development of a Contract Area and in respect of which the eligible recoverable cost attributable to the Contract Area is a small proportion of the total cost of the interpretations. 13.2 Records Storage Retrieval and Submission a b The Operator shall keep full complete and accurate books accounts and other records of Petroleum Operations and of the sale or other disposition of Petroleum of the data and information mentioned in subArticle 13.1 and of all other financial commercial legal operational technical and other data and information acquired or generated for or resulting directly or indirectly from Petroleum

Operations including that relating to marketing and otherwise to the sale of Petroleum. The Operator shall make the originals or copies of all such data information and records available to the Designated Authority or as it shall direct at reasonable times at the Operators offices in TimorLeste and shall promptly deliver the same to the Designated Authority or as it directs as and when and in such manner as the Designated Authority specifies. c Without prejudice to paragraph 13.2b the Operator shall store all such data and information as the Designated Authority after consultation with the Contractor reasonably directs and otherwise in accordance with Good Oil Field Practice. d The Contractor may retain copies of all such data and information and records delivered to the Designated Authority for use in or in relation to Petroleum Operations and its complying with obligations under law but not otherwise without the consent of the Designated Authority. e Except with the consent of the Designated Authority or as required by law or the rules of a recognised stock exchange the Contractor may not sell or disclose any 30 October 2006 Page 37 such data information and records without the consent of the Designated Authority or as otherwise provided in this Agreement.

13.3 Reports The Contractor shall provide the Designated Authority with such reports as are mentioned in Annex C and as the Designated Authority directs.

13.4 Export of Data and Information No such data information and records shall be taken out of or transmitted from or stored outside TimorLeste or Australia without the consent of the Designated Authority which consent shall not be withheld if resources for the processing interpretation or analysis thereof are not available in TimorLeste if the data information and records are promptly returned to TimorLeste or Australia and accurate copies or useable and representative samples are retained in TimorLeste or Australia.

13.5 Use of Data and Information a b The Designated Authority may make such use as it wishes of the data and information mentioned in this Article 13 and nothing in subArticles 13.6 or 13.7 prevents the Designated Authority using data and information for the purposes of general statistical and other general reporting publicly or otherwise on its activities. Except with the consent of the Designated Authority the Contractor may only use the data and information mentioned in subArticle 13.1 for its Petroleum Operations or for an application for an Authorisation or for reporting

information to its Affiliates provided that the Authorised Person first procures that any such Affiliates agree to be bound by this paragraph 13.5b.

13.6 Confidentiality of Data and Information

a Except as otherwise provided in this Agreement or with the consent of the Contractor the Designated Authority shall not publicly disclose or other than for the purpose of the administration of the Treaty or the Code or as otherwise required by the Treaty or the Code or for the purpose of the resolution of disputes under this Agreement make available to any person any data or information mentioned in subArticle 13.1 until the earlier of i ii five 5 years after the data or information was acquired by the Contractor; and this Agreement ceasing to apply; b Except with the consent of the Designated Authority and in accordance with the conditions if any of the consent the Contractor shall not disclose the data or information mentioned in subArticle 13.1 other than i to its employees agents contractors and Affiliates to the extent necessary for the proper and efficient carrying on of Petroleum Operations; 30 October 2006 Page 38 ii iii iv as required by law; for the purpose of the resolution of disputes under this Agreement; or as required by a recognised stock exchange. The Contractor shall procure that a person mentioned in subparagraph 13.6bi maintains the data and information disclosed to it confidential in the terms of this Article 13.

13.7 Trade Secrets

a Except with the consent of the Contractor and notwithstanding subArticle 13.6 the Designated Authority shall not publicly disclose or other than for the purpose of the administration of the Treaty or the Code or as otherwise required by the Treaty or the Code or for the purpose of the resolution of disputes under this Agreement make available to any person any data or information submitted to it by the Contractor which i ii is a trade secret of or other data and information the disclosure of which would or could reasonably be expected to adversely affect the Contractor in respect of its lawful business commercial or financial affairs; and was clearly marked as such when it was submitted to the Designated Authority. b Without prejudice to subparagraph 13.7ai i ii the Designated Authority may at any time and from time to time serve notice on a Contractor requiring it to show cause within the time specified for the purpose in the notice why information which it has marked pursuant to subparagraph 13.7aii should still be considered a trade secret or other information as mentioned in

that paragraph; and if the Contractor does not show cause within that time the data and information shall no longer be a trade secret or other such information for the purposes of this subArticle 13.7.

Article 14 Management of Operations 14.1 Constitution of Committee For the purpose of this Agreement there will be a committee consisting of two representatives of the Designated Authority one of whom shall be the chairperson and the same number of representatives of the Contractor as nominated by the Designated Authority and the Contractor respectively. For each of its representatives the Designated Authority and the Contractor may nominate an alternate to act in the absence of the representative. 30 October 2006 Page 39 14.2 Meetings a The Committee will meet at least twice in each year in the Designated Authoritys offices or such other place as the Designated Authority may advise upon the chairperson giving thirty 30 days notice thereof. There shall be at least one meeting of the Committee for each of the following purposes i ii examining the Work Programmes and Budgets for the following year which the Contractor is required to submit under Article 14; and reviewing any proposed or agreed amendments to a Work Programme and Budget; reviewing the progress of Petroleum Operations under the current Work Programmes and Budgets; and discussing any other matter relating to Petroleum Operations. b The Contractor or the Designated Authority may request a meeting of the Committee at any time by giving written notice to the chairperson. Such notice shall include a full description of the purpose of the meeting. The chairperson shall thereupon give notice and call such a meeting. Article 15 Third Party Access 15.1 Third Party Access a b The Contractor shall provide for third party access to the structures facilities installations equipment and other property within the Contract Area on reasonable terms and conditions. The Contractor shall use all reasonable efforts to negotiate a satisfactory agreement for third party access and where mutual agreement can not be reached the Designated Authority after consultation with the Joint Commission shall set the terms for such third party access after taking into account internationally accepted principles Good Oil Field Practice and operational requirements and standards. Article 16 Audit 16.1 Independent Audit The Designated Authority may require at the Contractors cost an independent audit starting except in the case of manifest error or

fraud within twenty four 24 months after the end of the Calendar Year and concluding within twelve 12 months of this start of the Contractors books and accounts relating to this Agreement for any Calendar Year. The Contractor shall forward a copy of the independent auditors report to the Designated Authority within sixty 60 days following the completion of the audit. There shall be a period of at least twelve 12 months between independent audits except in the case of manifest error or fraud.

30 October 2006 Page 40 16.2 Designated Authority Audit The Designated Authority may inspect and audit by itself or as it directs and at its own cost the Contractors books and accounts relating to this Agreement for any Calendar Year starting within twenty four 24 months after the end of the Calendar Year and concluding within twelve 12 months of this start.

16.3 Exceptions a b c All audit exceptions shall be raised by the Designated Authority within six 6 months after receipt of the independent auditors report by the Designated Authority or completion of the audit by the Designated Authority or as it directed as the case may be failing which the Contractors books and accounts shall be conclusively deemed correct except in the case of manifest error or fraud. The Contractor shall fully respond to an audit exception within sixty 60 days of its being raised failing which the exception shall be deemed accepted. Adjustments required among the Parties as a consequence of an audit shall be made promptly.

16.4 Contractor to Assist The Contractor shall fully and expeditiously assist and cooperate with audits.

16.5 Affiliates The foregoing provisions of subArticle 16.1 apply in respect of Affiliates of the Contractor. The Contractor shall use its best endeavours to procure that its Affiliates comply with them.

Article 17 Indemnity and Insurance 17.1 Indemnity The Contractor shall at all times defend keep effectually indemnified and hold harmless the Designated Authority and the members of the Joint Commission against all actions suits proceedings costs charges claims and demands whatsoever including for economic loss which may be made or brought against the Designated Authority and/or the members of the Joint Commission wheresoever by any third party in relation to or in connection with this Agreement or resulting directly or indirectly from Petroleum Operations under this Agreement or any other matter or thing done or purported to be done in pursuance of this Agreement or in the conduct of Petroleum

Operations notwithstanding that the Designated Authority and/or the members of the Joint Commission may have approved in any manner or form whatsoever thereof or that such may have been permitted or required by the terms of the Treaty the Code including any regulation made or direction given thereunder or this Agreement or that the Designated Authority and/or the members of the Joint Commission could have exercised but did not exercise any power function right or authority to prohibit the same. The Designated Authority and/or the members of the Joint Commission shall give 30 October 2006 Page 41 the Contractor prompt notice of any such claim and shall not settle it without the prior consent of the Contractor.

17.2 Insurance a The Contractor shall i ii unless the Designated Authority is satisfied from time to time after consultation with the Contractor that the potential liability under subArticle 17.1 can be covered by other means including selfinsurance maintain insurance in respect thereof for such amount and on such terms as the Designated Authority requires from time to time; and take out and maintain insurance in respect of such other matters as the Designated Authority requires including in respect of pollution for such amounts as the Designated Authority requires from time to time and otherwise as required by Good Oil Field Practice unless the Designated Authority is satisfied from time to time after consultation with the Contractor that the potential liability can be covered by other means including selfinsurance. b All such insurances shall name the Designated Authority and the members of the Joint Commission as coinsured and shall waive all rights of subrogation against the Designated Authority and the members of the Joint Commission.

Article 18 Force Majeure 18.1 Force Majeure Relief a Subject to the further provisions of this Article 18 a Party shall not be liable for any failure to perform an obligation under this Agreement to the extent such performance is prevented hindered or delayed by events or circumstances which are beyond its reasonable control and the effects of which could not including by reasonable anticipation and cannot reasonably be avoided or overcome by it Force Majeure. b Notwithstanding paragraph 18.1a the following shall not be Force Majeure i ii iii iv v failure to pay money; in the case of the Contractor the law or any action or inaction of the government of a place other than TimorLeste or Australia or of a political subdivision thereof; in the

case of the Designated Authority the law or any action or inaction of the government of TimorLeste or Australia; in the case of the Contractor any failure to deliver and maintain a Security or to obtain and maintain insurance as required by this Agreement; and in the case of the Contractor strikes lockouts and other industrial disturbances of the Operators or of its agents and subcontractors 30 October 2006 Page 42 employees and not part of a wider industrial dispute materially affecting other employers.

18.2 Procedure A Party claiming Force Majeure shall a b notify the other Party as soon as reasonably practicable of the event or circumstance concerned and of the extent to which performance of its obligations is prevented hindered or delayed thereby; keep the other Party fully informed as to the actions taken or to be taken by it to overcome the effects thereof and from time to time provide it with such information and permit it such access as it may reasonably require for the purpose of assessing such effects and the actions taken or to be taken; and c resume performance of its obligations as soon as reasonably practicable after the event or circumstance no longer exists.

18.3 Consultation The Parties shall consult with each other and take all reasonable steps to minimise the losses of either Party and to minimise any overall delay or prejudice to Petroleum Operations as a result of Force Majeure.

18.4 Third Parties Where a Party enters into an agreement in relation to this Agreement with a third party a failure by the third party to perform an obligation under that agreement shall be Force Majeure affecting that Party only if performance of that obligation was prevented hindered or delayed by events or circumstances which if the third party were party to this Agreement in the capacity of the Party concerned would in accordance with the provisions of this Article 18 be Force Majeure affecting it.

18.5 Extension of Time If Force Majeure materially prevents hinders or delays Petroleum Operations for more than one 1 month the Parties shall discuss in good faith amendments regarding the term of and the periods of time in which Petroleum Operations are to be carried out under this Agreement.

Article 19 Restrictions on Assignment and Change in Control

19.1 Assignment a Except with the consent in writing of the Designated Authority and unless in accordance with the conditions of the consent where the Contractor assigns or 30 October 2006 Page 43 otherwise deals with this Agreement the

Designated Authority may terminate this Agreement. b Paragraph 19.1a includes any assignment transfer conveyance novation merger encumbering or other dealing in any manner whatsoever or howsoever whether legally beneficially or otherwise and whether conditionally or not by a Contractor with i ii iii this Agreement or all or any part of its rights interests benefits obligations and liabilities under it; Petroleum which has not then been but might be recovered in the Contract Area or any proceeds of sale of such Petroleum; and anything whereby this Agreement that Petroleum or any of those rights interests and benefits would but for this subArticle 19.1 be held for the benefit of or be exercisable by or for the benefit of any other person. Paragraph 19.1a does not apply to an agreement for the sale or exchange of Crude Oil where the sale or exchange occurs after title thereto has passed to the Contractor. If notwithstanding paragraphs 19.1a and b any assignment or other dealing is effective by the laws of TimorLeste Australia or any other place without that consent the Designated Authority may terminate this Agreement. The Designated Authority may not consent to a dealing which would result in a person other than a limited liability corporation or an entity with limited liability specifically established for the sole purposes of this Agreement becoming a Contractor and any consent otherwise is of no force or effect. For the purposes of the foregoing encumbrance includes any mortgage charge pledge hypothecation lien assignment by way of security title retention option right to acquire right of preemption right of set off counterclaim trust arrangement overriding royalty net profits interest or any other security preferential right equity or restriction any agreement to give or to create any of the foregoing and any transaction which in legal terms is not a secured borrowing but which has an economic or financial effect similar to that of a secured borrowing. c d e f 19.2 Change in Control a Except with the consent of the Designated Authority if i ii there is a Change in Control of the Contractor or if more than one person any such person; within thirty 30 days after the Contractor has advised the Designated Authority in reasonable detail of the Change in Control the Designated Authority serves notice on the Contractor that it will terminate this Agreement unless such a further Change in Control of the Contractor as is specified in the notice takes place within the period specified in the notice; and iii that further

Change in Control does not take place within that period 30 October 2006 Page 44 the Designated Authority may terminate this Agreement. b c Paragraph 19.2a does not apply if the Change in Control is the direct result of an acquisition of shares or other securities listed on a recognised stock exchange. For the purposes of paragraph 19.2a Change in Control includes a person ceasing to be in Control whether or not another person becomes in Control and a person obtaining Control whether or not another person was in Control. Article 20 Other Provisions 20.1 Notices a b Any notices required to be given by any Party to another Party shall be served in accordance with the Code. All notices to be served on the Contractor shall be addressed to its office in Timor Leste. 20.2 Applicable Law This Agreement shall be governed by and construed in accordance with the laws of England without regard to principles of conflicts of law which would otherwise direct the laws of another jurisdiction to be applied. 20.3 Third Party Rights Unless specifically provided in this Agreement the Parties do not intend that any term of this Agreement be enforceable solely by virtue of the Contracts Rights of Third Parties Act 1999 UK by any person who is not a Party to this Agreement. 20.4 AmendmentsModification This Agreement shall not be amended or modified in any respect unless the Parties agree in writing. 20.5 Entire Agreement This Agreement in conjunction with the provisions of the Treaty and the Code sets out the entire agreement and understanding of the Parties in connection with the subject matter of this Agreement and supersedes any other prior agreements understanding or arrangements whether written or otherwise relating thereto. 30 October 2006 Page 45 IN WITNESS WHEREOF the Parties have executed this Agreement. The Designated Authority BY BY Minza Oil Gas Limited BY BY 30 October 2006 Page 46 Annex A Part 1 JPDA 06101A CONTRACT AREA DESCRIPTION Coordinates in AGD66 The JPDA 06101A Contract Area is the area bounded by the line described below. a commencing at the point of Latitude 10 21 00.00 South Longitude 127 50 00.00 East Point K1; b running thence east along that parallel of latitude to its intersection with the meridian of longitude 128 10 29.64 East Point K2; c thence south east along the geodesic to the point of Latitude 10 29 17.00 South Longitude 128 12 24.00 East Point K3; d thence south west along the geodesic to the point of Latitude 10 43 43.00

South Longitude 127 59 16.00 East Point K4; e thence south west along the geodesic to the point of Latitude 10 53 42.00 South Longitude 127 48 45.00 East Point K5; f thence north westwards to its intersection with the meridian of longitude 127 40 00.00 East Point K6; g thence north along that meridian of longitude to its intersection with the parallel of latitude 10 30 00.00 South Point K7; h thence east along that parallel of latitude to its intersection with the meridian of longitude 127 50 00.00 East Point K8; and i thence north along that meridian of longitude to the point of commencement Point K1. The approximate total area of JPDA 06101A is 2150 square kilometres.

Note The origin of the geographical coordinates used in this area description is the Australian Geodetic Datum 1966 AGD66.

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CONTRACT AREA DESCRIPTION Coordinates in WGS84 In accordance with Section 3 of the Petroleum Mining Code positions in the JPDA may be expressed by reference to the spheroid World Geodetic System 84 WGS84 which has its centre at the centre of the Earth and a major equatorial radius of 6378137 metres and a flattening of 10029825.7223563. The point numbers in the following table of WGS84 coordinates correspond to the written description of the Contract Area as described in Annex A Part 1. In the event of a discrepancy between the Annex A Part 1 description and the WGS84 coordinates tabulated below the Annex A Part 1 description takes precedence.

Point Number	K1	K2	K3	K4	K5	K6	K7	K8
Latitude	10o 20 54.86 South	10o 20 54.86 South	10o 29 11.85 South	10o 43 37.86 South	10o 53 36.86 South	10o 44 54.86 South	10o 29 54.86 South	10o 29 54.86 South
Longitude	127o 50 04.38 East	128o 10 34.01 East	128o 12 28.37 East	127o 59 20.38 East	127o 48 49.38 East	127o 40 04.39 East	127o 40 04.38 East	127o 40 04.38 East

30 October 2006 Page 48 Annex B Map of Contract Area JPDA 06101A 30 October 2006 Page 49 Annex C

Accounting Procedure Clause 1 General Provisions 1.1 Purpose and Definitions a b c The purpose of this Annex C is to further define the manner in which the costs and expenses of Petroleum Operations will be recorded Recoverable Costs will be determined and the Contractors books and accounts will be prepared and maintained and ancillary matters. A reference to a Clause or paragraph is to a clause or paragraph of this Annex C unless the contrary is stated. A reference to

an Article is to an article of the Agreement to which this Annex C is attached.

1.2 Accounting Records a The Contractor shall maintain complete accounts books and records on an accruals basis of all costs expenses and revenues of or relating to Petroleum Operations and the sale or other disposition of Petroleum on an accurate basis and in accordance with generally accepted accounting procedures and standards of the international petroleum industry and in accordance with the charts of accounts mentioned in paragraph 1.2b. b Within sixty 60 days after the Effective Date the Contractor shall submit to the Designated Authority for its approval an outline of charts of accounts books records and reports to be used for the purposes of paragraph 1.2a and for reporting to the Designated Authority thereon.

1.3 Language and Units of Account a Metric units and barrels shall be employed for measurements and quantities under this Agreement. b c The Accounting Records and all reports to the Designated Authority will be in English. The Accounting Records and all reports to the Designated Authority will be in United States Dollars. Costs and revenues in another currency will be translated at the exchange rate set on the day the cost is incurred or the revenue realised at a time and by a financial institution designated by the Contractor and approved by the Designated Authority. d Exchange gains or losses will be credited or charged to the Accounting Records.

30 October 2006 Page 50 Clause 2 Classification and Allocation

2.1 Exploration Costs Exploration Costs are those costs whether of a capital or operating nature which directly relate to Exploration and are incurred in respect of activities carried out substantially in accordance with an approved Exploration Work Programme and Budget but without prejudice to subArticle 4.7 of this Agreement including costs of a drilling wells and related abandonment and site remediation thereof; b surveys including labour materials and services including desk studies and analysis of survey data used in aerial geological geochemical geophysical and seismic surveys and core hole drilling; c auxiliary or temporary facilities; d e f workshops power and water facilities warehouses site offices access and communication facilities; floating craft automotive equipment furniture and office equipment; and if approved by the Designated Authority employee and welfare housing recreational educational health and meals facilities and other similar costs necessary for

Exploration. 2.2 Appraisal Costs Appraisal Costs are those costs that directly relate to Appraisal. 2.3 Capital Costs Capital Costs are a b in respect of a Development Area and before the start of Commercial Production from it those costs whether of a capital or operating nature which directly relate to the Development of it; and in respect of a Development Area and after the start of Commercial Production from it those costs of a capital nature which directly relate to the Development of it or to the production of Petroleum from it and are incurred in respect of activities carried out substantially in accordance with an approved Development Work Programme and Budget but without prejudice to subArticle 4.7 of this Agreement including costs of a b workshops power and water facilities warehouses site offices access and communication facilities; production facilities including offshore platforms including the costs of labour fuel hauling and supplies for both the offsite fabrication and onsite installation of platforms and other construction costs in erecting platforms wellhead production 30 October 2006 Page 51 tubing sucker rods surface pumps flow lines gathering equipment storage facilities all other equipment facilities and modules on platforms treating plants and equipment and secondary recovery systems; pipelines and other facilities for transporting Petroleum produced in the Contract Area to the Field Export Point; movable assets and subsurface drilling and production tools equipment and instruments and miscellaneous equipment; floating craft automotive equipment furniture and office equipment; and if approved by the Designated Authority employee and welfare housing recreational educational health and meals facilities and other similar costs necessary for the Development. c d e f 2.4 Operating Costs Operating Costs are in respect of a Development Area and after the start of Commercial Production from it those costs of an operating nature which directly relate to the Development thereof or to the production of Petroleum therefrom and are incurred in respect of activities carried out substantially in accordance with an approved Development and Production Work Programme and Budget but without prejudice to subArticle 4.7 of this Agreement. 2.5 Decommissioning Costs Reserve Decommissioning Costs Reserve is the amount determined in accordance with paragraph 4.14d. 2.6 Uplift Uplift is the amount which when compounded Quarterly is equal to the average for the

business days of the Quarter of the annual yield on longterm United States Treasury Bonds thirtyyear 30 bonds plus an annual margin of eleven 11 percentage points.

2.7 Miscellaneous Receipts

Miscellaneous Receipts are a all monies received by the Contractor other than for the sale or other disposal of Petroleum from a Development Area which are directly related to the conduct of Petroleum Operations including i ii iii amounts received from the sale or other disposal of Petroleum from production testing activities undertaken in Exploration and Appraisal wells; amounts received for the disposal loss or destruction of property the cost of which is a Recoverable Cost; amounts received by the Contractor under an insurance policy the premiums of which are Recoverable Costs in respect of damage to or loss of property; 30 October 2006 Page 52 iv v vi vii amounts received as insurance the premiums of which are Recoverable Costs compensation or indemnity in respect of Petroleum lost or destroyed prior to the Field Export Point; amounts received from the hiring or leasing of property the cost of which is a Recoverable Cost; amounts received from supplying information obtained from Petroleum Operations; amounts received as charges for the use of employee amenities the costs of which are Recoverable Costs; and viii amounts received in respect of expenditures which are Recoverable Costs by way of indemnity or compensation for the incurring of the expenditure refund of the expenditure or rebate discount or commission in respect of the expenditure; and b the value of property as determined by the Designated Authority the cost of which is a Recoverable Cost when that property ceases to be used in Petroleum Operations.

2.8 Ineligible Costs

Ineligible Costs are a interest or any payment in the nature of in lieu of or having the commercial effect of interest or other cost under or in respect of a Loan Facility; b Foreign exchange and currency hedging costs; c costs relating to formation of corporations or of any partnerships or joint venture arrangements other than in respect of a unitisation as required by the Code; d payments of dividends or the cost of issuing shares; e f g h i j repayments of equity or loan capital; payments of private override royalties net profits interests and the like; all expenditure including professional fees publicity and outofpocket expenses incurred in connection with the negotiation signature or ratification of this Agreement and payments associated with the acquisition of an

interest under this Agreement; payments of taxes under the taxation law of either TimorLeste or Australia made in accordance with Article 5 of the Treaty and Annex G of the Treaty and all other taxes on income profit or gain wherever arising; payments of administrative accounting costs and other costs indirectly associated with Petroleum Operations; except with the consent of the Designated Authority costs incurred in respect of Petroleum after it has passed the Field Export Point; 30 October 2006 Page 53 k costs incurred as a result of noncompliance by the Contractor with the law or this Agreement including costs incurred as a result of any negligent act or omission or willful misconduct of the Contractor its agents and subcontractors including any amount paid in settlement of any claim alleging negligence or willful misconduct whether or not negligence or misconduct is admitted or whether such sum is stated to be paid on an exgratia or similar basis; l payment of compensation or damages under this Agreement; m costs relating to the settlement of disputes which are not approved in advance by the Designated Authority including all costs and expenses of arbitration or litigation proceedings under this Agreement; n Decommissioning costs actually incurred which have been taken into account for the purposes of determining the Decommissioning Costs Reserve; o payments if any under Article 9 of this Agreement; p q r s audit fees and accounting fees excluding fees and expenses incurred for the conduct of audit and accounting services required by this Agreement incurred pursuant to the auditing and accounting requirements of any law and all costs and expenses incurred in connection with intragroup corporate reporting requirements whether or not required by law; except with the consent of the Designated Authority and in accordance with the conditions of the consent any expenditure in respect of the hiring or leasing of structures facilities installations; equipment or other property or of other works; except with the consent of the Designated Authority costs including donations relating to public relations or enhancement of the Contractors corporate image and interests; costs associated with local offices and local administration including staff benefits which are excessive; t costs which are not adequately supported and documented; u v except with the consent of the Designated Authority but subject to subArticle 4.7 of this Agreement costs not included in a Work Programme and Budget

for the relevant Calendar Year; and costs not falling within any of the above items which are stated elsewhere in this Agreement not to be recoverable including in paragraph 2.1d of Article 2 or costs incurred without the consent or approval of the Designated Authority where such is required.

2.9 Other Matters

a The methods mentioned in this 2.9 will be used to calculate Recoverable Costs.

b Depreciation is not a Recoverable Cost.

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c d The method for the allocation of general and administration costs other than direct charges allocable to Petroleum Operations proposed by the Contractor shall be subject to approval by the Designated Authority and shall be applied each Calendar Year consistently. Inventory levels shall be in accordance with Good Oil Field Practice. The value of inventory items not used in Petroleum Operations or sold the cost of which has been recovered as an Operating Cost shall be treated as Miscellaneous Receipts. The cost of an item purchased for inventory shall be a Recoverable Cost.

e Where the cost of anything or a receipt or value in respect of anything relates only partially to the carrying out of Petroleum Operations only that portion of the cost or the receipt or value which relates to the carrying out of Petroleum Operations will be a Recoverable Cost or assessed as a Miscellaneous Receipt. Where any cost or related receipt or value relates to more than one of Exploration Appraisal Capital and Operating Costs or to more than one Development Area the cost or related receipt or value will be apportioned in an equitable manner.

Clause 3 Costs Expenses and Credits

Subject as otherwise provided in this Agreement the following costs charges and credits shall be included in the determination of Recoverable Costs

3.1 Surface Rights

All direct costs necessary for the acquisition renewal or relinquishment of surface rights acquired and maintained in force for the purposes of the Agreement.

3.2 Labour and Associated Labour Costs

a b The Contractors locally recruited employees based in TimorLeste or Australia

Costs of all locally recruited employees who are directly engaged in the conduct of Petroleum Operations in the JPDA TimorLeste or Australia. Such costs shall include the costs of employee benefits and state benefits for employees and levies imposed on the Contractor as an employer transportation and relocation costs within TimorLeste and Australia of the employee and such members of the employees family limited to spouse and dependent children

as required by law or customary practice therein. If such employees are also engaged in other activities the cost of such employees shall be apportioned on a time sheet basis according to sound and acceptable accounting principles. Assigned Personnel Costs of salaries and wages including bonuses of the Contractors employees directly and necessarily engaged in the conduct of the Petroleum Operations whether temporarily or permanently assigned irrespective of the location of such employees it being understood that in the case of those personnel only a portion of whose time is wholly dedicated to Petroleum Operations under the Agreement only that prorata portion of applicable salaries wages and other costs as delineated in paragraphs 3.2c 3.2d 3.2e 3.2f and 3.2g shall be charged and the basis of such prorata allocation shall be specified.

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c d e f The Contractors costs regarding holiday vacation sickness and disability benefits and living and housing and other customary allowances applicable to the salaries and wages chargeable under paragraph 3.2b. Expenses or contributions made pursuant to assessments or obligations imposed under the laws of TimorLeste or Australia which are applicable to the Contractors cost of salaries and wages chargeable under paragraph 3.2b. The Contractors cost of established plans for employees group life insurance hospitalisation pension stock purchases savings bonus and other benefit plans of a like nature customarily granted to the Contractors employees provided however that such costs are in accordance with generally accepted standards in the international petroleum industry applicable to salaries and wages chargeable to Petroleum Operations under paragraph 3.2b. Reasonable transportation and travel expenses of employees of the Contractor including those made for travel and relocation of the expatriate employees including their families and personal effects assigned to TimorLeste or Australia whose salaries and wages are chargeable to Petroleum Operations under paragraph 3.2b. Actual transportation expenses of expatriate personnel transferred to Petroleum Operations from their country of origin shall be charged to the Petroleum Operations. Transportation expenses of personnel transferred from Petroleum Operations to a country other than the country of their origin shall not be charged to the Petroleum Operations. Transportation cost as used in this section shall mean the cost of freight and passenger service

meals hotels insurance and other expenditures related to vacation and transfer travel and authorised under the Contractors standard personnel policies. The Contractor shall ensure that all expenditures related to transportation costs are equitably allocated to the activities which have benefited from the personnel concerned. g Reasonable personal expenses of personnel whose salaries and wages are chargeable to Petroleum Operations under paragraph 3.2b and for which expenses such personnel reimbursed under the Contractors standard personnel policies. In the event such expenses are not wholly attributable to Petroleum Operations the Petroleum Operations shall be charged with only the applicable portion thereof which shall be determined on an equitable basis.

3.3 Transportation and Employee Relocation Costs The cost of transportation of employees equipment materials and supplies other than as provided in 3.2 necessary for the conduct of the Petroleum Operations along with other related costs including import duties customs fees unloading charges dock fees and inland and ocean freight charges.

3.4 Charges for Services For purposes of this Clause 3.4 Affiliates which are not wholly owned by the Contractor or the Contractors ultimate holding company shall be considered third parties. a Third Parties

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The actual costs of contract services services of professional consultants utilities and other services necessary for the conduct of the Petroleum Operations performed by third parties other than an Affiliate of the Contractor. b Affiliates of the Contractor i ii iii Professional and Administrative Services Expenses cost of professional and administrative services provided by any Affiliates of the Contractor for the direct benefit of Petroleum Operations including services provided by the production exploration legal financial insurance accounting and computer services divisions other than those covered by subparagraph 3.4bii or Clause 3.6 or paragraph 3.8b which the Contractor may use in lieu of having its own employees. Charges shall reflect the cost of providing their services and shall not include any element of profit and shall be no less favourable than similar charges for other operations carried on by the Contractor and its Affiliates. The chargeout rate shall include all costs incidental to the employment of such personnel. Where the work is performed outside the home office base of such personnel the daily rate shall be charged from the date such personnel

leave the home office base where they usually work up to their return thereto including days which are not working days in the location where the work is performed excluding any holiday entitlements derived by such personnel from their employment at their home office base. Scientific or Technical Personnel cost of scientific or technical personnel services provided by any Affiliate of the Contractor for the direct benefit of Petroleum Operations which cost shall be charged on a cost of service basis and shall not include any element of profit. Unless the work to be done by such personnel is covered by an approved Work Programme and Budget the Contractor shall not authorise work by such personnel. Equipment and facilities use of equipment and facilities owned and furnished by the Contractors Affiliates at rates commensurate with the cost of ownership and operation; provided however that such rates shall not exceed those currently prevailing for the supply of like equipment and facilities on comparable terms in the area where the Petroleum Operations are being conducted. The equipment and facilities referred to herein shall exclude major investment items such as but not limited to drilling rigs producing platforms oil treating facilities oil and gas loading and transportation systems storage and terminal facilities and other major facilities rates for which shall be subject to separate agreement with the Designated Authority. 3.5 Communications Costs of acquiring leasing installing operating repairing and maintaining communication systems including radio and microwave facilities between the Contract Area and the Contractors base facility. 30 October 2006 Page 57 3.6 Office Storage and Miscellaneous Facilities Net cost to the Contractor of establishing maintaining and operating any office suboffice warehouse data storage housing or other facility in TimorLeste directly serving the Petroleum Operations. 3.7 Ecological and Environment a b c d Costs incurred in the Contract Area as a result of legislation for archaeological and geophysical surveys relating to identification and protection of cultural sites or resources. Costs incurred in environmental or ecological surveys required by this Agreement or regulatory authorities. Costs to provide or have available pollution containment and removal equipment. Costs of actual control and cleanup of oil spills and of such further responsibilities resulting therefrom as may be required by applicable laws and regulations. e Costs of restoration of

the operating environment. 3.8 Material Costs Costs of materials and supplies equipment machines tools and any other goods of a similar nature used or consumed in Petroleum Operations subject to the following.

a Acquisition the Contractor shall only supply or purchase materials for use in Petroleum Operations that may be used in the foreseeable future. The accumulation of surplus stocks and inventory shall be avoided so far as is reasonably practical and consistent with efficient and economical operations. Inventory levels shall however take into account the time lag for replacement emergency needs weather conditions affecting operations and similar considerations.

Components of costs arms length transactions except as otherwise provided in paragraph 3.8d material purchased by the Contractor in arms length transactions in the open market for use in the Petroleum Operations shall be valued to include invoice price less trade and cash discounts purchase and procurement fees plus freight and forwarding charges between point of supply and point of shipment freight to port of destination insurance taxes customs duties consular fees excise taxes other items chargeable against imported materials and where applicable handling and transportation expenses from point of importation to warehouse or operating site. Where an Affiliate of the Contractor has arranged the purchase coordinated the forwarding and expediting effort a fee equal to four 4 per cent of the value of the materials may be added to the cost of the materials purchased.

c Accounting such material costs shall be charged to the Accounting Records and books in accordance with the First in First out FIFO method.

d Material purchased from or sold to Affiliates of the Contractor or transferred from other activities of the Contractor to or from Petroleum Operations shall be valued 30 October 2006 Page 58 and charged or credited at the prices specified in subparagraphs 3.8di 3.8dii and 3.8diii.

i New material including used new material moved from inventory Condition A shall be valued at the current international net price which shall not exceed the price prevailing in normal arms length transactions in the open market.

ii Used material Conditions B C and D

aa Material which is in sound and serviceable condition and is suitable for reuse without reconditioning shall be classified as Condition B and priced at seventyfive per cent 75 of the current price of new material defined in subparagraph 3.8di.

bb Materials which cannot be

classified as Condition B but which are reconditioning will be further serviceable for its original function shall be classified as Condition C and priced at not more than fifty per cent 50 of the current price of new material as defined in subparagraph 3.8di. The cost of reconditioning shall be charged to the reconditioned material provided that the value of Condition C material plus the cost of reconditioning does not exceed the value of Condition B material. cc Material which cannot be classified as Condition B or Condition C shall be classified as Condition D and priced at a value commensurate with its use by the Contractor. If material is not fit for use by the Contractor it shall be disposed of as junk. iii Material involving erection costs shall be charged at the applicable condition percentage of the current knockeddown price of new material as defined in subparagraph 3.8di. iv When the use of material is temporary and its service to the Petroleum Operations does not justify the reduction in price as provided for in subparagraph 3.8diibb such material shall be priced on a basis that will result in a net charge to the accounts under this Agreement consistent with the value of the service rendered. v Premium prices whenever material is not readily obtainable at published or listed prices because of national emergencies strikes or other unusual causes over which the Contractor has no control the Contractor may charge Petroleum Operations for the required material at the Contractors actual cost incurred in providing such material in making it suitable for use and in moving it to the Contract Area; provided notice in writing is furnished to the Designated Authority of the proposed charge prior to charging Petroleum Operations for such material and the Designated Authority shall have the right to challenge the transaction on audit. vi Warranty of material furnished by the Contractor the Contractor does not warrant the material furnished. In case of defective material credit shall not be passed to Petroleum Operations until adjustment has been received by the Contractor from the manufacturers of the material or their agents. 30 October 2006 Page 59 3.9 Rentals Duties and Other Assessments All rentals levies charges fees contributions and other charges of every kind and nature levied by any TimorLeste or Australian governmental authority in connection with the Petroleum Operations and paid directly by the Contractor save where the contrary is expressly provided in this Agreement. 3.10 Insurance and Losses Insurance premiums

and costs incurred for insurance provided that such insurance is customary affords prudent protection against risk and is at a premium no higher than that charged on a competitive basis by insurance companies which are not Affiliates of the Contractor. Except in cases of failure to insure where insurance coverage is required pursuant to this Agreement actual costs and losses incurred shall be allowable to the extent not made good by insurance. Such costs may include repair and replacement of property resulting from damages or losses incurred by fire flood storm theft accident or other cause.

3.11 Legal Expenses All reasonable costs and expenses resulting from the handling investigating asserting defending or settling of any claim or legal action necessary or expedient for the procuring perfecting retention and protection of the Contract Area and in defending or prosecuting lawsuits involving the Contract Area or any third party claim arising out of the Petroleum Operations or sums paid in respect of legal services necessary for the protection of the joint interest of the Designated Authority and the Contractor shall be allowable. Such expenditures shall include attorneys fees court costs costs of investigation and procurement of evidence and amounts paid in settlement or satisfaction of any such litigation and claims. Where legal services are rendered in such matters by salaried or regularly retained lawyers of the Contractor or an Affiliate of the Contractor such compensation shall be included instead under Clause 3.4b as applicable.

3.12 Claims Expenditures made in the settlement or satisfaction of any loss claim damage judgement or other expense arising out of or relating to Petroleum Operations.

3.13 Training Costs All costs and expenses incurred by the Contractor in the training of its employees engaged in Petroleum Operations and such other training as is required by this Agreement.

3.14 General and Administrative Costs The costs described in Clause 2.9c.

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3.15 Other Expenditures Other reasonable expenditures not covered or dealt with in the foregoing provisions of this Clause 3 which are necessarily incurred by the Contractor for the proper economical and efficient conduct of Petroleum Operations.

3.16 Duplication There shall be no duplication of charges and credits.

Clause 4 Inventories Inventories of property in use in Petroleum Operations shall be taken at reasonable intervals but at least once a year with respect to movable assets and once

every three 3 years with respect to immovable assets. The Contractor shall give the Designated Authority at least thirty 30 days written notice of its intention to take such inventory and the Designated Authority shall have the right to be represented when such inventory is taken. The Contractor shall clearly state the principles upon which valuation of the inventory has been based. The Contractor shall make every effort to provide to the Designated Authority a full report on such inventory within thirty 30 days of the taking of the inventory. When an assignment of rights under this Agreement takes place the Contractor may at the request of the assignee take a special inventory provided that the costs of such inventory are borne by the assignee.

Clause 5 Production Statement

5.1 Production Information From the start of production from the Contract Area the Contractor shall submit a monthly Production Statement to the Designated Authority showing the following information separately for each producing Development Area and in aggregate for the Contract Area a the quantity of Crude Oil produced and saved; b the quality characteristics of such Crude Oil produced and saved; c the quantity of Natural Gas produced and saved; d the quality characteristics of such Natural Gas produced and saved; e the quantities of Crude Oil and Natural Gas used for the purposes of carrying on drilling and production operations and pumping to field storage; f the quantities of Crude Oil and Natural Gas unavoidably lost; g the quantities of Natural Gas flared and vented; h the size of Petroleum stocks held at the beginning of the month in question; i the size of Petroleum stocks held at the end of the month in question; 30 October 2006 Page 61 j the quantities of Natural Gas reinjected into the Reservoirs; and k in respect of the Contract Area as a whole the quantities of Petroleum transferred at the Field Export Point. All quantities shown in this statement shall be expressed in both volumetric terms barrels of Crude Oil and cubic meters of Natural Gas and in weight metric tonnes.

5.2 Submission of Production Statement The Production Statement for each month shall be submitted to the Designated Authority no later than ten 10 days after the end of such month.

Clause 6 Value of Production and Pricing Statement

6.1 Value of Production and Pricing Statement Information The Contractor shall for the purposes of Article 7 of the Agreement prepare a Value of Production and Pricing Statement

providing calculations of the value of Crude Oil and Natural Gas produced and saved during each Quarter. This Value of Production and Pricing Statement shall contain the following information a b the quantities and the price payable therefor by the Contractor in respect of sales of Natural Gas and Crude Oil delivered to third parties during the Quarter in question; and the quantities and price payable in respect of sales of Natural Gas and Crude Oil delivered during the Quarter in question other than to third parties.

6.2 Submission of Value of Production and Pricing Statement The Value of Production and Pricing Statement for each Quarter shall be submitted to the Designated Authority not later than twenty one 21 days after the end of such Quarter.

Clause 7 Cost Recovery Statement

7.1 Quarterly Statement The Contractor shall prepare with respect to each Quarter a Cost Recovery Statement containing the following information a Recoverable Costs carried forward from the previous Quarter; b Recoverable Costs for the Quarter in question; c Credits under the Agreement for the Quarter in question; d Total Recoverable Costs for the Quarter in question paragraphs 7.1a plus 7.1b less 7.1c; 30 October 2006 Page 62 e f quantity and value of the Contractors share of Petroleum under Article 7 of the Agreement in the Quarter in question; and amount of Recoverable Costs to be carried forward into the next Quarter paragraph 7.1d less paragraph 7.1e.

7.2 Preparation and Submission of Cost Recovery Statements Quarterly Cost Recovery Statements shall be submitted within thirty 30 working days after the end of the Quarter in question.

7.3 Annual Statement An Annual Cost Recovery Statement shall be submitted within ninety 90 days after the end of each Calendar Year. The Annual Statement shall contain the categories of information listed in Clause 7.1 for the Calendar Year in question separated into the Quarters of the Calendar Year in question and showing the cumulative positions at the end of the Calendar Year in question.

Clause 8 Statements of Expenditure and Receipt

8.1 Quarterly Statement The Contractor shall prepare with respect to each Quarter a Statement of Expenditure and Receipts. The Statement will distinguish between Exploration Appraisal Capital and Operating Costs and will identify major items within these categories. The Statement will show the following a actual expenditures and receipts for the Quarter in question; b cumulative expenditure and receipts for the Calendar Year in question; c latest

forecast cumulative expenditures at the Calendar Year end; d variations between budget forecast and latest forecast and explanations thereof. The Statement of Expenditure and Receipts of each Quarter shall be submitted to the Designated Authority no later than fifteen 15 days after the end of such Quarter.

8.2 Annual Statement The Contractor shall prepare a Final EndofYear Statement. The Statement will contain information as provided in the Production Statement Value of Production and Pricing Statement Cost Recovery Statement and Statement of Expenditure and Receipts but will be based on actual quantities of Petroleum produced and costs incurred. This Statement will be used to make any adjustments that are necessary to the payments made by the Contractor under this Agreement. The Final EndofYear Statement of each Calendar Year shall be submitted to the Designated Authority within ninety 90 days of the end of such Calendar Year.

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Page 63 Annex D Proposals in respect of training employment and the acquisition of goods and services

subArticle 5.4 The following proposals are deemed to have accompanied the Contractors application under subSection 5.4 of the Code for this Agreement.

ACTION PLAN FOR SUPPORTING THE ECONOMIC DEVELOPMENT OF TIMORLESTE

a Proposals for training and employment of TimorLeste nationals It is the intention of Company to employ a citizen of TimorLeste to coordinate contact between the Company and the TimorLeste Government should a suitable qualified candidate be identified. Further should the workload justify it the Company will employ an administrative assistantsecretary. Training of Timorese staff will include language training to ensure high standards in Portuguese Tetun and English. For the senior post a nontechnical training will be given in the operation of the oil industry probably by means of an overseas training course. For both posts computer training and health and safety training will be supplied. It is the intention of the Company to employ one or more Timorese graduates as trainees in our primary operating location. If suitable candidates can be recruited depending on their qualifications they will receive training in geoscientific engineering legal andor financial aspects of oil industry; and health and safety with emphasis on marine facilities. These staff will also be trained to act as a primary link between the Company and the TimorLeste Government. It is the intention of the Company to support

undergraduate training in TimorLeste in particular for students in the fields of petroleum engineering geology geophysics and associated business. This programme could run alongside a sponsorship scheme and/or work experience opportunities for suitable candidates. Other programmes can be devised in accordance with the need of the Company and the existence of appropriate circumstances. The Company has provisionally identified a number of TimorLeste citizens that could fulfil roles within the company subject to their availability. The above proposals will involve a minimum commitment from the Company of US\$40000 but clearly our intention is that expenditure on the TimorLeste employment and training components of the project will be considerably larger than this figure.

b Proposals for the acquisition of goods and services in TimorLeste Tendering for goods and services for local/offshore use will be advertised in TimorLeste with preference given to companies based in TimorLeste.

c Proposals for the improvement of TimorLeste technical capabilities through research. It is the intention of the Company to support geoscientific research relevant to the Company's exploration and production interests. By way of background the first electromagnetic survey in the Falkland Islands was carried out by Rockhopper within just over one year of the licences being granted which was beyond the initial commitment in the application. Accordingly if similar opportunities were available to the Company the Company would endeavour to carry out similar types of technological studies/activities.

d Proposals for transfer of technology and skills to TimorLeste nationals The training for TimorLeste staff employed by the Company as summarised in section a above will result in the transfer of skills and technological expertise to TimorLeste nationals. Our longterm aim would be for TimorLeste staff to rise up through the Company organisation and eventually occupy positions of managerial responsibility for our TimorLeste projects.

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MINERAL PRODUCTION SHARING AGREEMENT

351 2011 No. This MINERAL PRODUCTION SHARING AGREEMENT is made between the

Mineral Production Sharing Agreement (MPSA) No. 351 dated 18 February 2011 between the

Republic of the Philippines and the Government of Timor-Leste

by the Acting Secretary of the Department of Environment and Natural Resources with office at the

Department of Environment and Natural Resources Building Visayas Avenue Diliman Quezon City and MT. SINAI MINING EXPLORATION AND DEVELOPMENT CORPORATION herein referred to as the CONTRACTOR a corporation duly organized and existing under the laws of the Republic of the Philippines with office at Km. 12 Diversion Road Panacan Davao City and represented in this act by its Chairman of the Board and Chief Executive Officer Vicente T. Lao as authorized by its Board of Directors please refer to ANNEX A WITNESSETH WHEREAS the 1987 Constitution of the Republic of the Philippines provides in Article XII Section 2 thereof that all lands of the public domain waters minerals coal petroleum and other natural resources are owned by the State and that their exploration development and utilization shall be under the full control and supervision of the State; WHEREAS the Constitution further provides that the State may directly undertake such activities or it may enter into a Co-Production Joint Venture or Mineral Production Sharing Agreement with Filipino citizens or cooperatives partnerships corporations or associations at least sixty per centum of whose capitalization is owned by such citizens; WHEREAS pursuant to Republic Act No. 7942 otherwise known as The Philippine Mining Act of 1995 which took effect on 09 April 1995 the Secretary of the Department of Environment and Natural Resources is authorized to enter into Mineral Production sharing Agreements in furtherance of the objectives of the Government and the constitution to bolster the national economy through sustainable and systematic development and utilization of mineral lands; WHEREAS the EVI and has applied for the Exploration Permit No. 200900010 of said Exploration Permit to a Mineral Production Sharing Agreement pursuant to the provisions of the pertinent implementing rules and regulations; WHEREAS the Government desires to avail itself of the financial resource technical competence and skill which the Contractor is capable of applying to the mining operations of the project contemplated herein; WHEREAS the Contractor desires to join and assist the Government in the initial rational exploration and possible development and utilization for commercial purposes of chromite and other associated mineral deposits existing in the Contract Area WHEREAS the Contractor has access to all the financing technical competence technology and environmental management skills required to

promptly and effectively carry out the objectives of this Agreement; NOW THEREFORE for and in consideration of the foregoing premises the mutual covenants, terms and conditions hereinafter set forth it is hereby stipulated and agreed as follows:

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This Agreement is a Mineral Production Sharing Agreement entered into pursuant to the provisions of the Act and its implementing rules and regulations. The primary purpose of this Agreement is to provide for the rational exploration, development and commercial utilization of chromite and other associated mineral deposits existing within the Contract Area with all necessary services, technology and financing to be furnished or arranged by the Contractor in accordance with the provisions of this Agreement. The Contractor shall not by virtue of this Agreement acquire any title over the Contract Mining Area without prejudice to the acquisition by the Contractor of the landsurface rights through any mode of acquisition provided for by law. The Contractor shall undertake and execute for and on behalf of the Government responsible mining operations in accordance with the provisions of this Agreement and is hereby constituted and appointed for the purpose of this Agreement as the exclusive entity to conduct mining operations in the Contract Area. The Contractor shall assume all the exploration risk such that if no minerals in commercial quantity are developed and produced it will not be entitled to reimbursement. During the term of this Agreement the total value of production and sale of minerals derived from the mining operations contemplated herein shall be accounted for and divided between the Government and the Contractor in accordance with the provisions of this Agreement.

VIII

hereof

SECTION II DEFINITIONS

As used in this Agreement the following words and terms whether singular or plural shall have the following respective meanings:

2.1 . Act refers to Republic Act No. 7942 otherwise known as the Philippine Mining Act of 1995.

2.2. Agreement means this Mineral Production Sharing Agreement.

2.3. Associated Minerals mean other ores/minerals which occur together with the principal ore/mineral.

2.4. Bangko Sentral means Bangko Sentral ng Pilipinas.

2.5. Budget means an estimate of expenditures to be made by Contractor in mining operations contemplated hereunder to accomplish the Work Program for each particular period.

2.6. Bureau means Mines and Geosciences Bureau.

2.7. Calendar Year or Year means a

period of twelve 12 consecutive months starting with the first day of January and ending on December 31 while Calendar Quarter means a period of three consecutive months with the first calendar quarter starting with the first day of January.

2.8. Commercial Production means the production of sufficient quantity of minerals to sustain economic viability of mining operations reckoned from the date of commercial operation as declared by the Contractor or as stated in the feasibility study whichever comes first.

2.9. Constitution or Philippine Constitution means the 1987 Constitution of the Republic of the Philippines adopted by the Constitutional Convention of 1986 on October 15 1986 and ratified by the People of the Republic of the Philippines on February 2 1987.

2.10. Contract Area means the area onshore or offshore delineated under the Mineral Production Sharing Agreement subject to the relinquishment obligations of the Contractor and properly defined by latitude and longitude or bearing and distance.

2.11. Contract Year means a period of twelve 12 consecutive months counted from the Effective Date of this Agreement or from the anniversary of such Effective Date.

2.12. Contractor means Mt. Sinai Mining Exploration and Development Corporation or its assignees of interest under this Agreement Provided That the assignment of any of such interest is accomplished pursuant to the pertinent provisions of the implementing rules and regulations of the Act.

2.13. Declaration of Environmental Concern (DEC) means a document proclaiming the specific site which are recoverable by socially acceptable environmentally safe and economically sound methods specified in the Project Feasibility Study.

2.14. Department or DENR means the Department of Environment and Natural Resources.

2.15. Director means the Director of Mines and Geosciences Bureau.

2.16. Effective Date means the date of execution of this Agreement by the Contractor and by the Secretary on behalf of the Government.

2.17. Environment means all facets of man's surroundings physical ecological aesthetic cultural economic historic institutional and social.

2.18. Exploration means searching or prospecting for mineral resources by geological geophysical and geochemical surveys remote sensing test pitting trenching drilling shaft sinking tunneling or any other means for the purpose of determining the existence extent quality and quantity of mineral resources and the feasibility of mining them for profit.

2.19. Exploration Period shall mean

the period from the Effective Date of this Agreement which shall be for two (2) years renewable for like periods but not to exceed a total term of six (6) years for nonmetallic minerals and eight (8) years for metallic minerals subject to the pertinent provisions of the implementing rules and regulations of the Act.

2.20. Force Majeure means acts or circumstances beyond the reasonable control of the Contractor including but not limited to war, rebellion, insurrection, riots, civil disturbances, blockade, sabotage, embargo, strike, lockout, any dispute with surface owners and other labor disputes, epidemics, earthquake, storm, flood or other adverse weather conditions, explosion, fire, adverse action by the Government or by any of its instrumentality or subdivision thereof, act of God or any public enemy and any cause as herein described over which the affected party has no reasonable control.

2.21. Foreign Exchange means any currency other than the currency of the Republic of the Philippines acceptable to the Government and the Contractor.

2.22. Government means the Government of the Republic of the Philippines or any of its agencies and instrumentalities.

2.23. Gross Output means the actual market value of the minerals or mineral products from each mine or mineral land operated as a separate entity without any deduction for mining, processing, refining, transporting, handling, marketing or any other expenses. Provided That if the minerals or mineral products are sold or consigned abroad by the Contractor under C.I.F. terms, the actual cost of ocean freight and insurance shall be deducted. Provided further That in the case of mineral concentrates which are not traded in commodity exchanges in the Philippines or abroad such as copper concentrate, the actual market value shall be the world price quotation of the mineral products contained therein prevailing in the said commodity exchange after deducting the smelting, refining, treatment, insurance, transportation and other charges incurred in the process of converting mineral concentrates into refined metal traded in those commodity exchanges.

2.24. Mine Development refers to work undertaken to prepare an ore body or a mineral deposit for mining including the construction of necessary infrastructure and related facilities.

2.25. Minerals mean all naturally occurring inorganic substances in solid, liquid, gas or any intermediate state excluding energy materials such as coal, petroleum, natural gas, radioactive materials and geothermal energy.

2.26. Mineral Products

mean prepared into marketable beneficiation cyanidation processes. materials derived from mineral ores rocks and state by metallurgical processes which include leaching smelting calcination and other similar.

2.27. Mining Area means that portion of the Contract Area identified by the Contractor as defined and delineated in a Survey Plan duly approved by the Director Regional Director concerned for purposes of development and/or utilization and sites for support facilities.

2.28. Mining Operations means mining activities involving exploration feasibility study environmental impact assessment development utilization mineral processing and mine rehabilitation.

2.29. Notice means notice in writing telex or telecopy authenticated by answerback or confirmation received addressed or sent as provided in Section 16.2 of this Agreement.

2.30. Ore means naturally occurring substance or material from which a mineral or element can be mined and/or processed for profit.

2.31. Pollution means any alteration of the physical chemical and/or biological properties of any water air and/or land resources of the Philippines or any discharge thereto of any liquid gaseous or solid wastes or any production of unnecessary noise or any emission of objectionable odor as will or is likely to create or render such water air and land resources harmful detrimental or injurious to public health safety or welfare or which will adversely affect their utilization for domestic commercial industrial agricultural recreational or other legitimate purposes.

2.32. Secretary means the Secretary of the Department of Environment and Natural Resources.

2.33. State means the Republic of the Philippines.

2.34. Work Program means a document which presents the plan of major mining operations and the corresponding expenditures of the contractor in its Contract Area during a given period of time including the plan and expenditures for development of host and neighboring communities and of local geoscience and mining technology as submitted and approved in accordance with the implementing rules and regulations of the Act.

SEN 000291 s.e.c. to N.I.T.

TERM OF AGREEMENT

3.1. This Agreement shall have a term of twenty-five (25) years from Effective Date and may be renewed thereafter for another term not exceeding twenty-five (25) years. The renewal of this Agreement as well as the changes in the terms and conditions thereof shall be upon mutual consent by the parties. In the event the Government decides to allow mining operations thereafter by other

Contractor this must be through competitive public bidding. After due publication of notice the Contractor shall have the right to equal the highest bid upon reimbursement of all reasonable expenses of the highest bidder.

SECTION IV CONTRACT AREA 4.1. Size Shape and Location of Contract Area This Agreement covers a Contract Area of approximately Five Hundred Ten and 160110000510.1601 hectares situated in Homonhon Island Guiuan Eastern Samar and bounded by the following geographical coordinates please refer to ANNEX A 150000 scale Location Map Sketch Plan Corner Latitude Longitude

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SECTION V EXPLORATION PERIOD 5.1. Timetable for Exploration The Contractor shall commence Exploration activities not later than three (3) months after the Effective Date for a period of two (2) years renewable for like periods but not to exceed a total term of six (6) years for metallic minerals and eight (8) years for non-metallic minerals subject to annual review and approval by the Director implementing rules and regulations of the Act.

6.1 SENR 030291 Provided That the used term of Exploration Permit No. 2009-0001-O-VIII shall be deducted from the above Exploration Period. The Contractor shall also submit a Community Development Program to the Regional Office concerned within six (6) months upon registration of this Agreement as prescribed under the implementing rules and regulations of the Act.

5.2. Renewal of Exploration Period In case the Contractor opts for a renewal of its Exploration Period it shall file prior to the expiration thereof a renewal application in the Mines and Geosciences Bureau Central office accompanied by the mandatory requirements stipulated in the implementing rules and regulations of the Act. The Director may grant the renewal of the Exploration Period on condition that the Contractor has substantially complied with the terms and conditions of the Agreement. Provided That with or without the filing of the renewal application the Exploration Period shall upon its expiration automatically shift to the next two (2) year term and so on. In cases where further exploration is warranted beyond the six (6) or eight (8) year period and on condition

that the Contractor has substantially implemented the Exploration and Environmental Work Programs as verified by the Bureau the Director may further grant renewal of the Exploration Period Provided That the Contractor shall be required to set up a performance surety equivalent to the expenditure requirement of the Exploration and Environmental Work Programs.

5.3. Work Programs and Budgets

The Contractor shall strictly comply with the approved Exploration and Environmental Work Programs together with their corresponding Budgets please refer to ANNEXES C and D. The amount to be spent by the Contractor in conducting Exploration activities under the terms of this Agreement during the Exploration Period shall be in the aggregate of not less than that specified for each of the Contract Years as follows:

Contract Year	Exploration Work Program	Environmental Work Program
1st Contract Year	PhP 1,695,000.00	PhP 870,000.00
2nd Contract Year	PhP 6,192,500.00	
Total	PhP 8,620,000.00	

In the event of renewal of the Exploration Period the amount to be spent every year shall first be agreed upon by the parties. In the event of termination of this Agreement the Contractor shall only be obliged to expend the prorata amount for the period of such Contract Year prior to termination. If during any Contract Year the Contractor should expend more than the amount to be expended as provided above the excess may be subtracted from the amount required to be expended by the Contractor during the succeeding Contract Years and should the Contractor stand or with the consent of the Government then the deficiency shall be applied to the amounts succeeding Contract Years.

6. Relinquishment of Total Portion of the Contract Area

During the Exploration Period the Contractor may relinquish totally or partially the original Contract Area. After the Exploration Period and prior to or upon approval of a Declaration of Mining Project Feasibility by the Director the Contractor shall finally relinquish any portion of the Contract Area not necessary for mining operations and not covered by any Declaration of Mining Project Feasibility.

7. Final Mining Area

The Director may allow the Contractor to hold more than one (1) final Mining Area subject to the maximum limits set under the implementing rules and regulations of the Act. Provided that each final Mining Area shall be covered by a Declaration of Mining Project Feasibility.

8. Declaration of Mining Project Feasibility

Within the term of the Exploration Period the

Contractor shall file in the Regional Office concerned the Declaration of Mining Project Feasibility of the Contract Area final Mining Area supported by Project Feasibility Study Three 3 Year Development and Construction or Commercial Operation Work Program complete geologic report an application for survey and the pertinent Environmental Compliance Certificate among other applicable requirements. Failure of the Contractor to submit the Declaration of Mining Project Feasibility during the Exploration Period shall be considered a substantial breach of this Agreement.

Survey of the Contract Area The Contractor shall cause the survey of the perimeter of the Contract Area final Mining Area through an application for survey complete with requirements filed in the Regional Office concerned simultaneous with the submission of the Declaration of Mining Feasibility. Survey returns shall be submitted to the Regional Director concerned for approval within one 1 year from receipt of the Order of Survey complete with the mandatory requirements stated in the implementing rules and regulations of the Act.

5.8. Reporting. During the Exploration Period the Contractor shall submit to the Director through the Regional Director concerned quarterly and annual accomplishment reports under oath on all activities conducted in the Contract Area from the Effective Date of this Agreement. The quarterly report shall be submitted not later than fifteen 15 days at the end of each Calendar Quarter while the annual accomplishment report shall be submitted not later than thirty 30 days from the end of each Calendar Year. Such information shall include detailed financial expenditures raw and processed geological geochemical geophysical and radiometric data plotted on a map at a minimum 1:50,000 scale copies of originals of assay results duplicated samples field data copies of originals from drilling reports maps environmental work program implementation and detailed expenditures showing discrepancies deviations with approved exploration and environmental plans and budgets as well as all other information of any kind collected during the exploration activities. All information submitted to the Bureau shall be subject to the confidentiality of this Agreement.

b. Final Report Regional Director Contractor shall submit to the Director through the concerned a final report under oath upon the expiration of the Exploration Period which shall be in the form and substance comparable to published professional reports of respectable

international institutions and shall incorporate all the findings in the Contract Area including location of samples assays chemical analysis and assessment of mineral potentials together with a geologic map of 150000 scale at the minimum showing the results of the exploration. Such report shall also include detailed expenditures incurred during the Exploration Period. In case of diamond drilling the Contractor shall upon request of the Director Regional Director concerned submit to the Regional Office concerned a quarter of the core samples which shall be deposited in the Regional Office Core Library for safekeeping and reference.

c. Relinquishment Report The Contractor shall submit a separate relinquishment report with a detailed geologic report of the relinquished area accompanied by maps at a scale of 150000 and results of analyses and detailed expenditures among others.

SECTION V DEVELOPMENT AND CONSTRUCTION PERIOD

6.1. Timetable The Contractor shall complete the development of the mine including the construction of production facilities within thirty six 36 months from the submission and approval of the Declaration of Mining Project Feasibility subject to such extension based on justifiable reasons as the Director may approve upon recommendation of the Regional Director concerned.

6.2. Reporting

a. Annual The Contractor shall submit within sixty 60 days after December 31 of each year to the Director through the Regional Director concerned an annual report which states the major activities achievements and detailed expenditures during the year covered including maps assays rock and mineral analyses and geological and environmental progress reports during the Development and Construction Period.

b. Final Report Within six 6 months from the completion of the development and construction activities the Contractor shall submit a final report to the Director through the Regional Director concerned. Such report shall integrate all information in maps of appropriate scale and quality as well as in monographs or reports in accordance with international standards.

IV. COMMERCIAL OPERATION

The Contractor shall submit within thirty 30 days before the completion and construction of production facilities to the Director through the Regional Director concerned a Three Year Commercial Operation Work Program. The Contractor shall commence commercial utilization immediately upon approval of the aforesaid Work Program. Failure

of the Contractor to commence Commercial Production within the period shall be considered a substantial breach of the Agreement.

7.2. Commercial Operation Work Program and Budget During the Operating Period the Contractor shall submit to the Director through the Regional Director concerned Work Programs and Budgets covering a period of three (3) years each which shall be submitted not later than thirty (30) days before the expiration of the period covered by the previous Work Program. The Contractor shall conduct Mining Operations and other activities for the duration of the Operating Period in accordance with the duly approved Work Programs and corresponding Budgets.

7.3. Expansion and Modification of Facilities The Contractor may make expansions, modifications, improvements and replacements of the mining facilities and may add new facilities as the Contractor may consider necessary for the operations. Provided That such plans shall be embodied in an appropriate Work Program approved by the Director.

7.4. Reporting

a. Quarterly Reports Beginning with the first Calendar Quarter following the commencement of the Operating Period the Contractor shall submit within thirty (30) days after the end of each Calendar Quarter to the Director through the Regional Director concerned a Quarterly Report stating the tonnage of production in terms of ores, concentrates and their corresponding grades and other types of products; value, destination of sales or exports and to whom sold; terms of sales and expenditures.

b. Annual Reports During the Operating Period the Contractor shall submit within sixty (60) days from the end of each Calendar Year to the Director through the Regional Director concerned an Annual Report indicating in sufficient detail:

1. The total tonnage of ore reserves whether proven, probable or inferred; the total tonnage of ores, kind by kind, broken down between tonnage mined, tonnage transported from the mine site and their corresponding destination, tonnage stockpiled in the mine and elsewhere in the Philippines, tonnage sold or committed for export whether actually shipped from the Philippines or not, tonnage actually shipped from the Philippines with full details as to purchaser, destination and terms of sale and if known to the Contractor, tonnage refined, processed or manufactured in the Philippines with full specifications as to the intermediate products, byproducts or final products and of the terms at which they were disposed; and work in progress at the end

of the ion with respect to all the installations and facilities¹⁰ SE R030291VV related to the utilization program including the investment actually made or committed; and b.3. Profile of work force including management and staff stating particularly their nationalities and for Filipinos their place of origin i.e. barangay town province region. The Contractor shall also comply with other reporting requirements provided for in the implementing rules and regulations of the Act.^{sEcTtoN viilIFJSCAL}

REGIME 81828384 **General Principle** The fiscal regime of this Agreement shall be governed by the principle according to which the Government expects a reasonable return in economic value for the utilization of nonrenewable mineral resources under its national sovereignty while the Contractor expects a reasonable return on its investment with special account to be taken for the high risk of exploration the terms and conditions prevailing elsewhere in the industry and any special efficiency to be gained by a particularly good performance of the Contractor.

Registration Fees Within fifteen 15 days upon receipt of the notice of approval of the Agreement from the Regional Office concerned the Contractor shall cause the registration of this Agreement with the said Regional Office and pay the registration fee at the rate provided in the existing rules and regulations. Failure of the Contractor to cause the registration of this Agreement within the prescribed period shall be sufficient ground for cancellation of the same.

Occupation Fees Prior to registration of this Agreement and at the same date every year thereafter the Contractor shall pay to the Bureau an occupation fee over the Contract Area at the annual rate provided in the existing rules and regulations. If the fee is not paid on the date specified the Contractor shall pay a surcharge of twenty five percent 25 of the amount due in addition to the occupation fees.

Share of the Government The Government Share shall be the excise tax on mineral products at the time of removal and at the rate provided for in Republic Act No. 7729 amending Section 151 a of the National Internal Revenue Code as amended in addition to a Royalty of not less than five percent 5 of the gross output as well as other taxes duties and fees levied by existing laws. The Excise Tax shall be timely and completely paid to the nearest Bureau of Internal Revenue Office in the province concerned while the Royalty shall be paid directly to the Bureau. For purposes of determining the amount of the herein Government Share the

Contractor shall strictly comply with the auditing and accounting requirements prescribed under existing laws and regulations. The and 292 of Government Code shall be allocated in accordance with Sections 290 Act No. 7160 otherwise known as The Local 1991 711 71 SE R03029185 Pricing of Sales

The Contractor shall dispose of the minerals and byproducts produced at the highest market price prevailing in the locality. The Contractor shall also pay the lowest achievable marketing commissions and related fees and shall negotiate for more advantageous terms and conditions subject to the right to enter into long term sales or marketing contracts or foreign exchange and commodity hedging contracts which the Government acknowledges to be acceptable notwithstanding that the sale price of the minerals and byproducts may from time to time be lower or the terms and conditions of sales are less favorable than that available elsewhere. The Contractor shall seek to strike a balance between long term sales or marketing contracts or foreign exchange and commodity hedging contracts comparable to policies followed by independent producers in the international mining industry. The Contractor shall likewise seek a balanced distribution among consumers. Insofar as sales to Contractor affiliates are concerned prices shall be at arms length standard and competing offers for large scale and long term contracts shall be procured. Before any sale and or shipment of mineral product is made existing and future marketing contracts sales agreements shall be submitted to the Director copy furnished the Regional Director concerned for registration. At the same time the Contractor shall regularly inform the Director in writing of any revisions changes or additions in said contracts agreements. The Contractor shall reflect in its Monthly Quarterly Report on Production Sales and Inventory of Minerals as well as in the Integrated Annual Report the corresponding registration numbers of the marketing contracts agreements governing the export or sale of minerals.

Associated Minerals If minerals other than chromite and other associated mineral deposits are discovered in commercial quantities in the Contract Area the value thereof shall be added to the value of the principal mineral in computing the Government share.

Submission to Government Within the periods stated herein the Contractor shall prepare and submit to the Director through the Regional Director concerned a Work Program and

corresponding Budget for the ContractArea stating the Mining Operations and expenditures which the Contractorproposes to carry out during the period covered with the details andparticulars set forth elsewhere in this Agreement or in the supportingdocuments.Governments Examination and Revision of Work Program Should theGovernment dee to propose a revision to a certain specific feature in theWork Program or Budget it shall within thirty 30 days after receipt thereofprovide a Notice to the Contractor specifying in reasonable detail its reasons the Government and Contractor will meettherefore.on the revision proposed by the Government. In anyany portion of said Work Program or Budget in whichto agthe revisioniii1rfl;r.rliltflfIJlrulithe Government shall fail to notify the Contractor of the proposed revisionshall insofar as possible be carried out as prescribed herein. f theGovernment should fail within sixty 60 days from receipt thereof to notifyContractor of the proposed revisions the Work Program and Budgetproposed by the Contractor shall be deemed to be approved.

9.3. Contractors Changes to Work Program It is recognized by the Governmentand the Contractor that the details of any Work Program may requirechanges in the light of changing circumstances. The Contractor may makesuch changes Provided That it shall not change the general objective ofthe Work Program Provided further That changes which entail a negativevariance of at least twenty percent 20 shall be subject to the approval ofthe Director.In case of any positive variance the Contractor shall submit to the Directorthrough the Regional Director concerned a copy each of the WorkPrograms for information.9.4. The Governments approval of a proposed Work Program and Budget willnot be unreasonably withheld.

XENVIRONMENTAL PROTECTION AND MINE SAFETY AND HEALTH

10.1. The Contractor shall manage its Mining Operations in a technicallyfinancially socially culturally and environmentally responsible manner toachieve the sustainable development objectives and responsibilities asprovided for under the implementing rules and regulations of the Act.10.2. The Contractor shall ensure that the standards of environmental protectionare met in the course of the Mining Operations. To the extent possiblecontrol of pollution and the transformation of the minedout areas ormaterials into economically and socially productive forms must be done

mining.10.3. An Environmental Compliance Certificate ECC shall be secured first by the Contractor prior to the conduct of any development works construction of production facilities and/or mine production activities in the Contract Area.10.4. The Contractor shall submit the following Programs/Plan as prescribed in the implementing rules and regulations of the Act. Environmental Work Program;b. Community Development Program;c. Environmental Protection and Enhancement Program EPEP and Final Mine Rehabilitation and/or Decommissioning Plan;Protection and Enhancement Program13SENRO30291e. Social Development and Management Program SDMP.10.5. The Contractor shall establish a Contingent Liability and Rehabilitation FundCLRFF which shall be in the form of the Mine Rehabilitation Fund MRF and the Mine Waste and Tailings Fee MWTF.The MRF shall be based on the financial requirements of the approvedEPEP as a reasonable environmental deposit to ensure satisfactory compliance with the commitments/strategies of the EPEPAEPEP and availability of funds for the performance of the EPEPAEPEP during the specific project phase. The MRF shall be deposited as Trust Fund in a government depository bank and shall be used for physical and social rehabilitation of areas affected by mining activities and for research on the social technical and preventive aspects of rehabilitation.The MWTF shall be collected based on the amounts of mine waste and mill tailings generated during the conduct of Mining Operations. The MWTF collected shall accrue to a Mine Waste and Tailings Reserve Fund and shall be deposited in a government depository bank for payment of compensation for damages caused by the Mining Operations.10.6. The Contractor shall set up mitigating measures such as mine waste and mill tailings disposal system mine rehabilitation or plan water quality monitoring etc. to minimize land degradation air and water pollution rock drainage and changes in hydrogeology.10.7. The Contractor shall set up an Environmental and Safety Office at its mine site manned by qualified personnel to plan implement and monitor its approved EPEP.10.8. The Contractor shall be responsible in the monitoring of environmental safety and health conditions in the Contract Area and shall strictly comply with all the rules and regulations embodied under DENR Administrative Order No. 200098 otherwise known as the Mine Safety and

Health Standards. SECTION X RIGHTS AND OBLIGATIONS OF THE PARTIES II. 1. Obligations of the Contractor. a. To exclusively conduct sustainable Mining Operations within the Contract Area in accordance with the provisions of the Act and its implementing rules and regulations; b. To construct and operate any facilities specified under the Mineral Agreement or approved Work Program; c. To determine the exploration mining and treatment process to be Mining Operations; 14. To extract, remove, use and dispose of any tailings as authorized by an approved Work Program; To secure all permits necessary or desirable for the purpose of Mining Operations; To keep accurate technical records about the Mining Operations as well as financial and marketing accounts and make them available to Government representatives authorized by the Director for the purpose of assessing the performance and compliance of the Contractor with the terms of this Agreement. Authorized representatives of other Government Agencies may also have access to such accounts in accordance with existing laws, rules and regulations; To furnish the Bureau all the data and information gathered from the Contract Area and that all the books of accounts and records shall be open for inspection; To allow access to Government during reasonable hours in inspecting the Contract Area and examining pertinent records for purposes of monitoring compliance with the terms of this Agreement; To hold the Government free and harmless from all claims and accounts of all kinds as well as demands and actions arising out of the acts or injuries to persons or properties caused by Mining Operations of the Contractor and indemnify the Government for any expenses or costs incurred by the Government by reason of any such claims, accounts, demands or actions; To allot annually a minimum of one and a half percent (1.5%) of the operating costs necessary to implement activities for the development of mining, community mining, technology and geosciences and institutionalization of public awareness and education on mining and geosciences; In the development of the community. I. To recognize and respect the rights, customs and traditions of indigenous cultural communities over their ancestral lands and to allocate royalty payment of not less than one percent (1%) of the value of the gross output of minerals sold; k. 2. To coordinate with proper authorities in the development of the host and

neighboring communities in accordance with the SDMP and to promote the general welfare of the inhabitants living therein. Where traditional self-sustaining income and the community activities are identified to be present the Contractor shall assist in the preservation and/or enhancement of such activities; and k.3. To give to Filipino citizens who have established the neighboring communities in the hiring of its mining operations. If necessary skills and are currently not available the Contractor must immediately prepare and undertake a training and recruitment program at its expense;

In the development of Mining Technology and Geosciences

- 1.1. In the course of its operations to produce geological, geophysical, geochemical and other types of maps and reports that are appropriate in scale and in format and substance which are consistent with the internationally accepted standards and practices. Such maps shall be made available to the scientific community in the most convenient and cost-effective forms subject to the condition that the Contractor may delay release of said information for a reasonable period of time which shall not exceed three (3) years;
- 1.2. To systematically keep the data generated from the Contract Mining Area such as cores, assays and other related information including economic and financial data and make them accessible to students, researchers and other persons responsible for developing mining, geoscience and processing technology subject to the condition that the Contractor may delay release of data to the science and technology community within a reasonable period of time which shall not exceed three (3) years;
- 1.3. To transfer to the Government or local mining company the appropriate technology it may adapt in the exploration, development and commercial utilization of the minerals in the Contract Area;
- 1.4. To develop a program for the advancement of mining technology and geosciences to build up resources and mineral discoveries, improve operational efficiency and resource recovery and enhance environmental protection and mine safety;
- 1.5. To allocate research and development budget for the advancement of mining technology and geosciences in coordination with the Bureau, research institutions, academe, etc.; and
- 1.6. To replicate data, maps and reports cited in k.1 and k.2 and furnish the Bureau for archiving and systematic safekeeping which shall be made available to the science and technology community for conducting research and undertaking other activities which

contribute to the development of mininggeoscience and processing technology and the correspondingnational pool of manpower talents Provided however that therelease of data maps and the like shall be similarlyconstrained in accordance with k.1 and k.2 above;m. To develop and institutionalize an Information EducationProgram for greater public awarenessof responsible mining and geosciences;andand16SENRO00291n. To incorporate in the Mining Project Feasibility Study the plannedexpenditures necessary to implement all the plans and programs setforth in this Agreement; ando. To pay all other taxes and fees mandated by existing laws rules andregulations.

11.2. Rights of the Contractor

a. To conduct Mining Operations within the confines of itsContractMining Area in accordance with the terms and conditionshereof and without interfering with the rights of otherContractorsLesseesOperatorsPermitteesPermit Holders;b. Possession of the Contract Area with full right of ingress and egressand the right to occupy the same subject to surface and easementrights;c. To use and have access to all declassified geological geophysicaldrilling production and other data relevant to the mining operations;d. To sell assign transfer convey or otherwise dispose of all its rightsinterests and obligations under the Agreement subject to the approvalof the Government;e. To employ or bring into the Philippines foreign technical andspecialized personnel including the immediate members of theirfamilies as may be required in the operations of the Contractorsubject to applicable laws and regulations Provided That if theemployment connection of such foreign persons with the Contractorceases the applicable laws and regulations on immigration shallapply to them. Every time foreign technologies are utilized and wherealien executives are employed an effective program of trainingunderstudies shall be undertaken. The alien employment shall belimited to technologies requiring highly specialized training andexperience subject to the required approval under existing laws rulesand regulations;f. To enjoy easement rights and use of timber water and other naturalresources in the Contract Area subject to pertinent laws rules andregulations and the rights of third parties;S. Repatriation of capital and remittance of profits dividends and intereston loans subject to existing laws and Bangko Sentral ng Pilipinasrules and regulations; andh. To import when necessary all equipment spare parts and

raw materials required in the operations in accordance with existing laws and regulations.¹¹ 11.3. Obligations of the Government⁹ the Contractor has the Governments full cooperation of the rights granted to it under this Agreement;¹⁷ tSE R000291b.C.d. To use its best efforts to ensure the timely issuance of necessary permits and similar authorizing documents for use of the surface of the Contract Area; To cooperate with the contractor in its efforts to obtain financing contemplated herein from banks or other financial institutions Provided That such financing arrangements will in no event reduce the Contractors obligation on Government rights hereunder; and To recognize the authority of the financing institution that has granted a loan to the contractor for the mining project to designate its assignee of the Mineral Agreement in case of the contractors default from such loan Provided That the assignee is a Qualified person and the assignment shall be subject to the approval of the Secretary.

SECTION XII ASSETS AND EQUIPMENT
12.1. The Contractor shall acquire for the Mining Operations only such assets that are reasonably estimated to be required in carrying out such Mining Operations.
12.2. All materials equipment plant and other installations of a movable nature erected or placed on the Contract Area by the Contractor shall remain the property of the Contractor. The Contractor shall have the right to remove and reexport such materials and equipment plant and other installations from the Philippines subject to existing rules and regulations.

In case of cessation of Mining Operations on public lands occasioned by its voluntary abandonment or withdrawal the Contractor shall have a period of one (1) year from the time of cessation within which to remove its improvements; otherwise all social infrastructures and facilities shall be turned over or donated tax free to the proper government authorities national or local to ensure that said infrastructures and facilities are continuously maintained and utilized by the host and neighboring communities.

SECTION XIII EMPLOYMENT AND TRAINING OF PHILIPPINE PERSONNEL
13.1. The Contractor agrees to employ to the extent possible qualified Filipino personnel in all types of mining operations for which they are qualified; and after Commercial Production commences shall in consultation and with consent of the Government prepare and undertake an extensive training programme suitable to Filipino nationals in all levels of employment. The objective of said

programme is to reach within the timetable set forth below the following targets of

Filipinization	Unskilled	Skilled	Clerical	Professional	Management	Year 1	Year 3	Year 5	Year 10	Year 15
100	100	100	100	100	100	100	100	100	100	100

13.2. Cost and expenses of training such Filipino personnel and the Contractor's own employees shall be included in the Operating Expenses.

13.3. The Contractor shall not discriminate on the basis of gender and shall respect the right of women workers to participate in policy and decision-making processes affecting their rights and benefits.

14.1. The Government and the Contractor shall consult with each other in good faith and shall exhaust all available remedies to settle any and all disputes or disagreements arising out of or relating to the validity, interpretation, enforceability or performance of this Agreement before resorting to arbitration as provided for in Section 14.2. below.

14.2. Any disagreement or dispute which can not be settled amicably within a period of one (1) year from the time the issue is raised by a Party shall be settled by a tribunal of three (3) arbitrators. This tribunal shall be constituted as follows: one to be appointed by the Contractor and the other to be appointed by the Secretary. The first two appointed arbitrators shall consider names of qualified persons until agreement on a mutually acceptable Chairman of the tribunal is selected. Such arbitration shall be initiated and conducted pursuant to Republic Act No.

876 otherwise known as the Arbitration Act. In any event the arbitration shall be conducted applying the substantive laws of the Republic of the Philippines.

14.3. Each party shall pay fifty percent (50%) of the fees and expenses of the Arbitrators and the costs of arbitration. Each party shall pay its own costs and attorneys' fee.

SECTION XV. SUSPENSION OR TERMINATION OF CONTRACT

TAX INCENTIVES AND CREDITS

15.1 This Agreement may be suspended for failure of the Contractor to comply with any provision or requirement of the Act and/or its implementing rules and regulations; to pay on time the complete taxes, fees and other charges demandable and due the Government;

15.2 This Agreement terminates or may be terminated for the following causes: a) expiration of its term whether original or renewal; b) withdrawal from the Contractor; c) violation by the Contractor of the Agreement's conditions; d) failure to pay taxes, fees or charges for two (2) consecutive years; e) false

statement or financial obligations or terms or C19SE R030291 omission of facts by the Contractor; and 0 any other cause or reason provided under the Act and its implementing rules and regulations or any other relevant laws and regulations.

15.3. All statements made in this Agreement shall be considered as conditions and essential parts hereof and any falsehood in said statements or omission of facts which may alter change or affect substantially the fact set forth in said statements shall be a ground for its revocation and termination.

15.4. The Contractor may by giving due notice at any time during the term of this Agreement apply for its cancellation due to causes which in the opinion of the Contractor render continued mining operation no longer feasible or viable. In this case the Secretary shall decide on the application within thirty 30 days from notice. Provided That the Contractor has met all the financial fiscal and legal obligations.

15.5. No delay or omissions or course of dealing by the Government shall impair any of its rights under this Agreement except in the case of a written waiver. The Government's right to seek recourse and relief by all other means shall not be construed as a waiver of any succeeding or other default unless the contrary intention is reduced in writing and signed by the party authorized to exercise the waiver.

15.6. In case of termination the Contractor shall pay all the fees and other liabilities due up to the end of the year in which the termination becomes effective. The Contractor shall immediately carry out the restoration of the Contract Area in accordance with good mining industry practice.

15.7. The withdrawal by the Contractor from the Mineral Agreement shall not release it from any and all financial environmental legal and fiscal obligations under this Agreement.

15.8. The following acts or omission inter alia shall constitute breach of contract upon which the Government may exercise its right to terminate the Agreement.

a. Failure of the Contractor without valid reason to commence Commercial Production within the period prescribed; and

b. Failure of the Contractor to conduct mining operations and other activities in accordance with the approved Work Programs and any modification thereof as approved by the Director. Provided That the Agreement shall automatically terminate upon field verification that the Contractor committed the above failures.

15.9. The Government may suspend and cancel tax incentives and credits if they are by the terms and conditions of said incentives and Contractor

facredits.20 1H NTSENR030291SECTION XVIOTHER PROVISIONS16.1 . Any terms and conditions resulting from repeal or amendment of any existing laws or regulation or from the enactment of a law regulation or administrative order shall be considered a part of this Agreement.16.2. NoticeAll notices demands and other communications required or permitted hereunder shall be made in writing telex or telecopy and shall be deemed to have been duly given notice in the case of telex or telecopy if answered back or confirmation received or if delivered by hand upon receipt or ten days after being deposited in the mail airmail postage prepaid and addressed as follows If to the Government THE SECRETARY Department of Environment and Natural Resources DENR Building Visayas Avenue Diliman Quezon City If to the Contractor THE PRESIDENT Mt. Sinai Mining Exploration and Development Corporation Km. 12 Diversion Road Panacan Davao City Either party may substitute or change such address on notice thereof to the other party Provided That the Contractor shall in case of any change of address during the term of this Agreement notify the Director in writing. Failure to do such notification shall be deemed as waiver by the Contractor to be informed about any communications as provided in Section 16.2 above. 16.3. Governing Law This Agreement and the relation between the parties hereto shall be governed by and construed in accordance with the laws of the Republic of the Philippines. The Contractor hereby agrees and obliges itself to comply with the provisions of the Act its implementing rules and regulations and other relevant laws and regulations. 16.4. Suspension of Obligation VVa. Any failure or delay on the part of any party in the performance of its obligation or duties hereunder shall be excused to the extent as defined in the Act Provided That attributable to Force Majeure causes the subject to be subject to by the Director. III W I I I I I b. If Mining Operations are delayed curtailed or prevented by such Force Majeure causes then the time for enjoying the rights and carrying out the obligations thereby affected the term of this Agreement and all rights and obligations hereunder shall be extended for a period equal to the period involved. The Party whose ability to perform its obligations is affected by such Force Majeure causes shall promptly give Notice to the other in writing of any such delay or failure of performance the expected duration thereof and

its anticipated effect and shall use its efforts to remedy such delay except that neither Party shall be under any obligation to settle a labor dispute Provided That the suspension of obligation by the Contractor shall be subject to prior approval by the Director.

16.5. Amendments This Agreement shall not be annulled amended or modified in any respect except by mutual consent in writing of the herein parties.

IN WITNESS WHEREOF the Parties hereto have executed this Agreement as of the day and year first above written

THE REPUBLIC OF THE PHILIPPINES
BY IPI PA E Acting Secretary
cDo Department of Environment and Natural Resources
EMTS NAMNNG EXPLORE AND DEVELOPMENT CORPORATION.. N. 24 7 6 9 000 BY Chairman of the and Chief Executive Officer SIGNED IN the PRESENCE OF Over Printed Name

22 ACKNOWLEDGMENT Republic of the Philippines Quezon City SS Before me a Notary Public for and in the City of Quezon personally appeared RAMON J.P. PAJE with Community Tax Certificate No. 20064743 issued on February 03, 2011 at Quezon City in his capacity as Acting Secretary of the Department of Environment and Natural Resources and VICENTE T. LAO with Community Tax Certificate No. 2649 issued on July 11, 2011 at Pasig City in his capacity as Chairman of the Board and Chief Executive Officer of Mt. Sinai Mining Exploration and Development Corporation both known to me and to me known to be the same persons who executed the foregoing instrument consisting of twentythree (23) pages including this acknowledgment page and acknowledged to me that the same is their voluntary acts and deeds.

IN WITNESS WHEREOF I have hereunto set my hand and affix my notarial seal this day of April 2011

river town site NO. 047000460 on lot M24 20 until Drr bt t zot t PrR No. 4 GoqotZ yo6ll a.cIFP No. s46g4g fa6tt pasigci NI Acti coy; ano No. l ot125V Doc. No. Page No. Book No. Series of 23 SENR030291 STUBB CREEK MARGINAL FIELD FARMOUT AGREEMENT BETWEEN NIGERIAN NATIONAL PETROLEUM CORPORATION and SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD and NIGERIAN AGIP OIL COMPANY LTD and ELF PETROLEUM NIGERIA LTD as Farmor AND UNIVERSAL ENERGY RESOURCES LIMITED as Farmee

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PARTIES ARTICLE 7 OPERATIONS ARTICLE 8 HEALTH AND ENVIRONMENTAL STANDARDS
ARTICLE 9 REPRESENTATIONS WARRANTIES AND DISCLAIMERS ARTICLE 10 NATURAL GAS
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27ARTICLE 14 ABANDONMENT SECURITY ARTICLE 15 LIABILITY AND IDEMNITY ARTICLE 16
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ENVIRONMENTAL CONDITIONS OF THE FARMOUT AREA ENVIRONMENTAL EVALUATION
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AGREEMENT is made between the BETWEEN Llgdny of B G C Cen e 2003 h i 2. 3. 4 The NIGERIAN
NATIONAL PETROLEUM CORPORATION a of the Federal Republic of body corporate established
under the Nigeria Head Nigeria whose hereinafter referred to as NNPC at NNPC Towers Abuja
Office laws is THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED a
company incorporated under the laws of the Federal Republic of Nigeria and having its registered
office at Freeman House No. 2122 Marina Lagos as SHELL hereinafter referred Nigeria to ELF
PETROLEUM NIGERIA LIMITED a company incorporated under the laws of the Federal Republic of
Nigeria and having its registered office at No 35 Kofo Abayomi Street Victoria Island Tagos Nigeria
heteinafter referred to as Elf OIL COMPANY LIMITED company NIGERIAN AGIP incorporated
under the laws of the Federal Republic of Nigeria and having its registered office at Plot PC 23
Engineering Close Victoria Island Lagos Nigeria hereinafter referred to as NAOC a NNPC SHELL
ELF NAOC hereinafter collectively called Farmor where the context so admits which expression

shall include their respective successors and assigns And company UNIVERSAL ENERGY RESOURCES LIMITED incorporated under the laws of the Federal Republic of Nigeria and having its registered office at No. 25 Idoro Road Uyo Akwa Ibom State Nigeria as Farmee where the context so admits which hereinafter referred to expression shall include its respective successors and assigns. a Page 4 W o ;J e N it ; m

WHEREAS A The Farmor hold patticipating interests in several oil mining leases OMLs granted by the Federal Government of Nigeria including OML 14 which contains Stubb Creek Field hereinafter referred to in the following proportions NNPC 55 SHELL 30 ELf 10 and NAOC 5; as OML 14 B C D B The Farmor are entitled to the benefits and rights and subject to the duties and obligations of a lessee under OMI 14 by virtue of the participating interest which they hold in OML 14 and The Farmor are parties to a joint venture under a joint operating agreement dated 11 July 1991 which governs their relationship in relation to inter alia OML 14 wheteby SHELL was appointed operator to conduct petroleurn operations within the areas covered by their oil mining leases and of 1996 and by Pursuant to the Petroleum Amendment Act number 23 virtue of a letter dated 27 August 2001 from the Office of the Presidential Adviser for Petroleum and Energy Stubb Creek Field has been declared a Marginal Field; the Farmece has been allocated Stubb Creck Field by the Government in Marginal Field Allocation Round wheteupon the Parties wish to set out the terms and conditions of the farmout by the Farmor of the Matginal Field tc Farmee Provided that full legal title to OML 14 shall wholly be retained by the Farmor; NOW THEREFORE in consideration of the above premises and of the mutual as covenants of the Parties follows the Parties hereby agree as hercinafter set forth

1.0 ARTICLE1 Definitions and Interpretation

1.1 In this Agreement the following terms shall have the meanings specified below

1.1.1 Affiliate means a as it relates to all Parties except SHELL a company or other entity thar directly or indirectly through one or mote intermediaries controls or is controlled by or is under common control of or with a Party; [4 Page 5 H o V A NN L Aemb as it relates to SHELL indirectly controlled N.V. Koninklijke Nederlandsche Petroleum Maatschappij The Shell Transport and Trading Company Ple any company other than SHELL which is for the dme being directly or Koninklijke Nederlandsche

Petroleum Maatschappij and The Shell Transport and Trading Company Plc of them. dhs definition Control means ownership of a minimum of 50 of the issued voting stock of company entitled to vote or ownership of equivalent rights to determine the decisions of such company or entity; [purpose of by N.V. For the either and or Agreement means this agreement including the Schedules; Appraisal means the its commencement is the determination of the extent volume or producibility of Hydrocarbons contained in a Discovery. activity whose purpose time the of at Farmout means the grant of possession and use of Farmout Area Farmee for the purpose of conducting Operations in the Marginal Field defined in Article 3. Additional Reservoir means any new Petroleum Deposit in the Farmout Area that is outside the Farmout Depth. Associated Agreements means all agreements to which some or all Parties are party under which the Farmor provide services to Farmee with regard to the transportation or disposal of Production from the Marginal Field the Hydrocarbon Handling Agreement and the Offtake Agreement. but without limitation including to 112 113 1.1.4 L1.6 117 Abandonment Security Agreement means an agreement substantially in the form of Schedule C provided that such amendments shall be made thereto as are necessary to; 0 i i make provision for the principles set out in the schedules thereof comply with documents comprising the schedules thereof and/or the Regulations and/or any third party signatory to the as may be required to render the Abandonment Security Agreement and/or the documents comprising its schedules effective and enforceable in accordance with the intention of the Parties as set out in this Agreement under the law applicable at the date of execution thereof. V Page 6 e el . S Am118 Discovery means by of Hydrocarbons within the Farmout Area the existence of which until that moment was unknown or not confirmed. accumulation drilling finding of an the 119 Ammerica. Dollars or US means the legal currency of the United States of 1.1.10 Dry Crude means treated crude oil from Marginal Field with a water of less than 0.5 by volume measured in accordance with Department Petroleum DPR in accordance with the provision of the Regulations. Resources approved methods less of 1111 Effective Date shall be as defined in Article 3 of this Agreement; 1112 1.1.13 1114 1.1.15 Encumbrances means any mortgage charge whether fixed or floating pledge claim lien equity or

other security agreement or arrangement or any royalty interest production payment net profit interest deferred or or right arrangement; preemption obligation agreement carried similar int of Farmee means Universal Energy Resources Limited Farmout means the grant of po sion and usc of Farmout Arca te Farmee for the purpose of conducting Operations in the Marginal Field as defined in Article 3. Farmout Area means the atea within OML 14 delineated by its ordinates shown in Schedule A as may be amended from time to time by the agreement of this Agreement. in accordance with provisions Parties the the of 1.1.16 Farmout Depth means the True Vertical Depth TVD of the decpest well drilled in the Marginal Field as at the Effective Date which is 9829 Feet True Vertical Depth Subsea as indicated in Schedule A. 1117 property and equipment Farmout Facilities means all Farmout Arca that shall be handed over belonging to the Farmor within the to the Farmee by Farmor on as is basis including all benefits and liabilitics putsuant to this Agreement. facilitics 1.1.18 Government means the Government of the Federal Republic of Nigerix including as the context requires state and local governments its ministe agencies and other subdivisions. 1119 Gross Negligence or Wilful Misconduct means an intentional and conscious or reckless distcgard of good and prudeat oil and gas field practice Page 7 or of the terms of this Agreement and shall not include any omissions crrovs or mistakes made by any director officer employee agent contractor o7 subcontractor of such Party or its Affiliates in the exercise in good faith of any authority or discretion conferred upon such Party under this Agreement 1.1.20 Health Safety and Environmental or HSE Standards means the standards as set out by the Department of Petroleum Resources and the JV Operator. 1.1.21 Joint Operating Agreement or JOA mcans the Joint Operating Agreement between the Farmor dated 11 July 1991 as may be amended from time to time which governs their relationship in relation to intee al OML 14 whereby SHELL was appointed operator to conduct petroleum opetations within the arcas covered by their oil mining leases. 1.1.22JV Operator means SHELL as the Operator for the time being of the Joint Venture. 1.1.23Joint Venture means the joint venture between the Farmor. 1.1.24 LIBOR means the London Inter Bank Offer Rate as quoted by the National Westminster Bank in London for three months United States Dollar deposits at 11.00

hours on the relevant date or the maximum legally If the London [nter Bank Rate is not so quoted on permissible rate if less. the relevant date such rate last previously so quoted shall be taken provided that if National Westminster Bank shall not have quoted such rate for seven 7 consecutive days the rate published in the Financial Times London on the day after the relevant date shall be substituted.

1.1.25 Marginal Field means Stubb Creek Field situated in the FarmOur Avca as defined in 1.1.15.

1.1.26 MFO means Unvers operator on behalf of h as Finergy Resources Limited rself and Partners where applicable. marginal eld 1.1.27 Minister or Ministry means the Minister or Ministry of

Petroleum requires Resources of including the Department of Petroleum Resources DPR of the Ministry the Federal chuhlit of Nigeria the context as 1.1.28 Month means a calendar month; 1.1.29

Natural Gas means all gascous Hydrocarbons produced in associarion gascous reservoirs produce mainly which from or Oil Crude with Hydrocarbons. 1.1.30 Nigeria means the Federal Republic of

Nigeria; Page 8 e ah Ao TL.1.31 Oil Mining Lease OML means the lease to the Farmor granted by the Minister under the Petroleum Act 1969 Cap 350 laws of the Federation of Nigeria 1990 as

amended to a lessee to search for win work carry away and dispose Petroleum from all the atea covered by OML 14. L1.1.32 Operations means the exploration prospecting winning working and

cartying away of petroleum undertaken by the Farmee in respect of the Marginal Field and all matters ancillary thereto including further Appraisal within the Farmout Area in accordance with the

terms of this Agreement. 1.1.33 Party means any party to this Agreement its successors and permitted assigns and Parties means all such parties collectively. 1.1.34 Petroleum means mineral

oil or any related hydrocarbon or natural gas its natural state in strata and does not include coal or be or other stratified deposits from which oil as bituminous shales extracted by destructive

distillation. it exists can in 1.1.35 Petroleum Operations shall have the meaning ascribed rhe Petroleum Profits Tax Act Cap 354 Laws of the Federadon of Nigeria 1990. to in it 1.1.36 Petroleum

Profits Tax ot PPT has the meaning ascribed to it in the Petroleum Profits Tax Act Cap 354 and Laws of the Federation of Nigeria 1990. 1.1.37 Regulations means any and statutes all and

regulations affecting oil mining leascs and Marginal Fields and companies conducting petroleum

operations in effect from time to time and made by government authorities having jurisdiction over oil mining leases and the Farmout Area and over operations conducted thereon and any laws orders or Regulations of any State or local Government authority. orders rules laws 1.1.38 Work Programme means any programme of Operations to be carried out in the FarmOut Area. 1.2 Interpretation All references to Articles Schedules and Appendices are unless otherwise this expressly stated references to Articles Schedules and Appendices to Agreement. The headings in this Agreement are inserted for convenience only and shall be ignored in construing this Agreement. Unless the context otherwise Page 9 requires in this Agreement references to the singular include a reference to the plural and vice versa and references to one gender will include all genders. this Agreement to any statute statutory instrument act or References in regulation will the same as amended reenacted or replaced from time to time and will include any rules or regulations passed in pursuance of the same. a reference to be 13 Conflicts In the event of any conflict or inconsistency between the provisions of the main body of this Agreement and the Schedules and/or Exhibits hereto the provisions of the main body of this Agreement shall prevail. In the event of any conflict or inconsistency between the provisions of this Agreement and the OML the provisions of the OML as applicable shall govern this Agreement and it shall be deemed to be modified accordingly and as so modified this Agreement shall continue in full force and effect. The unenforceability of any provisions of this Agreement for any reason whatsoever shall not prejudice the enforceability or validity of the rest of this Agreement or any other provision hereof. 14 Schedules The following Appendices are attached hereto and incorporated into this Agreement Schedule A Arca Farmout Facilities Stubb Creek Field Farmout Depth and Farmout b Schedule B DESCRIPTION OF ENVIRONMENTAL CONDITIONS OF THE FARMOUT AREA ENVIRONMENTAL EVALUATION STUDIES c Schedule C Decommissioning and Abandonment Security Page 10 ARTICLE 2 REPRESENTATIVES 2.1 Farmers Representative Each of the .Farmor hereby appoints SHELL as its representative and hereby authorises the said representative to act for and on behalf of each of the Farmor in the performance and administration of this Agreement. 2.2 Farmees Representative If Farmee is more

than party 2.2.1 The Partners to Stubb Creek Marginal field agree that Universal Energy Resources Limited is the operator and has the exclusive responsibility for executing the Operations and shall represent the Partners in the performance and administration of this Agreement. 2.2.2 Notwithstanding Article 2.2.1 each of the Farmee shall be jointly and severally liable for its obligations under this Agreement. 31 Tarmout ARTICLE 3 FARMOUT 3.1.1 to all of for the and with dutics terms subject accepts together benefits Facilities the purpose of conducting Operations in Subject to the terms and conditions of this Agreement the Farmor hereby grant to the Farmee for the term of this Agreement possession and use of the Farmout Area for the purpose of Farmee conducting Operations in the liabilities rights Marginal Field associated with conducting Petroleum Operations in the Farmout Atea and this Agreement and Farmee hereby Government consent the possession and use of the Farmout Area andor the Farm out Marginal Field together with all rights benefits obligations and liabilities associated with the conduct of Petrolevim Operations in the Farmout Arca. 312 Farmee shall use the Farmout Area only for the purposes set forth in this Agreement and in accordance with the terms of this Agreement the OMI and the Regulations. Except as otherwise provided for in this Agreement the costs and expenses incurred in the Operations as well as any losses and risks derived therefrom shall be borne by Farmee and Farmor shall not be responsible to bear ot tepay any of the Farmees costs provided such losses ate not caused by the Farmor. A v Page 11 3.1.3 g L 755 g It is understood and agreed that this Agreement is subject to the provisions of the OML and the Regulations. 315 As between the Fatmor and Farmee the Farmor shall retain all ownership rights to the OML and the rights title and interest or estate of the Farmec shall be equivalent to those of a sublessee in accordance with the terms of this Agreement. 3.2 Government Approvals 32.1 The Farmor and Farmee each undertake to obtain all necessary approvals from the relevant authorities in relation and obligations under this Agreement. In this regard each Party shall provide reasonable assistance to the other Party as necessary in order for such approvals to be obtained in a timely manner. their respective rights to 33 Effective Date and Term of Farmout 3.3.1 The Effective Date of the Farmout intended by this Agreement shall

be the latter of 1 The payment by Farmee of any signature bonus and/or other fees payable to the Government upon the terms of the allocation of the Marginal Field to Farmee. b The obtaining of all approvals and consents required by the Regulations for the Farmout. The receipt by Farmor from Farmee of copies of the certificates of insurance in respect of the classes of insurance listed in Article 16.1.1 16.1.2 and 16.1.3. 3.3.2 Term of Agreement 3.3.2.1 Subject to Article 19 this Agreement shall be for an initial period of sixty months from the Effective Date. 3.3.2.2 If prior to the end of the initial sixty month period Farmee serves on the JV Operator notification from DPR of approval and renewal of the farm out to Farmee by Government the Agreement shall be subject to the full force and effect from the end of the sixty . hereof continue in period of the Effective Date for so long as the Farmor continues to have the right to conduct Petroleum Operations within any part of the area currently included within OML 14 unless terminated earlier Article 19. Page 12 7 3.3.3 Hand Over Not later than fourteen days after the Effective Date of the Farmout in accordance with this Article 3 or at such other time as the Parties shall agree JV Operator shall give custody to Farmee on an as is and where is basis of the Farmout Area; of all the Farmout Facilities; 3.4 Environmental Baseline Survey Farmee shall carry out an Environmental Base Line Survey in line with the requirements set out in Schedule B signed by Farmee and Farmor the acceptance of which shall be confirmation by the Parties that this Survey fairly and completely describes the status of the environmental condition of the Farmout Area as at the Effective Date of this Agreement. Failure of Farmee to conduct the Environmental Base Line Survey in accordance with Article 3.4 above shall be deemed to be acceptance of Farmor's assessment of the environmental state of the Farmout Area as at the Effective Date and shall be a waiver of any subsequent claims against Farmor arising out of or concerning the environmental condition of the Farmout Area. ARTICLE 4 REDEFINITION OF FARMOUT AREA 4.1 If new information has become available based upon relevant objective scientific and technical factors that indicates that the Marginal Field may extend beyond the Farmout Area Farmee shall inform Farmor and may request an amendment to in accordance with the provisions of this Article. the Marginal Field shall include The factors on which a

case for redefinition of the Marginal Field could be and limited made interpretation of new seismic data new development concepts results from appraisal or development wells drilled within the Marginal Field by Farmee or outside the Farmout Area by JV Operator. acquisition processing not but to 4.3 Any such request shall be in writing and shall substantiate in detail and with relevant data the reasons behind Farmees request for a redefinition of the Page 13 44 4.5 4.6 Marginal Field. Not later than ninety days upon receiving such request for redefinition of the Marginal Field the Parties will meet to discuss such request. Farmort shall consider Farmees request and may at its absolute discretion agree to a redefinition of the Marginal Field as Farmor may deem fit. If Parties cannot agree on the a redefinition within six 6 months of the request or if the Parties fail to meet within ninety days of the request as provided in this Article 4.3 then the request shall be deemed to be refused by Farmor and may be revisited only for the purposes of a unitisation with Farmor at the discretion of the Farmor. The provisions of this Agreement including consideration shall apply mutatis mutandis to a redefinition made other than for unitisation. If and as long as with respect to any request for redefinition no agreement this has been reached the Marginal Field Agteement. shall remain as out in set . a as result of such request Farmor considers it appropriate or the If Marginal Field appears to straddle the boundaty or boundaries of Farmors oil mining lease ot a neighbouring oil mining lease not being the property of the Farmor Farmee shall promptly report same to DPR and shall use its best endeavours to reach agreement with the holders of such oil mining lease subject to the Regulations on the development of the Marginal Field as a unit with such straddled fields including agreement on participation the allocation of production and the determination of the consideration for such participation. If an agreement is reached the unitised arca shall be deemed to be subject to the terms of DPRs guidelines on unitisation. If Farmout Area is reduced by surrender expiration andot relinquishment revocation of the OML then the Farmout Area shall be redefined to andor such exclude relinquishment and in the event of revocation of the OML it shall revert to Government. surrender expiration affected arca any by Page 14 .ARTICLE 5 FINANCIAL OBLIGATIONS 51 Overiding Royalty As consideration for Overiding Royalty accordance with this

Article 5. the Farmout Farmee shall Override. The Ovetride shall pay to the Farmor be determined in Farmee shall pay to Farmor as follows daily production With respect to the production of Crude Oil from the Marginal Field the Farmee shall pay to the Farmor an Override of 2.5 of the daily production up to 2000 Bopd. Subsequently 3.0 of the value of Farmees from and subsequently 5.5 of the value of Farmees daily production from 5001 to 10000 Bopd; and subsequently 7.5 of the value of the Farmees daily production between 10001 and 15000 Bopd. For production in excess of 15000 Bopd the Farmee shall pay the Farmor such additional rate of Override as shall be negotated and agreed between the Parties. Bopd; 5000 2001 to For the purpose of the Override the daily production shall miean the entire daily production of Crude Oil from the Marginal Fild. With respect to the production of Natural Gas from the Marginal Field the Farmee shall pay to the Farmor an Ovetride of 0 of the value of Farmees production between 0 and 20 Million Standard Cubic Feet per Day MMSCFD; For production higher than 20 Million Standard Cubic Feet perDay MMSCFD the terms acd conditions of such production shall be agreed between Farmor and Farmee. All payments due under Article 5.1.1a from the Farmee shall be made in Crude Oil allocation from Farmee to Farmor in such quantum as will generate an amount sufficient to cover all such payment under this Agreement In respect of such allocation Farmor shall have the option at its sole discretion to elect to take delivery thereof . at the fence between Farmees facilities and Farmors facilitdes; or Page 15i at such other outlet of Farmees Crude Oil as may be agreed by the Parties. c Farmor shall have the option at its sole discretion to elect to receive the Override from Farmee at all times in US Dollars equivalent ar the prevailing market prices payment net of all applicable handling charges for Farmees Crude Oil the on ate of d For the purpose of calculation of the Override Farmee shall keep full and correct accounts for all Petroleum measured as stipulated in Article 7.2.3 and Farmor shall have access at all times to the books of Farmee containing such accounts and may make excerpts therefrom. Farmee shall within sixty 60 days after the end of cach calendar year deliver to JV Operator an abstract for cach be as confidential by JV Operator unless otherwise agreed by Farmee. yeat which accounts of such treated shall 3 5.2. 5.2. 4 rw2bnw5.3 Farmee shall be required

to account for or measure Petroleum unavoidably lost or used in operations hereunder including Petroleum used in secondary recovery operations or Natural Gas that may be flared. Without prejudice to Article 6.4 i Farmee shall furnish Farmor a copy of any report presented by Farmee to DPR on the number of barrels of Crude Oil and other Petroleum produced in the Farmout Area within the five 5 days immediately following the end of each calendar month. If Farmee should not supply copy of such report JV Operator may elect to calculate the payments due to Farmor under this Article 5 proceeding on the basis of the mentioned monthly report most recently presented by the Farmee to the Minister and Farmee shall pay on such on the understanding that such payment shall be adjusted when Farmee furnishes Farmor the report of reference. basis Unless otherwise provided herein any payment which Farmee is required to make to the Farmor pursuant to this Agreement shall be made within thirty days following the date of lifting by the Farmee of the Petroleum produced from its Operations. Where payments are to be made in cash they shall be made to a bank account to be nominated in writing from time to time by the Farmor. Page 16 5.4 Any overdue payment shall and compounded monthly from the due date until the date on which the payment is received at the annual rate of bear interest calculated as in the case of payments which have been the subject of a bona fide dispute LTBOR plus one percent 1; and in the case of all other late payments LIBOR plus one per cent 1 ; and in the case of payments in local currency it shall be the Minimum Rediscount Rate MRR advised by the Central Bank of Nigeria CBN plus six percent 6 during the period in which the amount in default remains unpaid.. 5.5 5.6 5.7 5.8 to Farmor from Farmee shall remain unpaid a If any sums due a continuous period of three months after it has become due Farmee shall be considered to be in Default and shall be deemed to have granted to the Farmor a lien upon all Crude Oil produced from the Marginal Field and the proceeds therefrom to secure discharge of the said sums due from Farmee together with interest thereon at the rate provided in Article 5.4 above. for This hereby agreed that throughout the period of such Default Farmee shall not be entitled to its production from the Marginal Field which shall then vest in and be the property of the Farmor while any sums including interest due from Farmee remains outstanding.

Farmor shall be authorised to sell such production from the Marginal Field at the best price obtainable under the circumstances and after deducting all costs charges and expenses incurred by it in connection with such sale shall recover from the remaining proceeds all moneys due to it by Farnee together with interest accrued. Any surplus remaining thereafter shall be paid to the Farmee. Notwithstanding the provision of Articles 5.5 and 5.6 above Farmor may upon not less than 30 days prior notice to Farmee suspend performance of their services or obligations to Farmee under the Associated Agreements if applicable. The exercise of such right shall not constitute a waiver of any other remedies available to the Farmor under this Agreement.

Page 17 6.1 6.1.1 ARTICLE 6

RIGHTS AND OBLIGATIONS OF THE PARTIES Rights and obligations of the Farmee Save and except as otherwise provided in this Agreement the Farmee shall to the extent provided for in this Agreement Have the right to conduct Operations by itself its agents and/or its contractors. If the Farmee does not conduct any Operations itself it shall nonetheless remain responsible for such Operations as the Farmee to the extent provided under this Agreement and the Regulations to Conduct all its Operations in accordance with the terms of the OML the Regulations and this Agreement in a manner consistent with good and prudent oil and gas field practice and with that degree of diligence and prudence reasonably and ordinarily exercised by experienced oil and gas companies engaged in similar activities under similar circumstances and conditions to meet Health Safety and Environmental Standards of DPR and the JV Operator. Have the right to all reservoirs lying totally within the Farmout Area and down to the Farmout Depth. Grant to the Farmor access to drilling well production operating and other data and reports as compile during the term hereof and at surrender all original data and reports to the DPR. seismic geological geophysical it may the end of the Agreement all e Acquire all permits consents approvals surface or other rights that may be required for or in connection with the conduct of the Operations the FarmOut Area and not start any activity the appropriate permit consent or approval has been obtained have the right to deal directly with Government on all matters relating to the Operations other than those relating directly or indirectly to the OML outside of the Farm out Area. until Fully inform and submit to JV Operator all

and Government interface in respect of the Marginal Field and adhere to any instructions of JV Operator in respect thereof as stipulated in the terms of this agreement. g Pay and be liable for all taxes rates and assessments of every description whatsoever that may be imposed on Farmee by any lawful authority in respect of the Farmout Area or by reason of this Agreement. Page 18 [3 N Y h Make all payments due to the Farmor in accordance with the terms of this Agreement. i Obtain the Insurance required under Article 16 without limiting in the rights way the Farmor to procure and insurance coverage as they determine to be appropriate at the Farmors expense. j Maintain good relations with the host communities Local and State Governments and inhabitants of the areas in and around the Farmout Area and do nothing to undermine the relationship of these parties with the Farmor. k Not exercise all or any rights or authority over the FarmOut Area in derogation of the rights of the Farmor as stipulated in the terms of this Agreement Farmee shall not represent itself in its Operations in any part of the Farm out Area in any way or manner that might reasonably be interpreted as a claim to agency of or partnership with the Farmor. l A violation of the terms Farmee shall not conduct any of its operations in be done within the and conditions of the OML and shall do or cause to scope of its authority and with due diligence all such lawful acts and things within its control as may be necessary to keep and maintain the OML in force and effect in so far as the Farmout Area is concerned and do nothing to endanger the OML. Farmee shall be responsible for acquiring any surface rights and rightsofway required for the Operations provided that JV Operator shall to the extent possible and subject to any required consent first having been granted easements or licence to the Farmee with regard to any such surface rights and is free to and/or is able to rightsofway that may be in its possession which it grant. Notwithstanding the foregoing however JV Operator responsible for any failure by Government or any owner of land or surface right to grant consent to any such easements and/or licence. Farmee at its sole expense shall have the right and obligation to perfect title to and/or make any modification necessary to cause any such surface v and rightsofway to remain in compliance with all requirements of the of Nigeria provided however that the Farmee shall not have the right in make

any such modification that of ability immaterial way obligations under the OML. will adversely affect other than any the Farmor to comply with ro an its the of 6.1.2 6.1.3 6.14 6.1.5 Page 19 0.1.6 Except as otherwise provided in this Agreement or as may be authorised by the mutual agreement in writing of the Parties Farmee shall not permit or suffer any lien or other encumbrance to be filed or to remain against the Farmout Area and Farmout facilities unless th a bona fide dispute with respect thereto. Farmee may only create a lien or other encumbrance on Farmees facilities and/or Petroleum produced and saved as a result of its Operations subject always to Farmors overriding royalty payments and any right reserved to the Farmor in respect thereof under the terms of this Agreement. The lien to be created by the Farmee under this Article 6.1.6 shall not for any reason rank in priority over the right which the Farmor would otherwise have been entitled to under this Agreement had such charge or lien not been created by the Farmee.

6.2 Rights and obligations of the Farmor

6.2.1 In accordance with this Agreement the Farmor shall a and be liable for all taxes rates and assessments of every Pay description 1 whatsoever that may be imposed by any lawful authority over the OML except as may be applicable over the Farmout Area y L b Subject to any confidentiality obligations by which it is bound herein give the Farmee access on reasonable prior notice during business hours to such information and/or data relating to the possession of the Farmor as Farmee may reasonably require for Operations excluding analyses prepared by or on behalf of the Farmor for their internal purposes or proprietary information of the Farmor or third party. the Farmee shall have the right and access to all original data resulting from the Operations including but not limited to geological geophysical engineering well logs completion production operations status reports and any other data as the Farmee may compile during the term hereof provided however that the Farmee shall keep and use such original data during the term of this Agreement d Have the right in the event of any environmental or safety problem or any emergency involving the safeguarding of the prevention of pollution or risk of damage to the OML or the Farmors Petroleum Operations around the Farmout Area In the event which in the opinion of of notice in writing to Farmee requiring Farmor's Operations to issue suspend Operations or any part thereof

and inform and seek Ellmfiilf.I from DPR.. Farmee shall not resume Operations until permitted to do so in the JV Operator could a suspension property or mitigated lives by be for or Page 20writing by DPR upon consultation with JV Operator. Any expense incurred by Farmee as a result of any such suspension shall not be recoverable from the Farmor provided the Inent was not caused by the Farmor. Access Rights The Farmor shall at all reasonable times and at their cost have the right of access to the FarmOut Arca for their authorised representatives and at the Farmors expense provided such Farmor give Farmee reasonable notice in writing of the date such access is required and nominates in such notice the authorised be granted. PROVIDED always that the JV Operator shall be entitled to dispense with such notice in the event of an emergency. representatives to whom such access to is relieve indemnify and hold Each Farmor so requesting such access shall harmless the Farmee from and against all claims liabilities costs damages and expenses of every kind and nature in respect of personal injury including fatal injury or disease of any representative of such Farmor save and except where such personal injury was caused or contributed by the negligence or breach of duty of any employee agents or contractors of the Farmee. Reports Farmee shall make available to Farmor copies of all statutory reports to DPR including a copy of the report or form presented by Farmee to DPR on the aumber of barrels of Crude Oil and volumes of other hydrocatbon produced he from days immediately following the end of each submitted within fifteen calendar month. calendar month which report the Marginal Field every shall 15 a quartetly Farmee shall submit within forty five days after the end of each calendar a quarter narrative report of all the activities during such calendar quarter under this Agrecment with plans and maps showing the places where the described wotk was done to Farmor which shall progress contain report the end of each Calendar Year Farmee shall Within three months after deliver to Farmor an annual report which shall consolidate the information such the quarterly progress reports furnished in contained in Calendar Year. Farmee shall report all inences of environmental pollution or commuiial disturbances occurring in the Farmout Area or from Operations immediacly respect of AL tae el Ry 1 o o . 1 i iii iv Page 21upon their occurrence and in any event not less than twentyfour hours thereafter. 6.5 Books

and Accounts Farmee shall keep complete books of accounts of Operations consistent with modern petroleum industry and accounting practices and procedures. The statutory books and accounts of this Agreement shall be kept in Naira and U. S. Dollars. All other books of accounts for the Operations shall be kept in both Naira and U. S. Dollars.

6.6 Farmers Inspection Rights

6.6.1 6.6.2 6.6.3 Subject as otherwise provided in this Agreement the Farmor shall have access to and the right to inspect not more than twice a year all books records and inventories maintained by the Farmee and relating to the Operations provided that JV Operator gives the Farmee not less than fourteen 14 days prior notice of the date upon which it desires to make such inspection and identifies the person or persons to conduct such inspection. Not more than once in six months and subject to a minimum of 14 days notice the Farmor may audit or cause the audit of the books and accounts relating to Operations and the Marginal Fields throughout the term of this report an Agreement. However in external auditor shall be appointed by both Parties to audit the books. In the event of disagreement of audit Notwithstanding the limitations under this Article 6 Farmor shall upon notice at any other time other than as provided have access to the records books the purposes of and accounts of the Farmee for inspection and/or audit upon showing reasonable cause to do so. inventories

6.7 Covenant and Undertaking Each Party hereby covenants and undertakes with the other Party that it will comply with all applicable provisions and requirements of the Regulations and the OML and will do all such acts and things within its control as may be necessary to keep and maintain the OML in full force and effect.

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ARTICLE 7 OPERATIONS

7.1 Operations conducted in the Farm out Area shall be at the sole cost risk and expense of Farmee and Farmee shall ensure that its Operations do not conflict with or cause any hindrance to Farmers Petroleum Operations. Farmee shall discuss its Annual Work Programme and proposed budget with the Farmor before submission to the DPR. Farmor shall have the right but not the obligation to review and/or comment upon the said work programme. Should Farmor wish to propose a revision as to certain specific features of the said Work Programme and Budget it shall within four 4 weeks after receipt thereof so notify the Farmee in writing specifying in reasonable detail the review requested and its reasons therefore

Farmee shall use its best endeavours to resolve the request for revisions proposed by Farmor and give reasonable regard to any comments by the Farmor. 17 Farmor has not made any comments and/or proposed any revisions in writing within four (4) weeks then it shall be deemed that Farmor has no comments thereon.

7.2 Exploration and Appraisal

7.2.1 7.2.2 7.2.3 Farmee has the right to further drill Appraisal/Development wells in the Marginal Field and all reservoirs lying totally within the Farmout Area down to the Farmout Depth shall be considered to be part of the Marginal field and subject to the terms of this Agreement.

drill 1f in the course of Operations Farmee suspects the presence of Additional Reservoirs below the Farmout Depth and desires to such Additional Reservoirs Farmee shall submit its Work Programme to Farmor for consideration of the safety and technical issues thereof as Farmor so wishes. Farmor shall not unreasonably withhold its consent for such drilling PROVIDED that if Farmor does not give its consent within a period of 30 days from the date of submission of such programme by Farmee the matter shall be referred to DPR for resolution. The Farmor reserve the right to participate in the terms and conditions therefore shall to separate agreement between the Parties. the development of such Additional Reservoirs and be subject into Farmee shall measure all Petroleum produced and saved from the Marginal Field and the duly authorised representatives of Farmor shall have the rights to examine such measurements and to test the appliances used therefore. [It give reasonable Farmee wishes to alter its measuring appliance it shall

Page 23 ; A notice to the Farmor to enable its representative to be present during such alteration and Farmee shall use standard measuring

7.3 Meetings and Minutes Farmee and Farmor shall meet at least once every twelve (12) Months to discuss Operations. Such meetings shall be called by Farmee upon not less than fourteen (14) days advance notice with the agenda for the meeting attached. Any Party may require additional items to be put on the agenda provided notice thereof is received not later than seven (7) days before the meeting in question. Notwithstanding the foregoing if either Party reasonably believes the circumstances so require it shall be entitled to call a meeting at such other time and upon shorter notice than that stipulated above.

8.1 8.2 HEALTH AND ENVIRONMENTAL STANDARDS ARTICLE 8 With the goal of achieving safe and reliable

operations in compliance with all Regulations including avoiding significant and unintended impact on the safety or health of people or property or the environment the Farmee must in the conduct of Operations conform to the applicable HSE Standards and Regulations as notified to the Farmee from time to time. Farmee shall establish and provide to the Partics a programme for regular FISE audits and shall grant the Farmor and/or its agents the right from time to time upon reasonable notice to observe Operations in the Farmour Area conduct HSE audits or join HSE audits conducted by the Farmee at or audit by the Farmor shall not of itseif Farmors own cost. Such visit the PFarmees constitute an endorsement ot warranty by the Farmor of Operations or environmental standards. 1f any such FISE Audir reveals any Petroleum which potential Operations or reputation the Farmee shall at its own cost abide by any instructions of the Farmor to correct and/or otherwise prevent and/or arrest such situation including the suspension of Operations. environmental Farmors affect issue may Page 24

REPRESENTATIONS WARRANTIES AND DISCLAIMERS ARTICLE 9 a1

Farmee heteby represents and watrants to the Farmor that a b c d it has all the requisite corporate power to execute this Agreement and to petform its obligations hereunder and thereunder and that in so doing such action will not violate any obligations binding on it or its assets or result in any liability to any third party or the creation of any Encumbrance; it accepts the Farmout Area farmedout to it under this Agreement on an as is where is basis upon its successful participation in the Marginal Tield Allocation Round of the Government and without any watranty exptess or implied being made by or on behalf of the Farmor. N it has made its own investigations as to title to and the validity of the OML; and it has and heteby acknowledges the thereof no payments were made or will be made or consideration given or will be given to obtain the Marginal Field in violation of Nigerian law ot which would be in violation of the laws of the Federal Republic of Nigeria. Farmee hereby covenants that all representations and wartranties made by it herein are true and cotrect as of the Effective Date. No representations or watranties express or implied are made by the Farmor and/or their Affiliates concerning the accuracy or completeness of any information and/or data on the Marginal Field supplied to Farmec under Article 6.2.1b of this Agreement and/or before the execution

of this Agreement and neither the Farmor nor their Affiliates shall be liable in any way to Farmee for receipt or use by Farmee of such Information and Farmee expressly disclaims any such liability whether in negligence or otherwise. No warranties representations covenants undertakings promises forecasts or other statements whatsoever whether written or and whether implied or otherwise made by or on behalf of the Farmor or any other person may form the basis of or be pleaded in connection with any claim by the Farmee under or in connection with this Agreement and without the generality of the foregoing no shareholder director limitation employee agent consultant or representative of any of them make any representations warranties or undertakings as to oral to

9.2 9.3 9.4 Page 25 j A om SIS i i i if the validity of the OML or the Farmors title to the Marginal Field; the amounts of hydrocarbon reserves attributable to Field; or the Marginal geological any forecasts or evaluations. engineering economic or other interpretations

ARTICLE 10 NATURAL GAS 10.1 10.2 10.3 10.4 The Farmee shall be fully and solely responsible for the handling and disposal of all Natural gas produced in an environmentally responsible manner in accordance with all applicable laws and regulations of the Federal Government subject to agreement on payments and other consideration due to the Farmor from the production of and disposal of Natural Gas. The Farmee shall be fully responsible for the payment of any flare penalty or any other penalties or duties levied by Government in respect of any Natural Gas that originates from the Marginal Field. In the event that the Farmor are prevented from Gas flaring in the OML Farmor shall give notice thereof to the Farmee to stop all Gas flaring and if necessary stop production of all hydrocarbons upon notification to DPR. At such time as Farmee decides to develop Natural Gas from the Marginal Field Farmee and Farmor shall agree upon the procedures including but not limited to payment schedules and notice requirements for payment of the Override relative to such Natural Gas. Page 26

EVAUATION OF FARMEEs PETROLEUM ARTICLE 11 1.1 a hydrocarbon handling Where applicable pending the agreement in respect of the Marginal Field Farmee shall pay to Farmor the cost of treatment handling transportation and terminating of Farmees execution of Crude oil and Natural Gas which pass through Farmors Facilities. Associated Agreements 11.2 11.2.1 Prior to commencement by

Farmee of production of Crude Oil from the Matginal Field the Parties shall in good faith upon the request of Farmee and subject to availability in the Farmors evacuation facilities certification by DPR and not less than three 3 Calendar Months prior to first delivery Associated conclude of Crude Agreements. 11.2.2 Farmee recognizes that pursuant to the Associated Agreements the Farmor are requited to perform cerfain acts undertake certain obligations assume certain liabilitics and are entitled to certain powers tights and benefits all on Farmees behalf accruing from such undertaking negotiate terms Oil and the the of 12.1 ARTICLE 12 GOVERNMENT PARTICIPATION itself or Farmee hereby agrees that if the Government either acting by through any of its agencies assetts any right it may have to acquire an interest in the Marginal Fieldor any portion theteof then Farmee shall usc its best endeavours to ensute that Government assumes a corresponding patt of each of Farmees obligations and liabilities under this Agreement. Any such Government patticipation shall not discharge or relieve Farmee of any of its duties andor obligations under this Agreement.

ARTICLE 13 CONFIDENTIALITY 13.1 Confidentiality Obligation this Agreement the Parties agree that al Unless otherwise specified in information and data acquired or obtained by any Party pursuant to this Agreement andor the implementation of its terms and conditions shall be considered confidential by the acquiring Party and shall be kept confidential this and not be disclosed at any time to any person or entity not a party t0 Page 27 . v A o Uy P M Q Agreement without the prior written consent of the other Parties such consent not be unreasonably withheld. However such confidential information and data may be disclosed as follows to To an Affiliate provided such Affiliate maintains confidentiality as provided in this Article 13; To a government agency ot other entity when required by applicable law the terms and conditions of the OML andort the terms and conditons of the Joint Operating Agreement; To the extent such data and information is required to be furnished in compliance with any applicable laws or regulations the Joint Operating Agreement or pursuant to any legal proceedings or because of any other order of any court binding upon a Party; Subject to Article 13.4 to contractors consultants and attorneys employed by a Party where disclosure of such data or information is essential to such contractors consultants or attorneys work;

Subject to Article 13.4 to a bank or other financial institution to the extent appropriate to assist a Party in arranging for funding for its obligations under this Agreement; any government or or requirements of To the extent such data and information must be disclosed pursuant to any rules stock exchange having jurisdiction over the disclosing Party; provided that if any Party desires to disclose information in an annual or periodic report to its or its Affiliates shareholders and to the public and such disclosure is not required pursuant to any rules or requirements of any government or stock exchange then such disclosure shall not be made without the prior consent of the other Parties such consent not to be unreasonably withheld; 7 To a Party's employees associates implementing this Agreement subject to precautions to ensure such data and information are kept confidential. for each Party the purposes of taking customary and partners 13.2 13.3 In the event that any entity constituting Farmee ceases to hold an interest under this Agreement such entity will continue to be bound by the provisions of this Article. In the event that this Agreement is terminated the Farmor shall be at liberty to disclose such Confidential Information to prospective assignees of the Page 28 Marginal Field and/or such other Parties as it may require in the conduct of their own Petroleum Operations in the OML.. 13.4 Confidentiality Undertaking from Certain Recipient Parties to such disclosure Disclosure pursuant to Articles 13.14 and 13.15 shall not be made unless prior the disclosing Party a written undertaking from the recipient party to keep the data and information strictly confidential and not to use or disclose the data and information except for the express purpose for which disclosure is to be made. o obtained has 13.5 Survival of Confidentiality Obligations The obligations of confidentiality contained in this Article 13 shall survive the termination of this Agreement and shall continue to be binding upon the Parties until expiration of the OML.

ARTICLE 14 ABANDONMENT SECURITY 14.1 14.2 14.3 Farmee shall provide security funds to satisfy abandonment obligations from the Marginal Field including without limitation security to cover the Such security cost of any abandonment in accordance with Schedule C. funds the underlying obligations and released liabilities are met reduced or released. be reduced or shall as first Upon commencement of Operations and prior to submission of its work programme to DPR the the agree

Parties Abandonment Security Agreement which shall be completed and executed by all Parties prior to any exploration and or development activities by Farmee. The Abandonment Security Agreement shall be in accordance with Schedule C. shall negotiate and for abandonment costs pursuant to If Farmee has at the effective date of termination already provided security an Abandonment Security funds Agreement entered into pursuant to this Agreement the adequacy of such security shall be reviewed by both Farmee and Farmor. Farmee shall take responsibility for any shortfall or surplus arising from the decommissioning of abandonment operations. 144 The security funds so provided by the Farmee shall be paid into an esc account established under this agreement both Farmee and Farmor shall be joint signatories to the account. The process of decommissioning activities Page 29 this agreement shall be carried out by the Farmee on termination of Farmees Operations under accordance on decommissioning and abandonment guidelines. In case of a compelling reason for a deferment of decommissioning or abandonment it shall be referred to DPR for consideration and approval provided that such approval shall not result in any liability to the Farmor for breach of any statute or tort regulation DPRs with in ARTICLE 15 LIABILITIES AND INDEMNITIES 15.1 General Liability and Indemnity 15.1.1 Farmee shall assume full responsibility and for Operations it conducts under this Agreement including but not limited to the cost of all Operations abandonment and third party liabilities. liability 15.1.2 Farmor hereby agree to indemnify and hold harmless the Farmee its Affiliates and all officers and directors of the Farmee from and against all losses claims liabilities damages costs arising from or attributable to previous actions in the Farmout Area prior to the Effective Date save as contributed to or escalated by an act or omission of the Farmee its servants and/or agents. Farmor also agrees to indemnify and hold harmless Farmec against loss or damage caused to or suffered by Farmee as result of any environmental mishap safety problem or other emergency arising from or out of the Farmors operations in the OML outside the Farmout Area save as contributed to or escalated by an act or omission of the Farmee its servants and/or agents. 15.1.3 Farmee hereby agrees to indemnify and hold harmless the Farmor their respective Affiliates and all officers and directors from and against all

losses or expenses of every nature arising from or liabilities damages costs attributable to the conduct of Operations by Farmee under this Agreement. save as contributed to or escalated by an act or omission of the Farmer servants and/or agents.

15.2 Limit of Farmor liability to Farmee or compensation payable Farmor shall not be liable for or to any persons in respect of any damages claims in particular from accidental death or injury to any workman visitor invirce or other persons whether or not in the employment of the Farmee agents and/or contractors arising out of the Operations or due to any other cause applicable arising under law any Page 30 18 N V v CN CU v ; save and except an accident or injury arising from the negligence of Farmor their agents or servants. The Farmee shall indemnify and hold Farmor harmless from all such damages claims expenses compensation and the like arising under any obligation imposed upon Farmor under statute except where Farmor is found to have acted with Negligence or Wilful Misconduct. in G

15.3 Third Party Liability

15.3.1 Farmee shall indemnify and hold harmless Farmor their agents and servants from all liability for personal injury including fatal injury and disease loss of or damage to property and inconvenience to any Third Party arising out of or in connection with Operations.

15.3.2 Farmee shall be responsible for settling all valid claims for loss damage injury or death to any third party including Farmors personnel caused by the Farmee or his agents or servants in the Operations. Farmor shall pass any claim presented to Farmor by any injured third party to the Farmee. If the Farmee delays or refuses to and the Third Party continues to claim against Farmor then if in the opinion of Farmor the claim is valid Farmor may in consultation with the Farmee pay the third party the amount of the claim and recover such amount from Farmee. settle the claim

15.3.3 Except as otherwise provided in this Agreement any loss claims damages and or causes of action brought by a third party against the Parties or any of them arising directly or indirectly out of the conduct of Operations in the Farmout Area shall be for Farmees sole account.

15.4 Injury to Farmees personnel Farmee shall be liable for and shall indemnify Farmor against all claims in respect of all diseases and injuries to death of any and all employees of Farmee its agents and servants howsoever arising except where due to the negligence of Farmor its agents or servants.

15.5 Injury

to Farmors Personnel Farmor shall be liable for and shall indemnify the Farmee against all claims in respect of all diseases and injuries to death of any and all employcc.s of Farmor their agents and servants arising from the exercise by Farmor of znv of their rights and obligations under this Agreement except where such is due to the negligence of Farmee its agents or scrvants. Page 3115.6 Property Damage to Farmees Farmee shall be responsible for all damage to loss of use of and loss of the Farmees equipment vehicles machines tools or other property including the property of its employees during Operations. 157 Damage to Farmots Property loss be responsible for and shall indemnify Farmor for or Farmee shall damage to property belonging to Farmor including their employees agents a result of Operations and scrvants which is damaged by the Farmee or as from Effective date of this Agrecment ot by any petson Of persons whom ine Farmee has allowed onto Farmout Area ot by any person being on premises who the Farmee ought to have removed or cjected unless such loss or damage is caused by the Gross Negligence or Wilful Misconduct of the Farmor . Whete relevant theFarmee shall be responsible for the cost of tepairs replacement transportation and all other inental expenses which Farmot may incur in replacing or tepairing the property. 15.8 Liability for acts of Farmees contractors Farmee shall indemnify Farmor against all actions claims demands and damages arising from acts or omissions of its employees contractors andor and agents scrvants including claims brought by such contractors against the Farmor or any of them. from the employment of such contractors agents their or 15.9 Liens Without prejudice to Article 6.1.6 herein Farmee shall indemnify Farmor for and against any liens issued against the FarmOut Area andor the Farmout Facilities arising from any dispute between Farmee and any third in consequence of any default by the Farmee to any party whether or not or third patty. Tt this agreement encumbrance other than in accordance with the terms of under the texms of this Agreement. Farmee shall shall be a Material Breach notify Farmor of any possible lien which may affect FarmOut Arca andot the Farmout Facilities. is hereby expressly agreed that the creation of any lien 15.10 War and confiscation Risk Farmee acknowledges that Farmor have no duty or responsibility to Farmce his contractors agents and servants in respect of any equipment materials

Page 32 and any other property of the Farmee and such contractors and their agents and servants in the event of a civil war recognised sabotage violence seizure war insurrection civil commotion hostilities whether or not war be declared or rebellion blockage revolution and embargo by whomsoever carried out and in any case nationalisation expropriation confiscation sequestration and any other purported authority which affects the liberty or the rights in property the Farmee its contractors their agents or persons generally or agents and servants. competent authority and orders that acts riot or of 15.10.1 Farmee hereby undertakes to fully indemnify Farmor against all claims demands and losses and against all costs of disputing them in connections related circumstances and with thereto. aforesaid matters other any the of all 15.10.2 Farmee thereto including their shall indemnify hold harmless and defend Farmot and respective Affiliates from and against all losses liability claims fines costs including attorneys fees and expenses and causes of action arising with to PLUGGING AND not respect ABANDONMENT OF EXISTING WELLS THE RESTORATION OF THE SURFACE OF THE LAND as may be required under the applicable any applicable governmental agency permits or having jurisdiction over well abandonment and the removal of or failure to remove any materials facilities or equipment used or required by Farmee in the conduct of Operations. as may be required by limited but 15.11 Extent of Indemnities The indemnities to either Party under this Agreement cover all sums paid by or on behalf of the indemnified party in satisfaction of the judgement of any court of law and all sums including costs legal fees and expenses paid or incurred by the indemnified party in settling or forestalling any claims or demands made against the indemnified party arising out of the risks against which the indemnity was given but shall not cover any indirect or consequential losses. Page 33 15.12 Environmental Compliance 15.12.1 15.12.2 all loss costs fines claims liability expenses Farmee assumes full responsibility for and agrees to indemnify hold harmless and defend Farmot and their respective Affiliates from and including against attorneys fees and expenses and causes of action including but not limited to those caused by or arising out of the enforcement or threatened enforcement of any applicable law governmental rules material or any environmental cleanup related

directly or indirectly to . Operations. regulations regarding orders waste and any be liable and shall indemnify Farmor from and The Farmee shall against any loss ot damage to any person Of property arising out of pollution ot contamination caused by the discharge or escape of oil other pollutants or contaminants from the Farmecs Operations the presence disposal celease or threatened release of any waste matesial and itself or subconteactors of any tier into the atmosphere or into ot upon land or any water coutse Of body of water including ground watet O the extent such are attributable in whole or in part to Operations under this Agreement. contractors hazardous including substance by its Page 34 s v

ARTICLE 16 INSURANCE 161 Farmee shall procure and maintain insurance as respect of Operations including any insuranc which shall as the financial limit specified a minimum be the insurance set out in the table b normally carried in required by the Regulations clow up to is 1

Comment Essential Financial Limits Specific inclusions Million Thirty U.S. Dollats Insurance course

1. Cost of Well Control Insurance the event which would respond in of a well getting out of control in activities the recompletion including testing reworking reconditioning until out replacing completion or abandonment. drilling cleaning of Million Thirty U.S. Dollats Essential
2. General Third Party Liability Insurance to cover legal liability to bodily third the injurydeath Farmee s activities including resulting parties from AND pollution Operations of seepage by from Farmees cost Seepage and Pollution Policy to respond to claims for bodily injury loss ot damage to or loss of use of property caused arising including removingnullifying cleaning up Seepage or pollution
- 3 Employers Liability Insurance to cover Farmee s tesponsibility to bodily employees its in injuryatentdeadl the course of employment. suffered for Essential with In line Workmens Compensation Act Page 35 Policy damage Farmee Onshore Property to Fire Lightening s against
- 4 cover sk of Perils Allied movable assets buildings and other facilities.
5. Offshore Assets Policy to cover Offshore Full of risk offshore Property platforms if any
6. Construction All Risks CAR fabrication cover Insurance maintenance and construction activities of Farmee Motor Vehicle O including to Full replacement value replacement TFull construction value with with to Passenger be may c line In sitnilar Statutory Insutance Statute by 7 as Liability Of required regulation in the country of use for requirements

motor vehicles used by Farmee in its Operations. Hull 8. Marine line In Machinery Protection of statutory risk cover Indemnity crafts vessels to loss damage owned employed by Farmee in its third party including Operations liability arising therefrom. line 9. Insurance to cover loss damage to statutory the requirements Farmee's aircrafts employed in for liabilities legal business damage to property or injury death of 3rd party arising therefrom. requirements Liability Aircraft Hull and In with If onshore assets 1f offshore assets If required B liPage 36 A 162 The Farmee shall procure the insurance policies set out in the table above from an insurance company that complies with the following conditions 2 Insurer must meet minimum capitalisation requirement as stipulated under the Insurance Decree for Special Risks Oil Gas Business is classified as Special Risk. b In addition Insurer Insurance Commission licence specified class classes. should possess to current NAICOM Nigerian the operate Insurer an as in c B experience in Oil Gas Business Insurer should possess a specialised by persons with relevant Energy Department appropriately staffed qualifications and experience. Insurer may be required to indicate Oil Gas Clients currently serviced d Desirable for Insurer to possess Federal Ministry of Finance approval for participation in the Insurance of Federal Government Assets. Insurer must maintain adequate technical reserves in accordance with S. 24 of the Insurance Decree. f Insurer must show evidence arrangement of adequate and valid Reinsurance Insurance Policy shall require that Insurer notifies JV Operator in the event of non payment of premium or other default in the Insurance Policy prior to the taking of any adverse action such as termination by the Insurer Farmee shall promptly inform Farmox of such insurance and provide the Farmox with copies of the cover notes and the annual coverage certificates when the same are issued. Farmee shall arrange for all the Farmox in proportion to their respective be named as Participating subrogation in favour of all the Parties; and co-insureds Interests waivers with O of all claims and take all necessary steps to collect any T Farmee shall duly file proceeds. Farmee shall also require all contractors or subcontractors performing work in respect of the Operations to effect and maintain any and all insurance the Regulations and this Agreement and shall make its best required by APage 37 163 164 16.5 16.6 167 to ensure that all such

contractors and subcontractors have their efforts insureds include Farmee as additional insureds and waive rights of recourse against Farmee and its respective employees.

ARTICLE 17 APPLICABLE LAW AND DISPUTE RESOLUTION

17.1 Applicable Law This Agreement including the dispute resolution procedure specified in Article 17.3 and 4 below shall be governed by construed interpreted and of Nigeria of applied excluding any rules of law which would otherwise refer the matter to the laws of another jurisdiction. in accordance with Republic Federal laws the

17.2 Dispute Resolution Procedures

17.2.1 In 30 date finally settled the event of on which notice a dispute between or among the Parties regarding this Agreement its interpretation performance or any other matter relating to this Agreement which the Parties cannot resolve amicably the matter shall notice from the by binding arbitration upon written be initiating Party to the other Parties. Farmee shall appoint one 1 arbitrator and JV Operator as operator of the Joint Venture shall appoint another arbitrator and each shall inform the other of the name of its arbitrator so was days from the appointed within thirty received from the Party initiating the arbitration proceeding If either fails to inform the other of the appointment of its arbitrator within the time limit prescribed the other Party may request that such arbitrator be appointed in accordance with the Arbitration and Conciliation Act of Nigeria. The two 2 arbitrators thus appointed shall choose the third arbitrator who will act as the presiding arbitrator of the tribunal No arbitrator shall be an employee or agent or former employee or agent of any of the Parties. In the case of failure to agree on the appointment of a third arbitrator within thirty 30 2 above mentioned later days arbitrators such third arbitrator shall be appointed by the Chief Justice of Nigeria on the application of any Party involved in the difference or dispute notice of intention to apply having been given in writing by the applicant Party to the other Party which for the Farmor shall be the v Operator. When appointed the presiding arbitrator shall convene meetings of the arbitration panel. The award shall be delivered within three months of the appointment of the presiding arbitrator or within such extended period as may be agreed by the Parties. the appointment of the two the of of Page 38 ; J 4 J] KM AV

17.2.2 The Parties shall extend to the Operations determination of the dispute. the arbitrators all for obtaining any information

required facilities including access to the proper for 17.2.3 The arbitration shall take place in Lagos Nigeria. The language to be used in the arbitral proceedings shall be English. 17.2.4 The absence or default of any Party to the arbitration shall not be permitted to prevent or hinder the arbitration in any or all of its stages. Furthermore access information the required for the resolution of the dispute shall not prevent the arbitrators from rendering an award to resolve the dispute. arbitrators refusal allow Party the the of to to 17.2.5 The costs of the arbitration proceedings shall be divided equally among the to such proceedings; provided however that each the costs and expenses of any witnesses presented by such Party Parties arbitration proceeding shall be responsible for well regardless of which Party prevails. Party its own attorneys to the a5 fees as 17.2.6 Pending the arbitrators to decision or award the operations or activities in the arbitration need not be discontinued. It which have given rise hereby agreed that any such pending arbitration shall not in any event have the effect of hindering Petroleum Operations by the Farmor on the OML In the event the it shall Farmee be entitled to apply for any such order. decision of award recognises that the dispute was justified provisions may be made therein for the appropriate reparation to be made. 17.2.7 Judgement regarding any arbitral award rendered may be entered in any way be made to such court for a judgment and an order of enforcement as the case court having jurisdiction or application in judicial acceptance of the award may be. 17.2.8 Although each Party shall pay its own attorneys fees and costs related to participation in the arbitral proceedings no matter which Party prevails the or part of such the request of a Party direct that all arbitrators may at arbitral to participation in related fees attorneys Partys the Party initiating the arbitration if the proceedings are arbitrators deem the claim of such initiating Party to be frivolous. and be paid by costs the to 17.2.9 The Parties undertake to arbitral proceedings. keep strictly confidential the of the Page 39 D

ARTICLE 18 ASSIGNMENT OF INTEREST S

Rights of Assignment 18.1 18.1.1 Subject always to Farmors approval and the consent of Government and the provisions hereinafter contained Farmee shall not at any time assign or transfer all or part of its rights and obligations under this Agreement except as follows to as to its and and well other assign financial sufficiently transferee rights the and information about to

determine that is the proposed assignee or assume under this obligations right If Farmee desites a third party it shall provide the Agreement or any part thereof to Farmor with the full details of the proposed assignment transaction the data as proposed third party assignee as requested by Farmor in order to be the able and qualified Assignee obligations which it proposes to assign. Such assignment shall not be made unless the Farmor shall have consented to such assignment or transfer in writing based on their satisfaction with the competence of the Assignee to discharge the obligations under this Agreement as they relate to the Farmout Area. Fatmor shall not grant such consent if the proposed assignment ot transfer may in the reasonable opinion of any of the Farmor bring the OML operations into distepute ot affect the goodstanding of the OML ot any of the Farmor or their respective Affiliates. Farmor shall within sixty 60 days of receipt of notice of such assignment from the assigning ot transferring Party the Assignor or within such longer petiod as may reasonably be required to consider any information provided by the Assignor with regard to the financial and technical capability of the Assignee either the Assignor in consent to so by Farmor to writing that such consent is withheld. notify within such period shall be deemed to be consent by Farmor to such assignment; such assignment in writing or A notify failure to of have Assignor fully performed all duties its the effective date of shall the obligations under the Agreement up assignment or transfer; and the Assignor shall notwithstanding the assignment be liable to the other Parties for any obligations financial or otherwise which have vested matured or accrued under the provisions of the OML or this Agteement ptior to the cffective date of such assignment. and the Page 40 it of and unless of such assignment t The Assignee shall have no rights in and under this Agreement arising the Assignee has until the out obligations expressly undertaken in writing to petform the Assignor under this Agreement including Abandonment obligations to the satisfaction of the Farmor. an Abandonment If the Assignor has provided security putsuant to Security Agrecment entered into pursuant to Article 14 the Assignot 2 release of such security of such part thereof shall not be entitled to is attributable to the interest t0 be assigned until the Assignee has such Abandonment as in complied with Security Agreement a3 they apply to the Party holding the interest O required to

provide security its terms of this Article 18 it may not be until the Assignor becomes entitled to any such release such Abandonment shall remain in place of Party. The Security Agreement of the relevant part thereof as an abandonment of the Party holding the interest in question. notwithstanding requirements pursuant specified provided assigned Assignee security which share costs such shall time held that has the the the the for be be of at is it is to the Farmor for 182

Assignment to Affiliates 18.2.1 Farmee may at any time upon notice to the Farmor transfer all or part of its rights and obligations under this Agreement to an Affiliate subject to any Farmee shall remain necessary consent and approval of the Government. all obligations under this Agreement transferred this Article 18 and such obligations shall in addition become the liability pursuant to This requirement may be waived by the Farmor obligations of the assignee. financial standing and technical of the same or better if such Affiliate competence as Farmee and assignee has given an unconditional undertaking to assume all obligations of the Farmee under this Agreement. at any time an assignee ceases to be an Affiliate the interest transferred shall be retransferred to Farmee prior to such cessation and Farmee shall be bound to accept such retransfer notwithstanding that it may have ceased to be a party to this Agreement provided always that if an order has been made by a court or an effective resolution has been passed on the dissolution liquidation winding up or reorganisation under any bankruptcy laws of Farmee; or Farmee has become insolvent bankrupt or has made an assignment for the benefit of creditors. 18.2.2 If at any time the Farmor shall be entitled to terminate this Agreement in accordance with the provisions of Article 19 herein.

ARTICLE 19 TERMINATION

19.1 Early Termination This Agreement may in the following circumstances be terminated immediately under the following article 19.1.1 to its or any of its creditors Nigerian a wilfully forced to make restitution found by a court. If Farmee or any Party constituting Farmee is declared bankrupt or becomes insolvent and is a court having competent jurisdiction and has violated regulations governing petroleum operations financial transactions and commercial operations during the term of the Agreement. If the DPR determines that the operations conducted by Farmee are not being conducted in compliance with applicable Nigerian and Petroleum laws safety standards and Farmee does not

testote its Operations to compliance within ninety 90 days after receiving a written notice from the DPR regarding the aforementioned noncompliance. and ot environmental health interests under this Agreement the notice and prior written consent of tegulations rights and its prior written If Farmee assigns without a Government. in out cartied a with Nigerian laws is established that the Farmee intentionally cxttracts or produces 1f it any Petroleumn outside the Farmout Area unless such extracton or result of expresssly authorized ot unavoidable as production is and accordance operations Regulations. If the Farmee is unable to remedy or remove the cause of a Material Breach after the full 90day notice period stipulated in Article 19.2. The Farmor may terminate this Agreement in accordance with the has 19.2 procedure For its of committed a puposes of this Agreement Matetial Breach shall mean a substantial herein obligations Farmee hereunder. in Material Article Breach specified the if Page 42breach of the provisions of this Agreement andox the Regulations by the provisions of shall include but the Tarmee and 16 19.1.1 Articles 8 not below 15.9 14 limited to If the Farmor determines Operations are substantially interfering with Petroleum Operations conducted by the Farmor. and the DPR approves that Farmees if is it established that the Farmee discloses confidential information related to the Petroleum Opeations in breach of the provisions of this Agreement and such disclosure causes prejudice to Farmor or the State. 1 JV Operator is notified of any breach by Farmee of the Insurance Policy. a b c 191.2 If Farmor consider that one of the causes set out in Asticle d If Parmee intentionally submits false information to the Government of to Farmot. a of of 90 date 19.1.1 cause ninety period days from the 19.1.1 including a d exists to terminate this Agreement Farmor shall notify Farmec in writing of the particular cause requiring Farmeeto remedy oOr remove the of breach within notification. If after the end of the ninety 90 day notice period such cause has not been remedied or removed ot if agreement has not been reached on a plan to remedy ox remove the cause Farmot may terminate this Agreement In accordance with the provisions of Article 19.1 above. If Farmee stops Operations fora petiod of more than nincty 90 days with 0o cause of justification acceptable under the Regulations Farmor may terminate this agrcement upon issuing thirty 30 days notice in writing to Farmee. If any of the entities

constituting Farmee but not all of them gives Farmor due cause to terminate this Agreement pursuant to the provisions of Article 19.1 above then such termination shall take effect only with respect to such entity or entities and the rights and obligations that such entity or entities hold under this Agreement except as herein provided in the preceding paragraph to Farmor without compensation PROVIDED that and subject shall entities applicable thereto [Farmor on respective their proportionate approval of the Farmor and the Government of such assignment. the other the to agreement between themselves and obligations the to may acquire terms to such participating rights interests subject entities revert 19.2 19.3 Page 4319.4 19.5 cease. this Article or by any reason The termination of the Agreement envisaged in whatsoever shall be without prejudice to any rights which may have accrued to any Party in accordance with this Agreement the OML or the Regulations.

Events following termination In the event of termination of this Agreement for any of the circumstances specified in Article 19.1 above the Farmout shall immediately expire and the proper decommissioning and/or the Farmout abandonment of all Operations and restoration of all land in Area including any associated facilities and for the avoidance of doubt the [Farmout Facilities in accordance with the Regulations and the provisions of 19.5.2 Farmee shall not later than ninety 90 days thereafter surrender possession complete rights titles interests and estates as owner of the Farmout Area and possessory interest by way of reversion or otherwise in the Farmout 19.5.1 Farmee shall remain responsible for the Farmout Area caused Farmor to this Agreement. to Farmor and have and full of Area. 19.5.3 At the time of such surrender all obligations of the OML and Regulations concerning decommissioning and abandonment shall have been fulfilled by Farmee.

19.5.4 Each day following the ninety day period required for surrender of the the condition required by rent Farmout Area that Farmee has not surrendered possession of the Farm out the Regulations this Agreement and Area in of Ten Thousand Naira N10 000 for Farmee shall pay to Farmor a Farmee possession irrevocably agrees that this rent is reasonable and 2 reasonable charge for its each continued presence in construed to be a penalty. the Farmout Area of Farmout Farmee retains Area. shall that and and day not not is be 19.5.5 Prior to effective date of termination Farmee shall

satisfy all obligations and including without of respect be implemented thereafter of any liability for acts occurrences or Circumstances taking place from its effective date of termination, or existing prior to has incurred or statutory any the if it liabilities limitation Operations that obligation obligations it to liabilities to attributable party third concerned even are set out in Page 44 19.6 Approvals Farmee shall promptly join in such actions as may be needed or desirable to and the obtain the Farmor in abandonment and any penalties or expenses incurred by connection with such termination shall be borne by Farmee. in connection with any approval termination required ARTICLE 20 NOTICES 20.1 Delivery and Receipt of Notices by the shall unless letter recipient specifically Agreement 20.1.1 Any notification consent Or other communication to be given under provided otherwise Notice be sufficiently made if delivered by hand or this herein be in writing and will by electronic communication means including electronic or regular mail mail or facsimile transmission to be confirmed unless acknowledged at the addresses hereinafter at otherwise agreed by specified and shall unless otherwise provided herein be deemed to have been made on the day of delivery in the case of delivery by hand five the case of regular mail or twentyfour 24 hours days after dispatch in after dispatch in the case of telegraphic communication. Unless otherwise specified by not less than fifteen 15 days notice Notices shall be given at the following addresses The Group Managing Director NNPC Nigerian National Petroleum Corporation NNPC Towers Herbert Macaulay Way Central Business District Abuja Nigeria Facsimile Telex Telephone The Shell Petroleum Development Company of Nigeria Limited Freeman House 2122 Marina Lagos P.M.B. 2418 Lagos Nigeria Facsimile Telephone 012601600 Page 45 CTelex To NNPC Nigerian Agip Oil Company Limited Plot PC 23 Engineering Close Victoria Island Lagos Nigeria P.O. Box 14 1268 Lagos Nigeria Facsimile 01262 2241 Telephone 01 260 0100 Telex 28734 AGIP NG Elf Petroleum Nigeria Limited 35 Kofo Abayomi Street Victoria Island Lagos Nigeria P.O. Box 927 Lagos Nigeria Facsimile 01 2623744 Telephone 01 261 3720 21320 elf ng Telex N To Farmee Universal Energy Resources Limited 25 Idoro Road Uyo Akwa Ibom State Nigeria Telephone 08023187338; 087 776696 Email emmanuelmbo@yahoo.co.uk 20.2 20.3 said The Party receiving a Notice by hand shall cause a

receipt for any the person delivering same and shall record the Notice to delivery of the said Notice in a permanent register and indicate the date and time of delivery of the said receipt in the said register. be given to time and Each Party shall have the order designate that copies of all such notices be directed to another person at another address by giving written notice thereof to the other Parties. to change its address at any time Page 46 4 ;

ARTICLE 21 RELATIONSHIP OF THE PARTIES AND TAX MATTERS

Relationship of the Parties 211 212 duties be this Agreement the rights each except liabilities their shall specified of In Parties relations be otherwise and other fiduciaries this Agreement shall act as whatsoever the an agent servant or employee for any other Party in Parties under is not the intention of the Parties to create create 2 mining Of this Agreement be deemed or construed to authorise any Of 0 trust any for this under as as Except the obligations several not joint or collective. It shall other partnership joint venture association or Party to with purpose considered not Agreement expressly provided in this Agreement. Tax Liability Each Party shall prepare and file the requisite income and other tax reports and returns required of such Party in accordance with the Regulations. FURTHERMORE INDEMNIFY AND HOLD HARMLESS FROM AND AGAINST RETURNS PAYMENT OF TAXES AND/OR THE ASSESSMENT RESPONSIBILITY AND PAYMENT OF ANY RELATED FEES OR PENALTIES. ARTICLE 22 FORCE MAJEURE

AX 221 222

be Party A Force Majeure situation includes delays defaults or inability to perform 20y event beyond the reasonable control of under this Agreement due to event limited event may Or perils of navigation Such any happening or occurrence due to natural causes acts fire hostilities war declared or undeclared blockade labour disturbances of hostilities by strikes riots insurrection civil commotion including acts floods storms epidemics quackery of Government and local earthquakes blowout lightning other acts of God. restrictions of acts communities or orders act not any but to is result of Force Majeure any Party is rendered unable wholly or a to as To part obligation party to out pay its any obligations amounts under due or this to Agreement other security furnish than then in the the Page 47 A i effects relied on and shall keep the obligations of the Party giving notice of Force Majeure shall be suspended during the continuance of any inability so caused but for no longer

period. The Party claiming Force Majeure shall notify the other Party of the Force Majeure situation within twentyfour 24 hours after the occurrence of the all significant developments. Such notice shall give reasonably full particulars of said Force Majeure and also estimate the period of time which said Party will probably reasonable endeavours to remove or overcome the Force Majeure situation as quickly as possible in an economic manner but shall not be obligated to except on terms disputes shall be handled within the sole discretion of the affected Party. To remedy the Force Majeure. The affected other Party informed of any labour dispute acceptable require it and Party settle shall use all to such

ARTICLE 23 GENERAL PROVISIONS

23.1 Press Releases all press releases and Farmee shall consult with JV Operator with regard to other announcements concerning this Agreement of the Operations subject to the approval of DPR.

23.2 Conflict of Interest its directors partners employees and agents this Agreement neither it nor any of its the other that except as otherwise directed Each Party for itself and for warrants covenants and represents to expressly provided in employees partners Of agents has given to or received from the other Party commission fee rebate gift or other thing of service in connection with this Agreement. directors partners employees or agents any such other Parties any or

2 23.3 Effect of Invalid Provisions In the event that any covenant condition or provision contained in Agreement is of any such covenant condition or provision shall invalidity affect any other covenant condition or provision contained herein. this a court of competent jurisdiction the no way to be invalid by held in Page 48 W

23.4 Titles and Headings The titles and headings of the various paragraphs hereof are intended solely for means of reference and are not intended for any purpose whatsoever to modify explain or place any construction on any of the provisions of this Agreement.

23.5 23.6 Counterparts This agreement shall be executed in counterparts by all the Parties each of which shall be deemed an original.

Entirety of Agreement and Amendments This Agreement constitutes the entire Agreement and understanding among the Parties hereto and supersedes any prior agreement and understanding the subject matter of this Agreement. This Agreement may be relating to modified or amended only by a duly authorised written instrument executed by all of the Parties hereto. IN WITNESS

WHEREOF the Parties have executed this Agreement in triplicate intending each copy to be written at the beginning of this Agreement. For NIGERIAN NATIONAL PETROLEUM CORPORATION an original on the date first Bygone; Name ENGR. F.M. KUPOLOKUN Designation GROUP AGING DIRECTOR In the presence of . Signature Name Chief SENA ANTHONY MCI Asst. Designation GROUP GENERAL MANAGER CORPORATE SECRETARIAT AND LEGAL DIVISION

Page 49 For THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED By Name SI How are Designation NEW BUCISS 605 Pts Digeole MCLLP In the presence of Signature Name C. . O.KLAWEY VT2 Designation CM 7W7. C;c[a of f.]i For ELF PETROLEUM NIGERIA LIMITED By oo B ALLI ApEKunLE Natme EXELUTWE Drrectsd BUSINESS BIm AL Designation In the presence of Signature WM WDN OMBi STEWWEDA Name Designation CMA M SWZW Page 50 IFor NIGERIAN AGIP OIL COMPANY LIMITED IAYcTuus . Name HForoAr Designation LL In the presence of Signature NE OkIEGLA Name Designation Cbmgn For UNIVERSAL ENERGY RESOURCES LIMITED By Name ENGR. EMMANUEL MBOHO Designation MANAGING DIRECTOR In the presence of Signature gMW Lol Name BARRISTER Mss. NKOYO AMANA Designation COMPANY SECRETARY Page 51

NAPPROVED BY THE HONOURABLE MINISTER In approving this Agreement Government holds harmless the Farmor and their respective Affiliates from and against any statutory fine penalty or liability on the OML arising out of i any failure by Farmee in complying with any Governmental law or Regulation or pollution or contamination caused by the discharge or escape of oil other pollutants or contaminants from the Farmees Operations the presence disposal release of threatened release of any waste material or hazardous substance into the atmosphere or into or upon land or any water course or body of water including ground water to the extent such are attributable in whole or in part to Farmees Operations in the Farmout Area under this Agreement. any failure by Farmee with respect to including but not limited to PLUGGING AND ABANDONMENT OF EXISTING WELLS THE RESTORATION OF THE SURFACE OF THE LAND as may be required under the applicable permits or as may be required by any applicable governmental agency having jurisdiction over well abandonment and the removal

of or failure to remove any materials facilities or equipment used or required by Farmee in the conduct of Operations. Signature7 M. DAUKORU Name Designation PRESIDENTIAL ADVISER ON PETROLEUM AND ENERGY FOR AND ON BEHALF OF MINISTER OF PETROLEUM RESOURCES. Page 52 A0 I I A em In the presence of Name 5.7 .o EPLE fGe e e Signature ... oo Reoonendt Seceerfill. Designation FeVEINES L Page 53 SCHEDULE A FARMOUT AREA FARMOUT DEPTH AND FARMOUT FACILITIES STUBB CREEK FIELD Farmout Area The Farmout Area is captured within the boundaries defined by the following coordinates in meters Eastings 633825 640895 640895 633825 A B G D Northings 68025 68025 62037 62037 These coordinates constitute the corners of a polygon encompassing areas of Oil Mining Lease 14 as shown on the map attached hereto. Farm out Depth The Farmout Depth is 9829 ft True Vertical Depth Subsea. Farmout Facilities 1 Stubb Creek wells 1 2 wells 3 and 4 Wells 1 3 and 4 are abandoned If any additional Farmout propettics are identified they will be included in future side letter attached to this Agreement. DESCRIPTION OF ENVI FARMOUT AREA BASE SCHEDULE B ENVIRONMENTAL CONDITION D ON ENVIRONMENTAL EVALUATION STUDIES The environmental status of the Stu FEenvironmental Evaluation Report to bb Creek Field will be described in an be provided by Farmor to Farmee.SCHEDULE C DECOMMISSIONING AND ABANDONMENT SECURITY The decommissioning and Abandonment security shall be in accordance with the formula below [01D4 1 Where Amount to be paid annually into an escrow account as abandonment security. D Development cost of field. 0.1D 10 of development cost of cd. t Bxpected field life LIBOR rate n Particular year of production The time of first payment shall be not later than seven 7 days after the commencement of production by Farmee from the Marginal Field.THE REPUBLIC OF CAMEROON CAM IRON S.A. MBALAM CONVENTION 2. 1 3 3. 1 3.2 3.3 3.4 3.5 3.6 4 4.1 4.2 4.3 4.4 4.5 5 5.1 5.2 6 6.1 6.2 6.3 6.4 6.5 6.6 DEFINITIONS INTERPRETATION Interpretation LEGAL NATURE AND PURPOSE OF THIS CONVENTION Legal Nature of tbis Convention Project Description Project Economic Model Joint and Several Liability Other Deliveries on the Signature Date Project Commissioning CONDTIONS PRECEDENT Conditions Precedent Quadripartite

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 194 194 195 195 195 196 196 199 200 201 202 203 204 205 211 212 .. XII fi IffiALAM
 CONVENTION TITIS CONVENTION IS DATED NOVEMBER 292012 BETWEEN THE REPUBLIC
 OF CAMEROON represented by the His Excellency Emmanuel BONDE Minister of Industry Mines
 and Technological Development acting herein pursuant to the powers conferred upon him by the
 Prime Minister of the Republic of Cameroon hereinafter referred to as the State AND CAM moN S.A.
 a societe anonyme registered under the Jaws of the Republic of Cameroon with a share capital of
 1200 shares having its registered office at 2eme etage Immeuble Ilibiscus Avenue Charles De Gaul
 le Hippodrome Yaounde Cameroon; registered on 27 April2005 with the Regislre du Commerce et
 du Credil Mobilier RCCM of Yaounde under number RCYA02005B362 BP 33 059 Yaounde
 Republic of Cameroon; represented by Mr. Giulio Casella acting herein in his capacity as Chaimtan
 of the Board of Directors and Mr. Serge Asso o Mendomo acting herein in his capacity as General
 Manager pursuant to a power conferred upon them by a resolution of Cam Irons board of directors
 hereinafter referred to as Cam Iron. The State and Cam Iron being together referred to as the
 Parties and each as a Party. Considering Law No. 20010 11 of 16 April 2001 establishing a Mining
 Code as amended and supplemented by Law No. 2010011 of29 July 2010 and decree No
 20021648PM of26 March 2002 defming the conditions of implementation of Law No. 2001001 of 16
 April2001. The mineral deposits contained in the soi l and subsoil of the territory of the State are and
 remain the exclusive property of the State. Considering the importance of the mining sector in the

economic and social development of the Republic of Cameroon Cameroon the State in the framework of its mining resource development programme has decided to promote and stimulate foreign investment related to the exploration of said resources. In the context of this development plan the State has granted to Cam Iron the Exploration Permit under which Cam Iron has carried out exploration operations which confirmed the existence of iron ore deposits near the Mbalam village in the Eastern Region of the Republic of Cameroon. In progressing its exploration of the Exploration Permit and to provide certainty for its investment into the territory of the State. Cam Iron entered into the Framework Agreement with the State. Based on the findings of the Feasibility Study Cam Iron considers that those iron ore deposits would allow on an economically profitable basis in compliance with the fiscal and customs provisions described in this Convention the extraction of the Mbalam Ore as well as the construction of the facilities required for the exploitation processing transformation transportation and export of said Mbalam Ore the Blended Ore and the Beneficiated Ore through an integrated system and in accordance with the Operating standards set forth in the Project Agreements. page 1 1 Therefore Cam Iron declared that it is able to i ii iii iv v vi carry out or instruct a Third Party to carry out Mining Operations in the Exploitation Area in accordance with the terms and conditions set forth in this Convention the Project Agreements and the Exploitation Permit; construct or procure the construction of and exploit the Railway Facilities in accordance with the terms and conditions set forth in this Convention the Railway Concession the relevant Project Lease and the Railway Agreement; construct or procure the construction of and exploit the Mineral Terminal facilities in accordance with the terms and conditions set forth in this Convention the Mineral Terminal Concession the relevant Project Lease and the Mineral Terminal Agreement; subject to the satisfaction of the matters referred to in Articles ii and iii above provide Railway services and Mineral Terminal services to Third Parties; conduct or procure the conduct of the Blending Operations in accordance with the terms and conditions set forth in this Convention and the Blending Agreement; subject to the satisfaction of certain technical and economic criteria construct or procure the construction of and exploit the Beneficiation Facility in accordance with the terms and conditions set

forth in this Convention and the Beneficiation Agreement; vii as the case may be conduct or procure the conduct of and exploit any other facility required for the Project in accordance with the terms and conditions set forth in this Convention and where necessary an Additional Specific Agreement including procuring the conduct and construction of the Beneficiation Power Station; and viii carry on each of the foregoing activities together the Project at its own expense and risk either itself or through a Project Company. Having confirmed its commitment to undertake the Project under the terms and conditions set forth in this Convention Cam Iron has filed an application for obtaining the Exploitation Permit under the conditions and according with the terms of sections 45 et seq. of the Mining Code which was declared admissible. The Parties have convened negotiated and agreed to this Convention which is governed by the Legislation subject to any contrary provisions or exemptions required for the Projects needs as may be authorised by the Enabling Law.

THEREFORE THE PARTIES HAVE AGREED AS FOLLOWS

SECTION I GENERAL PROVISIONS

DEFINITIONS Where capitalized the terms and expressions used in this Convention have the meanings ascribed to them below

Acceding Party means each of the Mine Project Company the Railway Project Company and the Mineral Terminal Project Company and any other Project Company which will be acceding to this Convention in accordance with Article 6.4. page 12

Acceptable Bank Rating means a with respect to any bank based in the Peoples Republic of China a long term credit rating of at least Baa3 Moody's Investor Services Inc. or BBB Standard and Poor's Ratings Group; b any bank with a physical presence in Cameroon that is under the supervision and regulation of the States national monetary authority; and c with respect to any other financial institution a long term credit rating of at least BBB Standard and Poor's Ratings Group or Baa3 Moody's Investor Services Inc. unless otherwise agreed by the State. Accession Notice means the document attached as Annex I. Additional Facility Authorisation has the meaning ascribed to it in Article 19.1 g. Additional Facility Request has the meaning ascribed to it in Article 19.1 b. Additional Roads means all land traffic lanes other than a Project Road. Additional Specific Agreement means any agreement entered into between the State and Cam Iron a Project Company or any Subsidiary

as the case may be and if agreed between those Parties drawn up based on the BOOT model where appropriate determining and setting the framework of the conditions of funding and building of any facility required for the purposes of the Project but which cannot be governed by any existing Specific Agreement. Additional Spur Line means a standard gauge heavy haul railway connecting the Mainline Railway to exploitation areas covered by a mining permit other than the Exploitation Permit either within or outside the territory of the State but does not include the Initial Spur Lines or loading facilities at the relevant mine site. Additional State Interest means the State interest described in Article 45.2a(ii). Adverse Circumstances has the meaning ascribed to it in Article 47.1.4a. Aerodrome means the defined area on land within the Exploitation Permit on which there will be buildings installations and equipment intended to be used either for the arrival departure and surface movement of aircraft authorized by a Project Company to utilize the Facilities including passenger check-in areas baggage handling facilities customs offices office space ramp access security screening aircraft parking and hangar facilities and other areas or facilities necessary for the efficient conduct of aviation activities. Aerodrome Agreement means the agreement relating to the use of the Aerodrome which shall be concluded between the Mine Project Company Cam Iron and the State. Affiliate means with respect to an entity any other entity which is Controlled by or under common Control with such entity. Annex means an annex to this Convention and Annexes means all annexes to this Convention. Application has the meaning ascribed to it in Article 32.1 2a. Arbitration Procedure has the meaning ascribed to it in Article 56.3. Arms Length Terms means the terms which would be agreed upon between knowledgeable and willing parties in an arms length transaction. Assets or Goods means as the case may be all assets and/or goods required for the Project Operations including consumables plant equipment materials commodities vehicles fuel and hydrocarbons. Assignee means any Person directly or indirectly holding rights in the Project from any Project Company the transfer to which Person was permitted in accordance with the provisions of this Convention the Project Agreements and the Finance Documents. Auditors has the meaning ascribed to it in Article 30.2a. Bank Guarantee means a guarantee in a form acceptable to

the State in its reasonable discretion issued by an independent bank with an Acceptable Bank Rating whether or not located outside the territory of the State for the amounts referred to in this Convention and Bank Guarantees mean those guarantees collectively. Beneficiated Ore means iron ore mined in the Exploitation Area which has been beneficiated in the Beneficiation Facility. Beneficiation means the process whereby the Mine Project Company concentrates or upgrades the Low Grade Ore from the Exploitation Permit and/or reduces the level of impurities thereof by washing drying crushing or screening or a combination thereof by utilising the Beneficiation Facility and Beneficiated shall be construed accordingly. Beneficiation Agreement means the agreement to be finalized between the State and the Mine Project Company with regard to the design construction operation and maintenance of a Beneficiation Facility and associated facilities. Beneficiation Capacity Expansion Works means construction and related work performed on the Beneficiation Facility and required to increase the Initial Beneficiation Production Capacity or the Interim Beneficiation Production Capacity as the case may be. Beneficiation Election has the meaning ascribed to it in Article I 0.1 j. Beneficiation Escrow Account has the meaning ascribed to it in Article I 0.9. Beneficiation Facility means the plant to be constructed which will enable the conduct of Beneficiation Operations which for clarification excludes the Beneficiation Power Station with an initial capacity equal to the Initial Beneficiation Production Capacity or Interim Beneficiation Production Capacity and as the context requires includes any expansion of that facility as contemplated by Article I 0.13. Beneficiation Feasibility Study has the meaning ascribed to it in Article 10.1 d. Beneficiation Operations means the design construction operation and maintenance of a Beneficiation Facility. Beneficiation Power Station means either the gas fired or hydro power station which is to be constructed to generate the power to meet the power requirements of the Beneficiation Operations. Beneficiation Power Station Feasibility Study has the meaning ascribed to it in Article I O. Jd. v page4 Beneficiation Sector Good Practices refers to Good International Industry Practices methods techniques standards norms and actions internationally followed for large scale bulk commodity projects. Beneficiation Specifications means the specification that in the Beneficiation

Facility be designed to eventually produce thirty five million 35 000 000 Tonnes of Beneficiated Ore in any Calendar Year and the other detailed technical characteristics of the Beneficiation Facility which must take into account the Beneficiation Sector Good Practices; and ii the Beneficiation Power Station be designed to always produce enough power to facilitate the Beneficiation Operations. BF Commissioning has the meaning ascribed to it in Article 10.7f. BF Commissioning Deadline has the meaning attributed to it in Article 10.7. BF Construction Commencement Date has the meaning attributed to it in Article 10.10a. BF Power Station Construction Commencement Date has the meaning attributed to it in Article 10.10b. BF Construction Conditions means the conditions set forth in Annex 11. BF Construction Deadline has the meaning ascribed to it in Article 10.7. Blended Ore means iron ore which results from the Blending Operations. Blending Agreement means the agreement relating to the blending of Mbale Ore with iron ore from the territory covered by the Nabeba Permit to be concluded between the Mine Project Company Congo Iron and the Mineral Terminal Project Company which will establish the provisions regarding the blending of Mbale Ore and Nabeba Ore. Blending Operations means the operations relating to the industrial process whereby Nabeba Ore and Other Ores other than Nabeba Ore with the consent of the State are blended with any Mbale Ore. which operations are carried out in accordance with the terms and conditions of this Convention the Blending Agreement and the Monitoring Agreement Blending or such similar agreements. Bonus Payment means a bonus payment under Law No. 201001 1 of 29 July 2010 to amend and supplement certain provisions of the Mining Code. Bonus Payment Holiday has the meaning ascribed to in Annex vn. BOOT means build own operate and transfer. Breach or Breach Event has the meaning ascribed to it in Article 50.1. Business Day means any day excluding Saturday and Sunday on which commercial banks are open for business in Yaounde in the territory of the State and with respect to the Reference Rate means any day excluding Saturday and Sunday on which commercial banks are open for business in London. Calendar Year means a period of twelve 12 consecutive months commencing on 1st January and ending on 31st December the same year. Cameroon has the meaning given in the . pageS Cameroonian Bank. has the meaning given

in Article 43.2. Cam Iron Share Transfer Agreement means the agreement to be concluded between the State and Cam Iron relating to the State acquiring fifteen percent 15 of the share capital and voting rights of the Mine Project Company from Cam Iron. Cam Iron Representative has the meaning ascribed to it in either Article 18.22.2ai or Article 30.5.2ai. Capital Gains Tax Holiday has the meaning ascribed to in Article Annex VII. CCJA means the Common Court of Justice and Arbitration. CEMAC means the Economic and Monetary Community of Central African States. CEDispute Notice has the meaning ascribed to it in Article 39.1. CENotice has the meaning ascribed to it in Article 39.1. Centre has the meaning ascribed to in Article 56.2a. CFA Franc means the currency which is the legal tender in the territory of the State. Change in Control has the meaning ascribed to it in Annex IX. Change in Emission Scheme means a the enactment or making of an Emission Scheme; or b a change in the way an Emission Scheme is applied or interpreted as a result of a binding decision of a court of competent jurisdiction or by a Governmental Entity responsible for administering the Emission Scheme that occurs on or after the Change Notice. Change in Law Event means the coming into effect of a any Legislation other than the Enabling Law enacted after the Signature Date; b c d e any modification including repeal of any Legislation existing on the Signature Date that comes into effect after the Signature Date; any change referred to in this Convention as a Change in Law; a change in the sales Tax imposed by the State and paid by a Project Company any Contractor or any Subcontractor with respect to sales of goods purchased for the performance of the services contemplated under any of the Project Agreements; or a new Tax or an increase in Tax imposed by the State and paid by a Project Company any Contractor or any Subcontractor with respect to the performance of the services contemplated under any of the Project Agreements including any Royalty or any Taxes measured by gross receipts; provided however that new Taxes shall not include any Taxes imposed by a foreign government or any of their agencies compliance with which in accordance with the Operating Standards materially interferes with delays or increases the cost of performing the Project Operations. v page6 It is specifically understood however that none of the following shall constitute a Change in law Event I 2

3 4 5 any law statute code or regulation that has been enacted or adopted on or before the Signature Date to take effect after the Signature Date; the denial delay in issuance of or imposition of any term or condition in connection with. any Governmental Approval required for the Project Operations as a result of any Project Companys noncompliance with applicable Legislation relating to such Governmental Approval; a change in the nature or severity of the actions typically taken by a Governmental Entity to enforce compliance with Legislation which was in effect as of the Signature Date; any increase in any fines or penalties provided for under Legislation in effect as of the Signature Date provided such increases do not discriminate against the Project Companies; or any act event or circumstance that would otherwise constitute a Change in Law Event but that does not change the requirements imposed on any Project Company by the Operating Standards in effect as of the Signature Date. Change Notice has the meaning ascribed to it in Article 40.5b. CIMA has the meaning ascribed to it in Article 42.1 . Collective Bargaining Agreement means the agreement dated the Signature Date entered into between Cam Iron on the one hand and the trade unions designated therein on the other hand the Ministry of Labor and Social Security and the Ministry of Employment and Professional Training having also executed such agreement with a view to determining the terms and conditions of recruitment dismissal organization of the working conditions remuneration professional training health and safety of the personnel hired for the purposes of the Project and all the obligations of which shall be restated separately by each Project Company in the Specific Agreement to which it is a party. Committee Response has the meaning ascribed to it in Article 47.1.5. Compensation Event means a b c any applicable entry on the Project by the State pursuant to Article 6.Sc and Article 6.5d ten million 10000000 US Dollars per individual occurrence or twentyfive million 25000000 US Dollars over a rolling five 5 year period; the circumstances described in Articles 22.2 twentyfive million 25000000 US Dollars over a rolling five 5 year period and 22.3 twentyfive million 25000000 US Dollars over a rolling five 5 year period; any unreasonable delay in or denial of the issuance of a properly submitted application or other petition for a Governmental Approval required for U1e Project for which the Project Company has complied with

all material requirements under applicable Legislation which delay is not caused by a Project Company Fault and which continues for sixty 60 Days following notice of such unreasonable delay or denial by the applicable Project Company to the State Project Committee or such later time to the extent the failure to respond would materially affect Project V page 9 Operations twentyfive million 25000000 US Dollars over a rolling five 5 year period; a Change in Law fifty million 50000000 US Dollars over a rolling five 5 year period and Article 40.6 fifty million 50000000 US Dollars over a rolling five 5 year period; Article 41.2 ten million 10000000 US Dollars over a rolling five 5 year period Confiscation; a State Fault twentyfive million 25 000000 US Dollars over a rolling five 5 year period; or any other event referred to in this Convention as a Compensation Event two million 10000000 US Dollars per individual occurrence or such other amount as specified therein defined in each case as adjusted by the Inflation Adjustment. Compensation Event Notice has the meaning ascribed to it in Article 47. 1.5. Conditions Precedent mean the conditions precedent described in Article 4. 1 . Confidential Information has the meaning ascribed to it in Article 44.1.1. Confiscation has the meaning ascribed to it in Article 41.1. Confiscation Dispute has the meaning ascribed to it in Article 41.4. Congo Border Terminal means the train monitoring station to be located on the border between the State and the Republic of Congo which will monitor the continuous movement of the locomotives and rail wagons via electronic monitoring systems to confirm the cargo is in accordance with the rail manifest prepared at the point of loading including overhead viewing platform and lighting to support continuous operations during daylight and at night and the train will not be required to stop before during or after the border crossing as elaborated in the Quadripartite Agreement and to be operated pursuant to the terms of the Quadripartite Agreement to the extent applicable. Congo Iron means Congo Iron S.A. a Societe Anonyme registered under the laws of the Republic of Congo having its registered office at Avenue du Professeur LokoMafouta Brazzaville Republic of Congo; registered with the Registre du Commerce et du Credit Mobilier of Brazzaville under number CGBZV06 B I I. Connected Operations means the Railway Operations including the Road Operations the Mineral Terminal Operations the Beneficiation Operations and the Blending

Operations as well as any operation required for the Project. Conservation Convention has the meaning ascribed to it in Article 29.5.2. Construction Phase means a for each of the Mining Facilities Railway Facilities and Mineral Terminal Facilities the period commencing on the Date of Entry into Force until Project Commissioning subject as the case may be to the issuance of the Finding of Compliance; and page 18 b for any other Project Facilities including the Beneficiation Facility the period during which the Project Company in charge of the completion of this Project Facility incurs expenses in connection with the acquisition the development and construction of such Project Facility until completion and commissioning of such other Project Facility after having been subject as the case may be to the issuance of the finding of Compliance. Contemplated Rights has the meaning ascribed to it in Article 50.5a. Contractors means any entity other than the Lenders which within the scope of a contract signed with a Project Company supplies Goods and/or services for the purposes of the Project under the conditions defined in this Convention and in the Specific Agreements and Additional Specific Agreements and in compliance with the Legislation provided that any such entity whose contract provides for aggregate payments in excess of one hundred million 100000000 US Dollars adjusted by the Inflation Adjustment shall be a Qualified Contractor. For the avoidance of doubt Contractors shall include Qualified Contractors and Main Contractors. Control means a b either the direct or indirect ownership by a person or entity of a portion of shares or stock or any other equity granting the majority voting rights in the general meetings of an entity or entitling it to exercise decisive authority within said entity's management provided that within the meaning of this Convention a person is deemed to exercise a decisive authority within an entity's management where due to de facto or de jure circumstances such person's opinion prevails with respect to said entity's decisionmaking; or the blocking minority in the decisions of the general meetings of an entity determined with respect to companies under the conditions provided by the Uniform Act on Commercial Companies or by the law of the place of incorporation of the relevant company if the latter proves to be more appropriate to assess such blocking minority. Convention means this Convention and its Annexes as well as any renewal extension substitution or

amendment thereof or thereto as mutually agreed upon by and between the Parties. Convention Compensation means with respect to a Compensation Event compensation payable or in the discretion of the State a incentives including Tax incentives offered; or b extensions of any applicable term under a Project Agreement in each case by the State to Cam Iron and/or the applicable Project Company in order to restore Cam Iron or such Project Company to the same after-tax economic position that such company would have been in if such Compensation Event had not occurred and calculated in accordance with Article 39.1; provided that incentives and Tax incentives may not be used as Convention Compensation if the use of such Convention Compensation would result in a payment default under the Finance Documents. Convention Compensation Dispute has the meaning ascribed to it in Article 39.1. Corporate Tax Holiday has the meaning ascribed to it in Annex VU. Costs include expenses costs royalties tariffs fees taxes and levies of any nature including customs duties and charges. page 9 CP Long Stop Date means the date that is eighteen 18 months from the Signature Date or such later date as is agreed to by the Parties or contemplated in this Convention including Article 4.3. CRU means CRU International Limited of 31 Mount Pleasant London W1X 0AD an international research company recognized for price and demand forecasting in the iron and steel industries or where they cease to exist or undertake such work such similar organization as agreed to between the Parties. Date of Entry into Force has the meaning ascribed to it in Article 4.4. Date of First Commercial Shipping means the date on which shall occur the first loading on a vessel of at least sixty thousand 60,000 Tonnes of Blended Ore excluding shipping intended for one or more steel plants aiming at testing the iron ore made effective by the issuance of the bill of lading relative to this first commercial shipping. Day means a calendar day it being understood that for any time limit provided for in this Convention if the last day falls on a Saturday Sunday or a bank holiday in the State said time limit shall be extended to the next Business Day. Debt means all indebtedness for borrowed money including principal interest commissions and fees to be paid or repaid by a Project Company under the Finance Documents relating to the amounts raised and used to fund or refinance the debt component of the

Project costs excluding the amounts borrowed to fund the Equity or interest accrued on said amounts. Decision has the meaning ascribed to it in Article 56.2. Delay Breach or Delay Breach Event has the meaning ascribed to it in Article 50.1.2. Delay Breach Liability Threshold has the meaning ascribed to it in Article 50.3. Design Capacity means one hundred million 100000000 tonnes of iron ore in a Calendar Year consisting of thirtyfive tnillion 35.000000 Tonnes plus sixtyfive million 65000000 wet tonnes based on the assumptions to be detailed in the Railway Agreement and Mineral Terminal Agreement. Development Costs means the aggregate amount of costs and expenses incurred by the State in connection with the development of the Project. Dispute means any dispute disagreement controversy or claim arising out of connected with or relating to this Convention or any of the other Project Agreements or to the breach termination invalidity existence or interpretation thereof or to any event action or inaction related to any of the foregoing. Economic Hardship means an economic situation that was unforeseeable by the Parties at the Signamre Date and which without preventing continuation of the Project would render the Project unprofitable in the aggregate across the Project Companies. Emission Scheme means any scheme relating to the emission removal mitigation reduction avoidance or sequestration of greenhouse gases including a greenhouse gas emissions trading scheme or sequestration requirement which is in place at the Signature Date. Enabling Law means the law ratifying the States entry into this Convention under the terms and conditions set forth in this Convention among other things. v pagol10 Environment means soil surface waters groundwaters land stream sediments surface or subsurface stiaata ambient air plants animals and other life fom1s and per Law n9612 of 5 August 1996 relating to environmental management in the State 111ay be defined as per clause 2 of such law as a common welfare of the Nation patrimoine commtm de la Nadon. It forms an integral part of the universal welfare palrimoine universe. Environmental Guarantces reters to the Mine Project Company Environmental Bank Guarantee and the Mineral Terminal Project Company Environmental Bank Guarantee or any one of them. Environmental and Social Assessment and Management Plan means the plan for the mitigation of the negative impacts of and the optimization of the positive

impacts of the Project and including the Environmental Impact Study in compliance with the Legislation and in particular Article 126 et seq. of the Mining Code Implementing Decree such as it is periodically revised pursuant to the provisions of Article 29.2.1 c and the Mining Code and which for the avoidance of doubt is incorporated by reference into this Convention. Environmental Impact Study means in accordance with the Legislation and submitted to the State along with filing the Feasibility Study. the environmental assessment carried out Exempt Assignment means an assignment to a wholly owned Subsidiary of such Project Company in which the assignee agrees to be bound by the rights and obligations of the assignor in an agreement acceptable to Ute State in form and substance in its reasonable discretion the assignment complies with applicable Legislation and any rights of the State in the Shareholders Agreement applicable to such Project Company have been complied with. Expn. nsion Capacity means the capacity of ore that can be hauled using the Railway Facil ities and handled and loaded onto vessels using the Mineral Terminal Facilities based on construction of new facilities and assets that are beyond the scope of the design for the Initial Capacity. Expansion Conunittee means the committee established in accordance with Article 18.22. Expansion Contract means either a Mineral Terminal Services Agreement or a Railway Haulage Agreement hat relates to the provision of Expansion Capacity. Expansion Directive has the mea. niog ascribed to it in Article 18.14a. Expansion Project refers to a project providing for the creation of Expansion Capacity pursuant to Article 18. Expansion Project Company or Expansion Project Companies means lhc Railway Project Company andor the Mineral Terminal Project Company where the context requires. Expansion Stage means any stage beyond Stage I where new infrastructure is constructed to increase thecapacityoftheMineraJ Terminal Facilities and U1e Railway Facilities beyond the Initial Capacity. Expert Procedure has the meaning ascribed to it in Article 56.2a. Exploitation Ana means. at any time the surface area of the Exploitation Permit such as same could be reduced pursuant to lhc provisions of Article 53 .2. page 11 Exploitation Lease means a Project Lease granted over the area of the Exploitation Area in accordance with this Convention. Exploitation Permit means the permit to mine iron ore to be granted to Cam Iron in

accordance with Sections 45 to 52 of the Mining Code the provisions of this Convention and the application for mining title filed by Cam Iron on 9 October 2009 as amended on 17 December 2009 and transferred to the Mine Project Company in accordance with Section 20 of the Mining Code. the provisions of this Convention and the applicable Accession Notice. Exploitation Phase means for each Project Facility a period beginning immediately after the completion of its Construction Phase until expiration or termination of rights to operate sltch Project Facility held by the relevant Project Company in accordance with the provisions of the relevant Project Agreements. Exploration Permit means exploration permit No 92 which is the subject of Decree No 161MINIMIDTDMGSDAM of Order No 00586MINIMIDT SG DMGSDAM of 6 July 2010 extending the term of exploration permit No 92 to 27 September 20 12 and Order No. 003207MINIMIDTSGDMGSDAM of 27 July 2012 extending the term of the exploration permit No. 92 to 27 July 2014. September of 27 2005 and Explosives means the ammonia based products that are to be imported into the territory of the State for. a b c usc within the Exploitation Area the Mineral Terminal Area and Railway Area for the construction of the mine Mineral Terminal and Railway usc in fracturing the Mbalam Ore within the Exploitation Area for Mining Operations; or transportation to the Republic of Congo for constmction and mining operations in the area covered by the Nabeba Permit using industry recognised transport driUing and blasting techniques in accordance with as applicable the Explosives Agreement and to the extent applicable the Quadripartite Agreement. Explosives Agreement means the agreement to be concluded between the Mine Project Company Mineral Terminal Project Company Railway Project Company and the State related to the use and transport of Explosives. Feasibility Expert has the meaning ascribed to it in Article 18.13.1. Feasibility Study means the Project definitive feasibility study which in accordance with Section 46 of the Mining Code was submitted to the State on 15 April2011 and as shall be updated as provided for in Article 4.1 a. Finance Documents means all equity or debt finance agreements entered into by Cam Iron the Project Companies and/or any Subsidiary and one or more Lenders for the purposes of constituting the Debt as well as any security document or related ancillary document including any abTeement

between the Lenders and the State or between the Lenders and Cam Iron the Project Companies or a Subsidiary. Finding of Compliance means for each of the Project Facilities the finding of compliance by the State of any Project Facility according to the Specifications and applicable Legislation relating thereto and the delivery by the State to the relevant Project Company of that finding pursuant to of compliance with the relevant Specific Agreement or with respect to the Beneficiation Facility in compliance with this Convention and the Beneficiation Agreement. First Notice has the meaning ascribed to it in Article 39.1. Fixed Profit Margin means twelve percent 12. FMU has the meaning ascribed to it in Article 29.5.2. Force Majeure means Ordinary Force Majeure or Political Force Majeure as the case may be each such event or circumstance being a Force Majeure Event. Foreign Exchange Agreement has the meaning ascribed to it in Article 43.1. Foreign Personnel has the meaning ascribed to it in Article 32.12a. Framework Agreement means the framework agreement entered into between the State and Cam Iron on 18 December 2008. Food Committee has the meaning ascribed to it in Article 29.5.1h. General Tax Code means Law No 200212003 of 19 April 2002 as amended from time to time. Good International Industry Practice has the meaning ascribed to it in Article 29.4h. Governmental Approval means any approval, certificate of approval, authorization consent waiver, variance, exemption, declaratory order, exception, license filing registration permit notarization special lease or other requirement of any Governmental Entity that applies to all or any part of the Project or Project Operations. Governmental Entity means the State or any ministry department or political subdivision thereof and any person directly or indirectly controlled by the State and performing executive legislative regulatory or administrative duties for the State including regional authorities. Granting Decree means the presidential decree granting the Exploitation Permit to Cam Iron. Handback Requirements has the meaning ascribed to it in Article 54.2. Handback Security has the meaning ascribed to it in Article 54.2. Iron SECS has the meaning ascribed to it in Article 32.11. Eligible Grade Ore means iron ore with an iron greater than 50 Fe with limitations on Al₂O₃ SiO₂ and Phosphorous which render the product suitable for direct shipping ore DSO. ICC means the International Chamber of

Commerce. ICSID Convention has the meaning ascribed to it in Article 10 of the ICSID Convention. Immigration Document has the meaning ascribed to it in Article 32.12a. Independent Engineer means an internationally recognized engineering firm or firms experienced in the mining rail and mineral terminal industries and in Africa. Independent Accountant means an internationally recognized accounting firm acceptable to both the Mine Project Company and the State with whom neither Party nor its Affiliates currently has or within the previous five (5) years has had a relationship. Inflation Adjustment means a pro rata adjustment every five (5) years from the Date of Entry into Force to reflect changes in the Consumer Price Index published by the United States Department of Labor. Initial Beneficiation Production Capacity means a production capacity of no less than eleven (11) million Tonnes of Beneficiated Ore in any Calendar Year or a pro rata portion of such tonnage based on the number of applicable Days in such Calendar Year commencing on the date that is twelve (12) months following the BF Commissioning where the Beneficiation Facility is first built to that capacity. Initial Capacity means in million Tonnes per annum the maximum number of Tonnes of iron ore that can be hauled using the Railway Facilities and handled and loaded onto vessels using the Mineral Terminal Facilities including any capacity created by operational efficiencies debottlenecking and other minor capital works excluding any Expansion Capacity, based on the construction of such Railway Facilities and Mineral Terminal Facilities in accordance with the initial design specifications to achieve the Targeted Annual Production Capacity. Initial Junction means the point at which the Mainline Railway joins the Initial Spur Lines as indicated on the site plan attached to the Railway Agreement. Initial Spur Lines means the standard gauge heavy haul railway located within the Railway Area in the case of the territory of the State connecting the junction of the Mainline Railway to the Mine Loading Area within the a) Exploitation Area; or b) the junction of the Mainline Railway to the Congo Border Terminal a site plan of which may be attached to the Railway Agreement showing each of the Initial Spur Lines and will include the loading facilities at the Mine Loading Area. Interim Beneficiation Production Capacity means a production capacity of no less than twenty two (22) million Tonnes of Beneficiated Ore in any Calendar Year or a pro rata

portion of such tonnage based on the number of applicable days in such Calendar Year commencing on the date that is twelve 12 months following the BF Commissioning where the Beneficiation Facility is built to that capacity. Internal Rate of Return or JRR means the annualised effective compounded rate of return as determined pursuant to the formulae and methodology set forth in the Beneficiation Agreement to be mutually agreed to by the State and Cam Iron. Investment Charter means Law No 200214 of 19 April 2002 as amended. Joint Committee has the meaning ascribed to it Article 30.5.1. Joint Liability Subscription Agreement has the meaning ascribed to it in Article 3.4c. Kribi Port Authority means the Cameroonian national port authority. Labor Committee has the meaning ascribed to it in Article 32.9. v page 14 Land Law means the Legislation that governs land and property management in the territory of the State. Legislation means inter alia any international convention validly ratified by the State OHADA uniform acts CEMAC rules any law including the Mining Legislation order circular regulation including any document relating to health safety and Environment matters case law any administrative act of a regulatory or individual nature decree act regulation directly applicable in the territory of the State and/or such as promulgated published voted or ratified by any Governmental Entity; including any variations modifications amendments novations or reentry into force of said texts as well as any permits licenses authorisations approvals and consents injunctions or any final and non appealable judgment directly applicable to the relevant party delivered or deed pursuant to these texts and issued by any Governmental Entity or any jurisdiction of the State or supranational jurisdiction including the CCJA. For the avoidance of doubt Legislation shall include the Enabling Law once enacted. Legitimate Cause means a b c a Project Agreement Project Lease or Exploitation Permit or any other permit or authorisation not being delivered or renewed being revoked modified withdrawn cancelled or suspended in each case resulting in a Material Adverse Effect other than where such nonissue or nonrenewal revocation modification cancellation or suspension or such withdrawal is the consequence of a nonperformance or a breach by Cam Iron or a Project Company of its contractual or regulatory obligations the effect of exercise of the States Reserved Rights or a result of a failure

by Cam Iron or a Project Company to properly file or renew such permit or authorisation; any Change in Law that has a Material Adverse Effect other than where such Change in law occurs under the nondiscriminatory application of the Legislation to companies carrying out the same or similar business as undertaken by any Project Company; or a breach by the State of any material obligation under this Convention a Specific Agreement an Additional Specific Agreement or the Legislation that has a Material Adverse Effect. Lender means any bank national or international financial institution export credit agency any credit insurer or other establishment having granted to Sundance Cam Iron or a Project Company a commercial credit a loan bonds or a financing or refinancing relating to the Project on capital markets or otherwise as well as their authorised assigns agents trustees auditors and assignees excluding Cam Iron the Shareholders or any Subsidiary of the Shareholders or any other lender providing debt to a Project Company in connection with the funding of capital needs in connection with the Additional State Interest and the exercise by the State of the right to borrow funds for capital calls on that equity including the financing or refinancing of all or part of the operations and infrastructures situated outside the territory of the State provided that said operations and infrastructures relate to or are physically connected with all or part of the Project Operations. LIDOR means the London InterBank Offer Rate of three month US Dollar deposits which appears on the Telerate page 3750 or equivalent successor to such page as of 1100 am London time on the original due date of the overdue amount. Loan Carry Cap has the meaning ascribed to it in Article 45.4h. page 15 Loss means any loss liability damage penalty charge or outofpocket and documented cost or expense or increase thereof. For the avoidance of doubt all actual payments reasonably made by any Person to third parties or reasonable outofpocket and documented costs or expenses actually suffered or incurred by any Person in respect of Claims made by third parties shall constitute Losses of such Person. Losses shall not include indirect and consequential damages including lost opportunities and lost profits. Low G grade Ore means Itabirite hematite ore containing between thirty to fifty percent 30-50 Fe and SiO₂ ranging from thirtyseven to fiftythree percent 37 to 53 with acceptable characteristics to allow the ore to be Beneficiated

producing a concentrate with approximately sixtyfive percent 65 Fe. M a in Contracto r or Main S
ubcontractor means respectively a Contractor or a Subcontractor which delivers mining rail
transportation or mineral terminal services to respectively the Project Companies or a Contractor for
the purposes of the Proj ect under the conctitions defined in this Convention and in the Specific
Agreements and Additional Speci fie Agreements and i of which fifty percent 50 of the work force is
employed or used for the needs of the Project in the relevant year or ii qualifies as a Qualified
Contractor or a Qualified Subcontractor. Mainline Railway means a standard gauge heavy haul
mainline railway between the Initial Junction and the Mineral Terminal Area including the unloading
facilities rocker and related conveyors as well as all connected infrastructures inducting railroad fills
and ballast railways works associated with the railways including bolsters passing tracks loops
works on or underneath the tracks supports including supports for machinery or items associated
with the use of a railway tunnels bridges culverts train control systems signalling systems warning
systems track machinery and other apparatus stations sheds rol lcong stock facilities and equipment
designed for the maintenance of rolling stock communication systems buildings offices workshops
and material machinery and equipment related thereto loops and loading and unloacting tracks
terminal stations marshalling yards depots weighbridges dwellings earthworks and concrete works
ballast wagons temporary shelters wells supply networks power plants power and transmission lines
and pipelines. Marketing Agreement means the agreement relating to the Marketing Operations
which shall be concluded between the Mine Project Company and the Marketing Company.
Marketing Company means a company in which the State does not have an equity interest. and a a
party to the Marketing Agreement is in charge of the Marketing Operations. Marketing Operations
means a lbc commercial logistical technical and quality assurance operations for Marketing of the
Sale Products; b Marketing of the Sale Products; and c assumption of credit risk associated w ilb the
buyer of the Sale Products carried out in accordance with the tenns and conditions of this
Conveolion and the Marketing Agreement. Marketing of tbe Sale Products means a the purchases
of all Products and Nabeba Ore; and . page I 18 b the sales and marketing of the Sale Products

inside or outside the territory of the State in order to produce income for the Mine Project Company.

Material Adverse Effect means an effect on a b Project Operations; or the real property securities, assets or economic financial or legal situation of Cam Iron or a Project Company under a Project Agreement or a Finance Document which i is or would reasonably be expected to be material and adverse to A the business results of operations or condition financial or otherwise of Cam Iron and the Project Companies taken as a whole; B the legality validity or enforceability of the Project Documents taken as a whole; C the ability of State to perform its material obligations under the Project Agreements taken as a whole or D the ability of the Project Companies to perform their material obligations under the Project Agreements taken as a whole. Mbalam Ore means all iron ores produced from the Exploitation Area including the High Grade Ore and the Low Grade Ore. Mine Commissioning means the wet commissioning of Mining Facilities associated with the Mining Operations other than the Beneficiation Operations. Mine Gate Value means the methodology described in 0 for the value of the Product. Mine Loading Area means the area within the Exploitation Permit designed for the loading of the Mbalam Ore into railway wagons for the purposes of transport using the Railway. Mine Project Company refers to the Project Company established by Cam Iron which will accede to the Exploitation Permit and the provisions of this Convention and be in charge of Mining Operations. Mine Project Company General Bank Guarantee has the meaning ascribed to it in Article 31.1. Mine Project Company Environmental Bank Guarantee has the meaning ascribed to it in Article 29 .2.1 . Mine Project Company Shareholders Agreement means the shareholders agreement relating to the rights and obligations of the shareholders of the Mine Project Company a non exhaustive list of the material terms of which are set out in Annex X that shall be concluded between the shareholders of the Mine Project Company. Mineral Terminal means the mineral terminal dedicated to the Project which consists of the Mineral Terminal Facilities located in the Mineral Terminal Area the building and operation of which is entrusted to the Mineral Terminal Project Company under the responsibility of Cam Iron in accordance with the provisions of this Convention and the Mineral Terminal Agreement. Mineral Terminal Agreement means the

agreement relating to the Mineral Terminal Operations which shall be finalized and concluded between the State the Mineral Terminal Project Company and the Knbi Port Authority in the presence of Cam Iron and shall contain a description of the assumptions and principles related to the Design Capacity and the operations of the Mineral Terminal. pageH Mineral Terminal Area has the meaning ascribed to it in Article 13.2. Mineral Terminal Commissioning has the meaning ascribed to it in Article 13.1 i. Mineral Terminal Concession means a concession granted by appropriate authority and the terms of which are set out in the Mineral Terminal Agreement. Mineral Terminal Facilities means any infrastructure necessary for the collection handling storage reclaiming loading onto ships and export of the Sale Products and collection of the Goods and goods for other Third Party mining operations including Nabeba Goods before railing to the Exploitation Area or mine belonging to a Third Party including to the Nabeba Permit and loading of those onto railway wagons but excluding the Mainline Railway the Project Roads the Additional Roads the unloading facilities rocker and conveyors but may include a rail waste retention ponds dwellings workshops and storage areas offices collection depots and iron ore storage sheds iron ore storage and recovery facilities equipment for processing and blending products platforms and material loading facilities a pier and berths for loading onto the ships ship loaders material handling tools dustsuppression equipment product sampling stations and tools product weighing stations chemical and metallurgical testing laboratories customs facilities earthworks and associated concrete units roads bridges supply systems gas petroleum and water transportation pipelines borrow material and quarries manufacturing facilities necessary for the production of material for construction and/or the Project Operations a power plant transmission lines water supply systems for industrial water and supply networks airstrips medical facilities material collection facilities material equipment and consumables and hydrocarbon collection facilities hydrocarbon storage facilities all of these being owned by or leased to Cam Iron or a Subsidiary or Contractor or occupied or used by same and necessary for completion of the Project; b temporary facilities; c c moorings; and the channel breakwater ship passing areas navigational aids and boathouses. Mineral Terminal

Operations means a the design construction operation and maintenance of the Mineral Terminal Facilities including the loading on board of the export ships unloading of import ships and storage of cargoes carried out in accordance with the terms and conditions of this Convention and the Mineral Terminal Agreement and b the Blending Operations carried out in accordance with the terms and conditions of this Convention the Blending Agreement and the Mineral Terminal Agreement. Mineral Terminal Operations Agreement has the meaning ascribed to it in Article 13.5. Mineral Terminal Project Company means the Project Company established by Cam Iron at the Date of Entry into Force and party to the Mineral Terminal Agreement. in charge of the Mineral Terminal Operations and Blending Operations. Mineral Terminal Project Company Environmental Bank Guarantee has the meaning ascribed to it in Article 29 .2.1 . v page j 18 Mineral Terminal Project Company Share Transfer Agreement means the agreement relating to the State acquiring fifteen percent 15 of the share capital and voting rights of the Mineral Terminal Project Company to be concluded between the State and the Mineral Terminal Project Company. Mineral Terminal Project Company Shareholders Agreement means the shareholders agreement relating to the rights and obligations of the shareholders of the Mineral Terminal Project Company a nonexhaustive list of the material terms of which are set out in 66cAnnex IX and shall be concluded between the shareholders of the Mineral Terminal Project Company. Mineral Terminal Services Agreement means the services agreement concluded between the Mineral Terminal Project Company and either the Mine Project Company or other Third Party contracting to utilise the services of the Mineral Terminal Project Company which may include a description of the tariffs to be charged by the Mineral Terminal Project Company. Mineral Terminal Specifications means the broad specifications which will be detailed in the Mineral Terminal Agreement. and which will describe the technical requirements of the Mineral Terminal Facilities that the Mineral Terminal Project Company will need to meet while carrying out the Mineral Terminal Operations. Minimum Annual Beneficiated Ore Production means a minimum of eleven million Tonnes of Beneficiated Ore from the Beneficiation facility in any Calendar Year or a pro rata portion of such tonnage based on the number of applicable Days in

such Calendar Year commencing on the date that is twelve 12 months following the BF Commissioning. Minimum Annual Ore Production means the mining and selling of a minimum of twelve L2 million Tonnes of High Grade Ore from the Exploitation Area in any Calendar Year commencing in the Calendar Year post Project Commissioning. Mining Code means Law No 2001001 of 16 April 2001 as amended and supplemented by Law No 2010011 of 29 July 2010, as it may be further amended or supplemented from time to time. Mining Code Implementing Decree means decree No 20021648PM of 26 March 2002 setting the conditions for implementation of Law No 2001001 of 16 April 2001. Mining Facilities means all facilities constructed or operated within the Exploitation Area which are used for the mining crushing screening and processing and after BF Commissioning the Beneficiation of Mbalam Ore water treatment and storage transmission lines and storage facilities as well as necessary supporting infrastructure including conveying and load out facilities and accommodation facilities required to produce the Mbalam Ore for transportation to the Mineral Terminal Facility. Mining Legislation means collectively Implementing Decree, the Mining Code and the Mining Code Mining Operations means a the design construction operation and maintenance of the Mining Facilities including dismantling and rehabilitation of the said Mining Facilities; b the extraction through any process of the Mbalam Ore; c Beneficiation Operations; v page 119 d e the development handling transportation and storage of Mbalam Ore and Beneficiated Ore within the Exploitation Area; an investigation aiming to localise and assess mineral substance deposits located within the Exploitation Area; and t the rehabilitation of the Exploitation Area carried out under the Exploitation Permit and under the terms and conditions of this Convention and the applicable Project Agreements. Minister refers to at all times the Minister of the State in charge of mines. Ministry refers to at all times the ministry of the State in charge of mines. Ministry of Labor refers to at all times the ministry of the State in charge of labor. Monitoring Agreement Blending means the agreement relating to the rights of the State to review the Blending Operations and the rights of the Mine Project Company and Congo Iron to be protected from discriminatory or disproportionate treatment with regard to Blending operations. Monitoring Agreement Marketing

means the agreement relating to Marketing Operations and the rights of the State to review those operations. Monitoring Agreement Treasury means the agreement relating to Treasury Operations and the rights of the State to review those operations. Nabeba Assets or Nabeba Goods means as the case may be, all assets and/or goods required for the Nabeba Project including consumables plant equipment materials commodities vehicles fuel and hydrocarbons. Nabeba Convention means the convention relating to the Nabeba mining project which is to be located on the area covered by the Nabeba Permit which convention is to be concluded between Congo Iron and the Republic of Congo. Nabeba Ore means all iron ores produced from the area covered by the Nabeba Permit. Nabeba Permit the areas covered by the Mineral Permit Decree 2007362 and Decree 2007363 of 2d August 2007 and renewal Decrees 2011280 and 2011281 of 5 April 2011 over the Nabeba Bamegod and Ibanga permits in the Sangha region of the Republic of Congo. Nabeba Project means the mining project which is the subject matter of the Nabeba Convention and Nabeba Permit. Notification of Breach has the meaning ascribed to it in Article 50.2a. Official Gazette means the Official Gazette of the State. OHADA is the French acronym for Organisation pour l'Harmonisation du Droit des Affaires en Afrique Organisation for the Harmonisation of Business Law in Africa and currently comprises 16 Member States. The organisation was established on 17 October 1993 by a treaty signed in Port Louis Mauritius which was amended on 17 October 2008 by the Treaty of Quebec. OHADA Act means any uniform act which has been adopted by OHADA as modified from time to time each governing a specific matter and which are directly applicable in the territory of the State. Operating Standards means all construction management operational technical and performance standards applicable to Cam Iron and the Project Companies under any Project Agreement including the Specifications and if no standard is specified then internationally recognized practices used in large mining and infrastructure projects including any applicable international environmental standards and compliance with Legislation and not inconsistent with Good International Industry Practices unless the Legislation conflicts with Good International Industry Practices in which case the Legislation shall control. Ordinary Force Majeure

means with respect to either Party any event or circumstance external for the affected Party independent of its will reasonably unforeseeable and outside its reasonable control that prevents the Party invoking it from performing its statutory or regulatory obligations as well as its obligations under this Convention and any other Project Agreement to which it is a party where such Party has taken all reasonable measures in order to avoid or mitigate the effect of such event or circumstance on the ability of the Party to perform its obligations under this Convention and any other Project Agreement to which it is a party and provided that this event or circumstance is not the direct or indirect result of a breach or nonperformance by such Party of any of its statutory or regulatory obligations or of its obligations under this Convention and any other Project Agreement to which it is a party. Without limiting the generality of the foregoing it is expressly agreed between the Parties that the definition of Ordinary Force Majeure includes to the extent that they satisfy the requirements of the foregoing paragraph the following events a b earthquake fire tsunami flood cyclone, typhoon tornado or other natural disaster; and unforeseeable and uninsurable events not attributable to the Party affected by the Ordinary Force Majeure Event each such event or circumstance being an Ordinary Force Majeure Event the intent of the Parties is that the expression Ordinary Force Majeure should be construed in closest possible compliance with customary international law principles and practices in particular that recognized by the United Nations International Law Commission. Other Ores means any iron ore whether direct shipping ore or processed ore that is mined outside of the territory of the State and brought into the territory of the State for transport and shipment which shall include the Nabeba Ore but exclude the Mbalam Ore. Parties means all of the parties to this Convention and as applicable, to any Project Agreement and Party means any one of them. Permit Withdrawal Breach or Permit Withdrawal Breach Event has the meaning subscribed to it in Article 50.1.1. individual including legal Person means any representatives or administrators thereof corporation partnership joint venture trust limited liability company limited partnership joint stock company unincorporated association or other entity or a Governmental Entity. the heirs beneficiaries executors Platts means a division of the McGraw Hill Companies and is a provider of

energy and metals information and a source of benchmark price assessments in the physical energy
page 21 markets or a similar source if Platts does not provide applicable benchmark price
assessments or is no longer providing such information. Political Force Majeure means a b c d an
act of war whether declared or not invasion armed conflict act of foreign enemy or blockade or any
epidemic in each case within or directly affecting the State; an act of rebellion riot nationwide strikes
or strikes of a political nature acts or campaigns of terrorism or sabotage or credible and imminent
threats thereof occurring within the territory of the State; any event expressly identified as a political
force majeure event under a Specific Agreement; or any closing by the State of a border terminal
through which iron ore is transported into the territory of the State including the Congo Border
Terminal each such event or circumstance being a Political Force Majeure Event provided however
that such event or circumstance prevents the Party invoking same from performing any statutory or
regulatory obligation as well as any obligation under the Project Agreement to which it is a party
where such Party has taken all reasonable measures in order to avoid or mitigate the effect of such
event or circumstance on such Party's ability to perform its obligations under the Project Agreement
to which it is a party. Positive Beneficiation Determination has the meaning ascribed to it in Article
10.11. Positive Economic Feasibility Determination has the meaning set forth in Article 18.13.2diii.
Positive Technical Feasibility Determination has the meaning ascribed to it in Article 18.13.2diii. P
ower Plant means any power plant including the Beneficiation Power Station to be built and/or
contracted to produce the power required for the Mining Operations. Products means a the Mbalam
Ore produced on the Exploitation Area; b the Blended Ore produced from the Mineral Terminal
Area; and c the Beneficiated Ore produced from the Beneficiation Facility. Project has the meaning
ascribed to it in the of this Convention. Project Agreements refers to collectively this Convention the
Specific Agreements the Marketing Agreement the Treasury Agreement the Railway Haulage
Agreement the Mineral Terminal Services Agreement the Monitoring Agreement Blending the
Monitoring Agreement Marketing the Monitoring Agreement Treasury. the Collective Bargaining
Agreement the Exploration Permit the Exploitation Permit and individually any one of these

documents and any other agreement certificate or document entered into issued or created in connection with the Project. v page 122 Project Agreement Termination Certificate means the certificate in a form agreed to by the Parties to be issued pursuant to Article 54.2.5b . Project Area means any surface area within U1e territory of Stale including the Exploitation Area the Railway Area and the Mineral Terminal Area over which a Project Lease is granted to one or more of the Project Companies. Project Commissioning means whichever date occurs last between the foUowing three 3 dates a the date Mine Commissioning occurs; b c the date Railway Commissioning occurs; or the date Mineral Terminal Commissioning occurs as acknowledged jointly by the Parties through the issuance of the last of the Findings of Compliance and the effective occurrence of the Date of First Commercial Shipping. Proj ect Company or Project Companies means a Cam Iron the Mine Project Company the Railway Project Company and the Mineral Tenninal Project Company or any Subsidiary responsible for any part of the Project Operations of which it is in charge in accordance with the terms of this Convention and in which the State held or holds with the exception of Cam Iron at any Lime an interest of at least fifteen percent 15 or; b any other entity that is a party to a Project Agreeemem that expressly provides for such entity to be treated as a Project Company. Project Compan y Fault means a b c d a breach by Cam Iron a Project Company or any Subsidiary of a Project Company of any of its material obligations under any Project Agreement or Legislation; a breach of any material representation or warranty made by Cam Iron a Project Company or any Subsidiary of a Project Company under any Project Agreement; wilful misconduct of Cam Iron a Project Company a Project Company Person or any Subsidiary or a Project Company; or a grossly negligent act or omission of Cam Iron a Project Company a Project Company Person or any Subsidiary of a Project Company. Project Company Inte rest means the interest benefits and rights of a Project Company in the Project created by the applicable Project Agreement and the rights and obligations of such Project Company in such Project Agreement. Project Company Person means a b any director officer employee or agent of Cam Iron or a Project Company in each case acting as such; o r any Contractor. any Subcontractor and any

representative advisor including any legal and financial advisor of Cam Iron or any Project Company in any such Persons capacity as a provider of services directly or indirectly to Cam Iron or such Project Company in connection with the Project. page 123 Project Contracts refers to collectively the Mineral Terminal Services Agreements and Railway Haulage Agreements including any Expansion Contract and individually any one of these documents. Project Economic Model is the financial model which the Parties have agreed is their best understanding of the economics of the Project as of the Signature Date including the assumptions on which the financial model has been prepared as the same may be updated pursuant to the terms of this Convention. Project Facilities means the Mining Facilities the Mineral Terminal Facilities and the Railway Facilities as well as any other facility which may be built in accordance with the terms and conditions set forth in Article 19.1 of this Convention. Project Lease means a b a longterm lease entered into by a Project Company with the State in accordance with this Convention relating to the use and occupation of the land riverbeds and seabeds required for the purposes of the Project; or in case a longterm lease as referred to in paragraph a of this definition cannot be implemented any public domain Temporary Occupation Authorisation granted by the State and/or a Governmental Entity to a Project Company on the land riverbeds and seabeds and having the same purpose as that mentioned in paragraph a of this definition. Project Lease Request means a request to the State by a Project Company to enter into a Project Lease in form and substance which is typical in the territory of the State and to be otherwise agreed to by the Parties. Project Operations means the Mining Operations and the Connected Operations. Project Parties has the meaning ascribed to it in Article 56.3b Project Roads means all unsealed roads constructed by a Project Company which are required for the Project in accordance with the provisions of this Convention a Project Agreement and a Project Lease and where the context permits includes all unsealed roads constructed by a b the Mine Project Company for the support of Mining Operations; the Mineral Terminal Project Company for the support of Mineral Terminal Operations; and c the Railway Project Company for the support of the Railway Operations. Project Road Adjacent to the Railway means the Project Road built and located along the Mainline

Railway under a specific Project Lease by the Railway Project Company for but not limited to the Project needs in accordance with the provisions of this Convention and the Railway Agreement; provided that a portion of such Project Road set forth in the Road Plan shall become a Public Road and cease to be a Project Road following completion of the construction of the Railway and the metallic surfacing of the applicable portions of such Project Road in accordance with the Road Plan.

page 124 | Project Road Specifications means the specifications attached as an annex to the Road Agreement containing all the technical requirements of the Project Roads that a Project Company will need to meet while carrying out the Road Operations. Protocol has the meaning ascribed to it in Article 32.12c. Promulgation Decree means the decree promulgating the Enabling Law. Proposed Expansion Schedule has the meaning ascribed to it in Article I 0.13 di. Public Roads means those roads and bridges within the territory of the State that are designated by the State for public use including the applicable portion of the Project Road Adjacent to the Railway set forth in the Road Plan following completion of the construction of the Railway and the metallic surfacing of such applicable portion of the Project Road Adjacent to Railway. Qualified Contractor means preapproved contractors agreed to by the State and Cam Iron prior to the Date of Entry into Force or any other person or entity that has the independence technical and financial resources to perform the obligations to be assigned to it and is reasonably experienced in performing such obligations and with respect to those contractors and subcontractors which report directly to a Project Company and will receive aggregate payments in excess of two hundred and fifty million 250000000 US Dollars without reduction for anticipated subcontracting adjusted by the Inflation Adjustment to which the State has provided its prior written consent which will not be unreasonably withheld provided that such consent will be deemed to have been given if the State does not respond to notice requesting approval of a contractor within fortyfive 45 Days of the delivery of the notice. Quadripartite Agreement means the agreement contemplated to be entered into among the State the Republic of Congo one or more Project Companies and Congo Iron relating to among other things the import of Nabeba Ore into the territory of the State before export and the transport through

the State of Nabeba Assets for use in the Nabeba Project. Quarter means the three 3 month period of a Calendar Year ending on 31 March 30 June. 30 September or 31 December. Railway means the railway dedicated to the transport of iron ore and goods and assets related to the mining of iron ore including the Railway Facilities located within the Railway Area. the completion of which has been entrusted to the Railway Project Company under the responsibility of Cam Iron in accordance with the provisions of this Convention and the Railway Agreement. Railway Agreement means the agreement relating to the Railway Operations which shall be finalized and concluded between the State and the Railway Project Company in the presence of Cam Iron and may include the indication of the Initial Junction and Initial Spur Lines Railway Area and Railway Specifications and shall contain a description of the assumptions and principles related to the Design Capacity and the operations of the Railway. It is anticipated that the Railway Project Company will have the right to operate the Initial Spur Line and on above rail system from the Congo Border Terminal to the mine on the Nabeba Permit. Railway Area has the meaning ascribed to it in Article 12.1.2a. Railway Commissioning has the meaning ascribed to it in Article 12.1.1. v page 25 Railway Concession means a concession granted by the appropriate authority and the terms of which are set out in the Railway Agreement. Railway Facilities means the Mainline Railway the Initial Spur Lines and as the case may be one or more other Additional Spur Lines. Railway Haulage Agreement means the services agreement which shall be finalized and concluded between the Railway Project Company and the Mine Project Company or other party contracting with the Railway Project Company which may include a description of the tariffs to be charged by the Railway Project Company. Railway Operations Agreement has the meaning ascribed to it in Article 12.2.2a. Railway Operations means the design construction operation and maintenance of the Railway Facilities carried out in accordance with the terms and conditions of this Convention and the Railway Agreement. Railway Project Company means the Project Company Controlled by Cam Iron at the Date of Entry into Force and party to the Railway Agreement in charge of the Railway Operations. Railway Project Company Share Transfer Agreement means the agreement to be entered into whereby the State

acquires fifteen percent 15 of the share capital and voting rights of the Railway Project Company. Railway Project Company Shareholders Agreement means the shareholders agreement relating to the rights and obligations of the siweholders of the Railway Project Company a nonexhaustive list of the material tenns of which are set out in Annex X and shall be concluded between the shareholders of the Railway Project Company. Rnitway Specifications means the specifications which will be detai led in the Railway Agreement and which wil l describe the technical requirements of the Railway Facilities that the Railway Project Company will need to meet while carrying out the Railway Operations. RCCM means Registre du Commerce et du Credit Mobilier established by the Uniform Act on Commercial Companies. R eference Rate means the threemonth US Dollar LffiOR variable rate as it appears on the Telerate screen as of 1100 a.m. London time two 2 Business Days London marketplace prior to the fust l Day of the relevant period. Telerate screen means page 3750 of the Dow Jones Telerate Monitor Service or such other page as may replace page 3750 for US Dollar deposits; where the Reference Rate is said to be increased by x the interest rate shall be calculated by addition of the LIBOR rate to the amount displayed; where the Reference Rate is said to be increased by x basis points the interest rate shall be calculated by addition of the LIBOR rate to the basis points it being understood that one hundred 1 00 basis points equal one percent l. Rehab Escrow Account bas the meaning ascribed to it in Article 29.2.1. Rehab Escrow Agreement bas the meaning ascribed to it in Article 29.2. l. Relief Event means the occurrence of any of the following events or circumstances a a Change in Law Event; pagl26 b c d e f g h i j compliance by the Project Company pursuant to the Reserved Rights or otherwise with an order or direction by police fire officials anned forces or any comparable public authority having the legal authority to make such order or give such direction; an official or unofficial strike lockout work rule or other labor dispute by i public sector employees or ii private sector employees other than employees of a Project Company a Contractor or a Subcontractor that are working at the Project Area A which l is regional or national in nature and affects the mining construction building maintenance or facilities management indusll generally or 2 takes place at a faciHty manufacturing materials or equipment for the Project and is

not directed at the Project and B which lasts for more than thirty 30 Days in the aggregate; the preemption confiscation diversion destruction or other interference in possession or performance of materials or services by a Governmental Entity in connection with a public emergency or any condemnation or other taking by eminent domain of any material portion of the Project; the issuance of an injunction or any other final order by a court of competent jurisdiction other than as a result of a reasonable determination by the issuer that such action was appropriate with the result that the State or the Project Company becomes unable to perform its material obligations under the Convention or applicable Project Agreement; the closure due to an accident construction or otherwise of a road necessary for direct access to the Project through exercise of the States Reserved Rights; the performance of maintenance that cannot be performed under the Operating Standards without affecting the provision of services under the Mineral Terminal Services Agreement and Railway Haulage Agreement and the relief for which is approved in advance by the State in writing; any unreasonable delay in or denial of the issuance of a properly submitted application or other petition for a Governmental Approval required for the Project for which the Project Company has complied with all material requirements under applicable Legislation which delay is not caused by a Project Company Fault and which continues for sixty 60 Days following notice of such unreasonable delay or denial by the applicable Project Company to the State Project Committee or such lesser time to the extent the failure to respond would materially affect Project Operations; a State Fault; or any other item expressly identified as a Relief Event in a Project Agreement in each case the response to which or compliance with which in accordance with the Operating Standards materially interferes with delays or increases the cost of performing the Project Operations provided that, none of the foregoing shall be deemed a Relief Event if it arises from or is materially contributed to directly or indirectly by any Project Company Fault. Relief Event Notice has the meaning ascribed to it in Article 38.1.1 Remedial Period has the meaning ascribed to it in Article 50.2a.ii. v page 27 Reports refers to on an individual basis any one of the reports specified in Article 30.3 and collectively all of such reports. Representative means with respect to any party any director officer employee official lender

or any agent or trustee acting on its behalf partner member owner agent lawyer accountant auditor professional advisor consultant engineer. contractor other Party for whom such Party is responsible at law or other representative of such Person and any professional advisor consultant or engineer designated by such Person as its Representative. Request has the meaning ascribed to it in Article 56.2a. Reserve Expansion Capacity has the meaning ascribed to it in Article 0. Reserved Rights has the meaning ascribed to it in Article 6.5. Road Agreement has the meaning ascribed to it in Article 14.1. Road Operations means the design construction operation and maintenance of the Project Roads carried out in accordance with the terms and conditions of this Convention and of a Project lease as the case may be. Road Plan has the meaning ascribed to it in Article 14.1. Rosters means a work scheme that includes a ratio of a number of work daysweeks and a number of daysweeks leave. Royalty means the payment calculated in accordance with Article 34. Sale Products means a the Products; and b Nabeba Ore. Services Application means an application for Mineral Terminal services or Railway haulage services sent by Mine Project Company Congo from or any Third Party to an Expansion Project Company and the State. Services Application Window means a period commencing on the date that an invitation is published pursuant to Article 18. 7b and ending on the date that is forty five 45 Days thereafter. Services Feasibility Study means a technical commercial and economic feasibility study of the provision of Mineral Terminal services and the provision of Railway haulage services as applied for under a Services Application. Share Transfer Agreement or Share Transfer Agreements mean one or more of the Cam Iron Share Transfer Agreement Mineral Terminal Project Company Share Transfer Agreement and the Railway Project Company Share Transfer Agreement. Shareholder means any entity other than the State that holds one or more shares in any Project Company. v page 128 Shareholders Agreements mean the Mine Project Company Shareholders Agreement the Mineral Terminal Project Company Shareholders Agreement and the Railway Project Company Shareholders Agreement. Scheme has the meaning ascribed to it in Article 4.1 d. Shifts means the continuous time period over one day measured in hours which starts from the time employees are required to start working on the

Project to the time they are entitled to leave the work premises. Signature Date means the date first written above when the State and Cam Iron signed this Convention. South and East Regions Plan has the meaning ascribed to it in Article 29.5. 1 a. Special Development Fund has the meaning ascribed to it in Article 29.5.1 f. Specific Agreements means together the Railway Agreement the Mineral Terminal Agreement and the Blending Agreement as well as any Additional Specific Agreement. the Railway Specifications means Specifications the Project Road Specifications the Mineral Terminal Specifications construction specifications and any other specifications that could be prepared in connection with any Additional Facility Request and in singular any one of these specifications. the Beneficiation Specifications in plural Spur Line means the Initial Spur Line or any Additional Spur Line. Stage 1 means the period from the Date of First Commercial Shipping and ending on the earlier of a the date that the maximum capacity of the Railway Facilities and the Mineral Terminal Facilities achieves or is demonstrated to achieve thirty five 35 million Tonne per annum or b the fourth anniversary from the Date of first Commercial Shipping. State Fault means a b a breach by the State of any of its material obligations other than payment obligations under a Project Agreement; or a breach of any material representation or warranty by the State under a Project Agreement; or c wilful misconduct of the State. State Interest means the State interest described in Article 45.2a. State Project Committee has the meaning ascribed to it in Article 47.1. State Representative has the meaning ascribed to it in either Article 18.22.2a.ii or Article 30.5.2a.ii. Step in Rights shall refer to such rights of the State as set forth in Article 50.4. Subcontractors means any entity other than the Lenders who carry out within the scope of a contract signed with a Contractor all or part of the Project Operations on behalf of such Contractor under the conditions laid down in this Convention Specific Agreements and Additional Specific Agreements and in compliance with the Legislation and international standards generally accepted for projects of comparable scale provided that any such entity whose contract with a Contractor provides for aggregate payments in excess of one hundred million US Dollars adjusted by the Inflation Adjustment shall be a Qualified Contractor.

Subsidiary means any entity which is directly owned or directly controlled by Cam Iron and/or a Project Company and specifically excluding any entities or Affiliates owned or Controlled by any entity which directly or indirectly owns or controls Cam Iron or a Project Company other than the Mine Project Company the Railway Project Company or the Mineral Terminal Project Company.

Sundance means the company Sundance Resources Limited organised under the laws of Australia having its registered office at Level 35 Exchange Plaza | 2 The Esplanade Perth Western Australia 6000 Australia and registered on 1 July 2000 as an Australian Public Company under Australian Business Number No 19 055 719 394.

Sustaining Capital means capital expenditure that is necessary to ensure continuity of production output at the planned capacity incurred periodically to replace existing capital assets.

Targeted Annual Production Capacity means prior to the BF Commissioning a target of thirty five 35 million Tonnes per annum of Mbalam Ore and Nabeba Ore and after the establishment of the Beneficiation facility that facility achieving a production capacity of thirty five 35 million Tonnes per annum of Mbalam¹ Ore as provided for in this Convention.

Tariff Framework means the Mineral Terminal Tariff Framework and or the Railway Tariff Framework attached as Annex III as the context requires.

Tax includes duties taxes and tolls of any kind including ad valorem taxes business licence taxes community integration taxes transit taxes company taxes impôt sur les sociétés including the minimum company income tax based on revenue le minimum de perception de l'impôt base sur les bénéfices des sociétés value added taxes including council tax and value added tax special taxes on revenue Taxe Spéciale sur les revenus nonresident taxes withholding taxes computer taxes. customs duties excise duties duties under the OHADA Acts impôt sur le revenu de capitaux mobiliers taxes stamp duties capital gains taxes registration duties transit commission taxes Port Autonome de Douala unloading taxes personal income tax income taxes and turnover tax including the minimum company income taxes that represent 1.1 of the monthly or annual turnover of the company based on revenue even in the case of loss impôt sur les sociétés et le minimum de perception; and costs fees and charges of any kind including inspection costs including any monitoring verification inspection and control duties fees

taxes and charges of Societe Generale de Surveillance or any company forming a similar function charges of the Foreign Trade Single Desk Operations Guichet Unique des Operations du Commerce Exterieur importation declaration fees transit charges customs clearance certificate fees customs verification fees customs clearing agent fees clearing and forwarding agent fees and charges. Bordereau Electronique de Suivi des Cargaisons electronic transit commissioning and clearance fees. transfer fees registration fees and charges Bonus Payment import file fees transit commission fees and charges customs clearance attestation fees customs inspection fees handling fees and charges Honoraires d'Agrets en Douanes rental charges dividends and interest and management fees tracking charges and cargo tracking charges page 30 a b v charged by the Sale whether existing or future regardless of nature whether direct or indirect. Technical Dispute shall refer to any Dispute specifically designated as a Technical Dispute elsewhere in this Convention whose referral to the Expert Procedure is expressly provided for in this Convention. Technical Dispute Resolution Agreement has the meaning ascribed to it in Article 56.2n. Temporary Occupation Authorization means a right to occupy the Cameroonian public domain as provided in article 9 of the Ordinance No. 742 of 6 July 1974 on Land Law and this Convention. Term of the Project means a period starting on the Date of Entry into Force of this Convention and ending upon completion including, as the case may be any renewal or early expiry of the Exploitation Permit. Third Party means any person other than a Party a Project Company a Governmental Entity a Subsidiary a Shareholder or any other entity subrogated to the rights of Cam Iron. Third Party Facility means a b an Additional Spur Line; or an Additional Road that has been authorised in accordance with the applicable provision regarding expansion as set forth in Article 18. Tonnes means dry tonnes. Treasury Agreement means the form of agreement relating to the Treasury Operations which shall be finalized and concluded between the Project Companies and the Treasury Company. Treasury Operations means the management of the treasury functions of the Project Companies and the sale proceeds received by the Mine Project Company on the sale of the Sale Products carried out in accordance with the terms and conditions of this Convention and the Treasury Agreement. Treasury Company

means a company in which the State does not have an equity interest and as a party to the Treasury Agreement is in charge of the Treasury Operations. Uniform Act on Commercial Companies means the Uniform Act relating to Commercial Companies and Economic Interest Group adopted on 17 April 1997 by the Member States of the Organisation for the Harmonisation of Business Laws in Africa. US Dollar means the currency which is the legal tender in the United States of America. VAT means value added tax.

2 INTERPRETATION

2.1 Interpretation

In this Convention save any provision to the contrary page 131 the Annexes have the same legal force as this Convention itself of which they form an integral part; the headings used Articles and paragraphs are for convenience only and shall not be construed as having any particular meaning; a reference to the and to the Articles paragraphs and Annexes is to the and articles paragraphs and annexes of this Convention unless indicated otherwise; the terms defined in Article I are used interchangeably in the singular or plural form where the meaning or context so requires; if a word or phrase is defined its other grammatical forms have a corresponding meaning; a reference to a person includes any natural person or legal person organized under private or public law; a reference to an entity includes any legal person organized under private or public law as well as any association or groups of several legal persons and excludes natural persons or group comprised of natural persons; a reference to this Convention an agreement another convention or another agreement includes this document and its annexes such as potentially amended as well as as the case may be any deed that would be validly substituted therefore by way of novation unless this Convention such agreement or document expressly provides otherwise; mentioning anything after includes including for example or similar expressions does not limit what else might be included; the terms grant award delivery where applied to an authorisation a permit a lease or any other legal document designate the moment when the authorisation permit lease or administrative document has been duly delivered or enacted by the relevant Governmental Entity notified to the beneficiary in the manner prescribed by the Legislation or this Convention and in the case of a regulatory document published with the Official Gazette or according to the other methods required as the case may be. by the

Legislation. The ministerial or interministerial orders granting the authorisations the decrees and the laws of the State must in particular be published with the Official Gazette; in case of conflict or contradiction between the provisions of this Convention and those of its Annexes or any other Project Agreement those of this Convention shall prevail except where the Annex or Project Agreement expressly contemplates that it will prevail. In case of conflict or contradiction between any general provision and a special provision then the specific provision shall prevail over the general provisions; the Parties acknowledge that this Convention is being finalized in both English and French and agree that the English version shall prevail in the event there is any contradiction or inconsistency between the English version of this Convention and the French version of this Convention; and any reference to a specific law in this Convention shall unless otherwise specified be deemed a reference to such law as in effect in the State. page 132 a b c d e f g h i j k l m v 3

LEGAL NATURE AND PURPOSE OF TJUS CONVENTION 3.1 Legal Nature of this Convention a

This Convention is inter alia a mining convention within the meaning of the Mining Legislation. It determines i ii U1e technical legal tax customs economic administrative land employment and environment conditions with a view to the Parties performance of the Project; and the main terms and conditions for carrying out the Mining Operations within the Exploitation Area. b c d This Convention also sets for the framework for the Connected Operations which the Parties acknowledge are an essential component of the Project and integral to the Mining Operations. T11e Specific Agreements relating to the Connected Operations shall be concluded by the Parties after the Signature Date in accordance with the terms set forth on the applicable Annexes hereto to the extent applicable and shall become a part of this Convention upon ratification of this Convention by the Enabling Law. The Parties intend as a Condition Precedent to enter into a written agreement agreeing on the form of Annexes contemplated by this Convention but not attached at the time of signing and may also update annexes by agreement To the extent any provision of this Convention and a Project Agreement departs from the provisions of the Legislation such provision shall only be effective to the extent approved in the Enabling Law. Without limiting U1e foregoing the Enabling law

shall address any authorizations needed under Legislation to pennit the Marketing Company to accomplish the Marketing Operations.

3.2 Project Descr iption

The Parties agree that tile Project is an integrated mining and infrastructure project all steps of which shall be undertaken by the Project Companies with a view to optimally exploiting the Mbalam Ore resources contained within the Exploitation Area and to allow for the development of an integrated iron ore tining industry in the territory of the State. To illis end ilie Parties accept that a b subject to iliis Convention Cam Iron shall have overall responsibility for Project Operations aod in that capacity shall be responsible for the completion and the proper execution of ilie Project relative to the terms and conditions set by Legislation by this Convention and by all of the other Project Agreements; the Mine Project Company as assignee of the Exploitation Permit and holder of the Exploitation Lease shall be in ccharge of carrying out the Mining Operations in compliance with the tenus and conditions set by legislation this Convention and those of the Project Agreements to which it is a party; c v the completion of the Connected Operations shall be entrusted to the oilier Project Companies for the terms referred to in this Convention of page 133 l which i ii lthe Railway Project Company is in charge of conducting the Railway Operations and Road Operations; the Mineral Terminal Project Company is in charge of conducting lthe Mineral Terminal Operations and Blending Operations; and iii as the case may be any Project Company in charge of conducting any other operations required for or connected with the Project in compliance with the terms and conditions of the Legislation this Convention the Project Agreements and the Project Leases to which each of the Project Companies is a party; d e conduct of the Marketing Operations shall be entrusted to the Marketing Company; and conduct of the Treasu.ry Operations shall be entrusted to the Treasury Company.

3.3 Project Economic Model

a As at the Signature Date the Parties have agreed on the Project Economic Model which i ji b is built up on the economics detailed in the Feasibility Study and any updates included up until the Signature Date; and takes account of the exonerations reductions and fiscal principles propbsed by Cam Iron prior to their final negotiation of this Convention. The Parties agree to keep confidential and hold the Project Economic Model for the benefit and use of the Parties. The

State may retain a copy of and access and use the Feasibility Study and Project Economic Model for its own use for any purpose including i the operation of the Railway and Mineral Terminal directly or by a Third Party after the expiration of the Railway Agreement and Mineral Terminal Agreement respectively and ii mining operations after the end of the Term of the Project.

3.4 Joint and Several Liability

a b Other than as provided for in Article 3.4d Cam Iron expressly consents to be jointly and severally liable to the State for all the obligations undertaken by the Project Companies hereunder or under the various Project Agreements. This commitment by Cam Iron to joint and several liability shall continue until any obligation entered into by any Project Company under any document referred to in Article 3.4a has been fully and finally satisfied or as otherwise provided for in Article 3.4d.

c The commitment of Cam Iron under this Article 3.4 is the subject of a separate document which the Parties intend to negotiate the Joint page 34 v incorporate Liability Subscription Agreement which may Article 1200 et seq. of the Cameroonian Civil Code and shall set forth among others Cam Iron's obligation to perform or cause to be performed any specific obligation of Cam Iron or any Project Company or pay or cause to be paid any amount due by Cam Iron or any Project Company in each case under any Project Agreement.

d Cam Iron shall be released from being jointly and severally liable to the State for all the obligations undertaken by a Project Company where i ii more than fifty percent 50 of the voting equity interests in that Project Company are held by or have been transferred to the State or a Governmental Entity whether together or by one of them; or the State agrees in writing to release Cam Iron from that obligation on the basis of an alternative party acceptable to the State offering to be jointly and severally liable for the obligations of the Project Company and that party having financial standing which is no less than that of Cam Iron or if less, otherwise acceptable to the State.

3.5 Other Deliveries on the Signature Date

In addition to any other documents or items required to be delivered to the State on the Signature Date, the State shall also have received from Cam Iron a b a letter agreement from Sundance in favour of the State which, among other things provides for a guarantee by Sundance of the obligations of Cam Iron under this Convention prior to the Date of Entry into Force and an agreement to pay or cause to be

paid to the State a breakup fee in certain circumstances and the Bonus Payment required to be paid as set forth in Article 36.3; and i a certificate of appropriate public officials dated a date reasonably close to the Signature Date as to the existence and good standing in its jurisdiction of organization; ii a certificate dated as of the Signature Date duly executed and delivered by an officer of Cam Iron certifying as to A resolutions of its board of directors then in full force and effect authorizing the execution delivery and performance of this Convention. B the incumbency and signatures of those of its officers or other authorized representatives as applicable authorized to execute this Convention on behalf of Cam Iron and C the full force and validity of each organizational document of Cam Iron and copies thereof.

3.6 Project Commissioning a b Cam Iron undertakes that the Project Commissioning occur within six (6) years following the Date of Entry into Force or such later date as otherwise agreed. In case of disagreement between the Parties concerning the completion of the Project Commissioning the provisions of Article 56 shall apply. For the purposes of this Article such a disagreement shall be deemed to constitute a Technical Dispute.

3S 4 CONDITIONS PRECEDENT

4.1 Conditions Precedent Except for the provisions of this Article 4 as well as Articles 1 Definitions 2 Interpretation 4 Conditions Precedent 36.3 Bonus Payment 44 Confidentiality 56 Dispute Resolution 59 Legislation in Force 60 Entire Agreement 61 No Waiver. 62 Severability and Article 3 of Annex VTI Bonus Payment which will to the extent applicable become effective as of the Signature Date this Convention and the Parties rights and obligations under this Convention shall only become effective at the time indicated in Article 4.4 and subject to the prior satisfaction of the following conditions a b c the delivery by Cam Iron to the State of an updated Feasibility Study which i includes details of the costs for the construction of the foundations required for a dual track and any delays and direct costs such construction would cause to the construction of the Mainline Railway for A the first two hundred and fifty (250) kilometres of the Railway from Lolabe and B the entire length of the Mainline Railway; ii the impact on the construction time frame for building the Mainline Railway; iii includes the update to the independent reserve statement including changes in construction and operating cost the production profile and the Project Economic Model; and iv a

description of the key components of and assumptions associated with reaching the Design Capacity and an annual capacity of two hundred million 200000000 wet tonnes on the Railway and for the Mineral Terminal. the delivery by Cam Iron to the State of a commitment letter for the Debt required by the Project; agreement by the Parties on the form of all Annexes contemplated by this Convention but not attached at the Signature Date and Sundance shall have either i ii consummated the transactions contemplated by the scheme of arrangement announced involving Sundance and Hanlong Africa Mining Investment Ltd in 2011 and subsequently varied the Scheme pursuant to which one hundred percent 100 of the shares of Sundance will be acquired by a Third Party; or completed a transaction with another entity or entities which in the opinion of the State acting reasonably has the independence and capability to run the Project and has firm written commitments for to achieve Project the equity and debt financing necessary Commissioning; e.g the passage of the Enabling Law in a mutually acceptable form and issuance of the Promulgation Decree; the delivery of a signed copy of the Joint Liability Subscription Agreement by Cam Iron to the State; the registration of the Mine Project Company and the conclusion and entry into force of the Mine Project Company Share Transfer Agreement page J36 v the Mine Project Company Shareholders Agreement and an Accession Notice by the Mine Project Company; the registration of the Railway Project Company and the conclusion and entry into force of the Railway Project Company Share Transfer Agreement the Railway Project Company Shareholders Agreement the Railway Agreement and an Accession Notice by the Railway Project Company; the registration of the Mineral Terminal Project Company and the conclusion and entry into force of the Mineral Terminal Project Company Share Transfer Agreement the Mineral Terminal Project Company Shareholders Agreement the Mineral Terminal Agreement and an Accession Notice by the Mineral Terminal Project Company; the execution of the Technical Dispute Resolution Agreement; the notification to Cam Iron of the publication in the Official Gazette of the Promulgation Decree if any; the approval by the State of any Finance Documents in which the State is a party and the closing of the lending transactions contemplated by the Finance Documents; the delivery of the Exploitation

Pennit to Cam Iron materialized by the notification to Cam Iron of the publication in the Official Gazette of the Granting Decree to the extent required by the Legislation; a certificate from an officer of Cam Iron or the applicable Project Company certifying that all of Cam Iron s representations and warranties as set forth in this Convention and all the representations and warranties by the applicable Project Companies if any exist at the time or their Subsidiaries under the Project Agreements shall in each instance be true and correct in all respects on the Signature Date other than any representations and warranties that relate to a specific date in which case such specific date and after giving effect to any disclosure provided in such certificate; in a certificate from the State certifying that all of States representations and warranties as set forth this Convention and the Project Agreements to which the State is a party on the date of execution shall in each instance be true and correct in all respects on the Signature Date other than any representations and warranties that relate to a specific date in which case such specific date and after giving effect to any disclosure provided in such certificate; the State shall have received from each Project Company or Subsidiary executing a Project Agreement i a certificate of appropriate public officials dated a date reasonably close to the date of execution of such Project Agreement as to the existence and good standing of such Project Company or Subsidiary in its jurisdiction of organization; and ii a certi ticate dated as of the date of execution of such Project Agreement duly executed and delivered by an officer of such Project Company or Subsidiary as to A resolutions of its board of directors then in full force and effect authorizing the execution delivery and perfonnance of such pagal37 h i j k l m n o p v Project Agreement and the transactions contemplated thereby B the incumbency and signatures of those of such Project Company or any Subsidiarys officers authorizod representatives agents managing members or general partners as applicable authorized to act with respect to each Project Agreement to be executed by such Project Company or Subsidiary and C the full force and validity of each organizational document and copies thereof; the Project Companies shall have received from the State i the incumbency and s.ignatures of those State officials authorized to act with respect to each Project Agreement to be executed by such Project Company or Subsidiary; the issuance of the

Bank Guaranties required by the terms of this Convention to be in effect on the Date of Entry into Force; the execution of the Railway Haulage Agreement by the Railway Project Company and the Mine Project Company and the Mineral Terminal Services Agreement by the Mineral Temuol Project Company and the Mine Project Company; the execution of the Monitoring Agreement Blending; the execution of the Monitoring Agreement Marketing; the execution of the Monitoring Agreement Treasury; the execution of the Marketing Agreement including the registration of the Marketing Company; the execution of the Treasury Agreement including the registration of the Treasury Company; the binding and effectiveness of the insurance policies required in accordance with the Finance Documents; q r s t u v w x y z the execution by all applicable parties thereto of each of the i Aerodrome Agreement; ii Explosives Agreement; iii Conservation Convention; iv Road Agreement; v Blending Agreement; vi Beneficiation Agreement; vii Beneficiation Escrow Agreement; viii Foreign Exchange Agreement; ix Project Leases for the initial territory covered by the Exploitation Permit Mineral Terminal Area and Railway Area and page 138 x Rehab Escrow Agreement; and aa the Parties shall have agreed on a list of preapproved Qualified Contractors.

together the Conditions Precedent. 4.2 Quadripartite Agreement. The Parties may also negotiate the Quadripartite Agreement but the effectiveness of this Convention shall not be conditioned upon the execution of the Quadripartite Agreement. 4.3 Satisfaction and Benefit of the Conditions Precedent a Except as set forth below the Parties shall also use their reasonable endeavours to cause the Conditions Precedent to be satisfied as soon as possible after the Signature Date and in any event before the CP Long Stop Date. Notwithstanding the foregoing or anything to the contrary in this Convention i ii iii iv all Conditions Precedent requiring the execution of an agreement also require that the agreement be so tenable acceptable to the Parties to that agreement; the Condition Precedent set forth in Article 4.1 a shall be satisfied on or before the date that is six 6 months following the Signature Date and the Condition Precedent set forth in Article 4.1b shall be satisfied on or before the date that is nine 9 months following the Signature Date or in either case such other date as the Parties may agree; the State shall have no obligation to present the Enabling Law to

Parliament for approval until the Conditions Precedent set forth in Articles 4. Ja and b are satisfied and only to the extent such Conditions Precedent are satisfied within the timing required by Article 4.3a(ii); and the Parties shall use their reasonable efforts to finalize prior to the submission of the Enabling Law any Project Agreement which the Parties agree requires a variance or waiver of Legislation so such variance or waiver can be included in the Enabling Law which the Parties will seek to be presented to the Parliament of the State for approval at the scheduled session of Parliament that occurs following agreement on the terms of any such Project Agreements and variances and waivers. b In the event that any of the Conditions Precedent are not satisfied or waived at the latest on the CP Long Stop Date the Parties agree to meet in order to deal with no obligation to agree within ninety 90 Days following the CP Long Stop Date to either. i each waive in writing any nonsatisfied Conditions Precedent; or v postpone the CP Long Stop Date to any subsequent date as mutually agreed between the Parties. c In the event of either failure to reach an agreement on the waiver of the nonsatisfied Conditions Precedent or agreement to extend the CP Long Stop Date without satisfaction or waiver of the Conditions Precedent by such CP Long Stop Date i ii iii this Convention shall be null and void and the rights and obligations potentially arisen under this Convention shall be automatically terminated and revoked; Cam Iron shall not be entitled to invoke any right under any Project Agreement; and each Party including with respect to Cam Iron any Subsidiary Shareholder and Lender expressly and irrevocably undertakes not to seek the other Party's liability due to a failure to fulfil one or more Conditions Precedent only in this case other than as a result of a failure to use reasonable efforts or to that Party's refusal at its sole discretion to waive such fulfilment in writing. d If the Parties agree to waive the satisfaction of a specific Condition Precedent which provides for execution of a Project Agreement and agree to continue to work to finalize such Project Agreement following the Date of Entry into Force the Parties shall continue to negotiate the terms of such Project Agreement for an additional mutually agreeable period of time and if the Parties do not reach final agreement by such time any Party may submit the matter as a Technical Dispute to the Expert Procedure and request the

determination of the appropriate terms of the item constituting the waived condition and the decision of the experts in the Expert Procedure shall determine the terms on which the Parties shall enter into the waived item.

4.4 Entry into Force of this Convention This Convention shall be effective on that date on which all of the Conditions Precedent shall be satisfied or waived such date the Date of Entry into Force.

4.5 Parties Responsibilities between the Signature Date and the Date of Entry into Force

a b Each Party shall justify and notify the other Party any satisfaction of the Conditions Precedent as and when they occur. The Parties undertake to a reasonable extent to provide any information or assistance requested by the other Party in order to enable the performance of all obligations to which they are bound under Article 4.1 . If the satisfaction of the relevant Condition Precedent is the responsibility of only one Party and the latter seeks the assistance of the other Party all costs and expenses related to such assistance shall be borne by the Party seeking to satisfy the relevant Condition Precedent.

c Each Party shall notify the other Party in writing of the occurrence of any event likely to prevent the Conditions Precedent from being satisfied before or no later than on the CP Long Stop Date as soon as the Party becomes aware of the relevant event.

d The Parties acknowledge that the Conditions Precedent listed are for the benefit of each Party and that the State and Cam Iron shall use their reasonable endeavours to cause the satisfaction of such Conditions Precedent and that any such Condition Precedent may only be waived with the agreement of each Party.

5 REPRESENTATIONS AND WARRANTIES

5.1 Cam Iron Representations and Warranties Cam Iron hereby represents and warrants to the State as follows

a b c d e it is a Societe Anonyme duly organized and validly existing under the Legislation and has full power right and authority to execute this Convention and any other Project Agreement to which Cam Iron is a party and which it is executing at the applicable time of the making of this representation. and to perform each of its obligations herein and therein; neither the execution by Cam Iron of this Convention and any Project Agreement to which Cam Iron is a party and which it is executing at the applicable time of the making of this representation nor the fulfilment of the obligations contemplated hereby or thereby is in conflict with or has resulted or will result in a default

under or a violation of the governing instruments of Cam Iron or any other agreements or instruments to which it is a party or by which it is bound; each of this Convention and the Project Agreements to which Cam Iron is a party and which it is executing at the applicable time of making of this representation constitutes the legal valid and binding obligation of Cam Iron enforceable against Cam Iron in accordance with its terms subject to applicable bankruptcy insolvency and similar laws affecting the enforceability of the rights of creditors generally; as of the date of the applicable representation there is no action suit proceeding investigation or litigation pending and served on Cam Iron which challenges Cam Iron's authority to execute or perform or the validity or enforceability of this Convention and any Project Agreement to which Cam Iron is or will be a party or which challenges the authority of the individual executing this Convention and any Project Agreement for Cam Iron and Cam Iron has disclosed to the State any pending and unserved or threatened action suit proceeding investigation or litigation with respect to such matters of which Cam Iron is aware; the information supplied and representations and warranties made by Cam Iron in the Feasibility Study the Project Economic Model reports and official submittals and applications to the State to the knowledge of Cam Iron after diligent investigation with its employees and legal and other advisors of Cam Iron involved including employees of Sundance Inc. with regard to factual statements A are true correct and complete in all material respects; B do not contain any untrue statement of a material fact or omit to state any material fact necessary in light of the particular circumstances under which it was made in order to make the statements in this Convention not misleading; and C with respect to projections and to the extent not otherwise disclosed are made in good faith; 2 are based on the best available information at the time of delivery; and 3 have not been superseded and are the only item of that type in use at the time; f it has carefully reviewed the whole of this Convention the Project Agreements which are being executed as of the date of this representation and all applicable Legislation prior to the Signature Date and subject to the satisfaction of the Conditions Precedent has taken all steps it considers reasonably necessary to satisfy itself that assuming the satisfaction of the Conditions Precedent nothing contained in this

Convention or a Project Agreement which is being executed at the applicable time of the making of this representation inhibits or prevents Cam Iron from performing and completing the Project as currently contemplated; g as of the Signature Date it is in compliance in all material respects with the Legislation pertaining to the transactions contemplated in this Convention; and h the Project Economic Model i was prepared by or on behalf of Cam Iron in good faith; ii iii discloses all material cost revenue and other financial assumptions and projections used by Cam Iron in determining to enter into this Convention; and is substantially similar exclusive of any changes made as a result of the discussions between the States Representatives and Sundance to the financial model presented to Ilanlong Africa Mining Investment Ltd for it to present to the anticipated Lenders.

5.2 State Warranties

The State warrants to Cam Iron and the Project Companies the following a b c it has full status power right and authority to execute and perform this Convention and the other Project Agreements to which it is a party and which it is executing at the time of this representation and to perform each and all of its obligations provided for in this Convention and the Project Agreement; each of the Project Agreements to which the State is a party and which it is executing at the time of this representation constitutes a legal valid and binding obligation of the State enforceable against the State in accordance with its terms; as of the date of the representation there is no action suit proceeding investigation or litigation pending and served on the State which challenges the States authority to execute or perform or the validity or enforceability of this Convention or any other Project Agreement to which the State is a party or which challenges the authority of the State

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executing his Convention or any other Project Agreements to which the State is a party; d c the State has carefully reviewed the whole of his Convention the Project Agreements which it is executing at the time of this representation and applicable Legislation prior to the Signature Date and subject to the satisfaction of the Conditions Precedent has taken all steps it considers reasonably necessary to satisfy itself that assuming the Conditions Precedent are completed nothing contained in this Convention and any Project Agreement to which it is a party as of the date of his representation inhibits or prevents the State from performing and completing the Project as

contemplated; and in executing this Convention the State is in full compliance with any Legislation. As of the Signature Date all financial obligations required by the State for the Project under this Convention or any other Project Agreement to which the State is or will be a party are or will at the appropriate time be included in the States annual financial programs.

6 SCOPE WIDTH AND PERFORMANCE OF THIS CONVENTION

6.1 Scope of this Convention

a The rights created by this Convention are solely for the benefit of the Parties hereto and their respective permitted Assignees and except as expressly provided in Articles 28, 32 and 43.1 no other Person shall have or be construed to have any legal or equity right remedy or claim under or in respect of or by virtue of this Convention or any provision herein contained provided the permitted Contractors and Subcontractors shall be entitled to benefit from Cam Iron's Tax incentives and exemptions in this Convention with respect to their work on the Project in connection with such entity's performance pursuant to the Project Agreements provided however that only one entity shall be entitled to enjoy such benefits with respect to each individual product or service contemplated under the Project Agreements and no such Contractor or Subcontractor shall have a direct relationship with the State be a third party beneficiary or have a right to bring a cause of action or enter into any dispute resolution proceeding with the State but rather Cam Iron and the Project Companies shall be able to claim any denied Tax benefits or incentives under claims permitted through the Project Agreements and then the applicable Project Company if any shall refund to such Contractor or Subcontractor any compensation received. No Shareholder Subsidiary Contractor Subcontractor Lender nor any respective employee thereof shall be deemed a third party beneficiary of this Convention or any Project Agreement unless such Person is an Assignee.

b Any suspension termination extinguishment or expiry of the rights and benefits granted to the Project Companies under this Convention triggers automatically and under the same conditions suspension termination extinguishment or expiry of the extension of said rights and benefits to the Persons referred to in the preceding Article.

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6.2 Cooperation

The State and Cam Iron undertake to reasonably cooperate in order to fulfil the purpose of this Convention; provided that nothing herein shall be

deemed to restrict the ability of the State to enforce the Legislation and pursue civil and criminal actions in connection with violations of the Legislation. This Article shall apply to all references in the Project Agreements to the States obligation to cooperate regardless of whether expressly stated in such Project Agreement. The State Project Committee shall be formed and empowered with offering timely State cooperation to Cam Iron and the Project Companies with respect to performance of their responsibilities under the Project Agreements including any matter in any Project Agreement that requires the consent or the approval of the State.

6.3 Compliance with Undertakings and Binding Effect of this Convention Each Party agrees to comply with the undertakings obligations and responsibilities to which it is bound under Ibis Convention in accordance with the Legislation.

6.4 Accession to this Convention The Parties to this Convention agree that notwithstanding Article 49 each Project Company once duly incorporated with the relevant RCCM shall automatically become a Party to Ibis Convention by delivering a duly executed Accession Notice supported by an extract of the minutes of its governing body or relevant organ of management that the person executing the Accession Notice has been duly authorised to execute the Accession Notice. Such an Acceding Party shall immediately benefit from and be bound by Ibis Convention to the extent specified in the Accession Notice or as otherwise applicable to that Acceding Party upon receipt of the Accession Notice by all the Parties to Ibis Convention as of the date of the Accession Notice provided that each Acceding Party shall be required to make the same representations and warranties as Cam Iron under this Convention as of the effective date of such Accession Notice and shall assume with respect to its applicable portion of the Project all obligations of Cam Iron and/or the applicable Project Company hereunder and under the Legislation any applicable permits and the Environmental and Social Management Assessment Plan including with respect to Operating Standards State remedies notification dispute resolution provision of Bank Guarantees or other security and other operational matters. For the avoidance of doubt Cam Iron shall not be released from any of its obligations hereunder by virtue of any such accession.

6.5 Reservation of Rights Notwithstanding anything to the contrary in Ibis Convention or in any Project Agreement the State

reserves for itself its Representatives and Governmental Entities the right and shall at all times during the Term of the Project have the right to enter the Project Area and each and every part thereof at all reasonable times and to the extent practicable under the circumstances upon reasonable prior notice which notice shall outline the reasons for and/or object of the State's actions in the following circumstances the Reserved Rights a to inspect the Project or determine whether or not a Project Company is in compliance with its obligations under this Convention a Project Agreement or Legislation as further set forth in Article 30.2b; paragraph 44 v b c d in the event of an actual or reported emergency danger threat circumstance or event that is reasonably believed by the State or its designee including relevant police fire emergency services, armed forces and any other security or emergency personnel in accordance with Article 6.9 to have caused or to present the imminent potential to cause injury to individuals damage to property or threat to the Environment or to public safety to take at such times as the State determines necessary in its discretion and with notice to the Project Company if practicable under the circumstances such actions as the State or such designee determines necessary to respond to or to rectify such emergency danger threat circumstance or event without liability to the Project Companies; to design construct operate manage maintain repair and rehabilitate any existing or future roads highways port terminals railroads or aerodromes other than as contemplated in the Project Agreements adjacent to above or under the Project in accordance with the terms set forth in this Convention or any Project Agreement; and solely in accordance with the terms of the Project Agreements to do any other act or thing that the State may be obligated to do pursuant to the terms of such Project Agreement or have a right to do under such Project Agreement, including those expressly referenced as Reserved Rights. In connection with any entry made pursuant to this Article 6.5, the State shall use reasonable efforts obligation de moyens to minimize interference with the Project Operations in connection with any entry on the Project. With respect to any entry or action under Article 6.5b above and to the extent applicable pursuant to the terms of this Convention Article 6.5d above in each case that qualifies as a Compensation Event the State shall pay to the Project Company or otherwise deliver

the Convention Compensation upon demand by the Project Company and if Disputed after final judgment or arbitral award is rendered in each case in accordance with the procedures set forth in this Convention for payment of Convention Compensation.

6.6 State Access Rights. The State and its Representatives during the progress of any work referred to in Article 6.6 at no cost to the State or its Representatives shall have all necessary or appropriate easement and access rights and may keep and store at the Project all necessary or appropriate materials tools supplies equipment sheds mobile trailers and other vehicles in a reasonably neat and orderly fashion in material compliance with the Legislation and the Environmental and Social Assessment and Management Plan and so as to not unreasonably interfere with the applicable Project Companys conduct of Project Operations. To the extent that the State undertakes work or repairs under Article 6.6 or any other provision of this Convention such work or repairs shall be commenced and diligently completed in a good and workmanlike manner in accordance with any applicable Operating Standards and in such a manner as not to unreasonably interfere with the conduct of business in or use of such space to the extent reasonably possible without incurring any additional cost. Cam Iron and the applicable Project Companies shall be indemnified for any Losses related to the foregoing access rights and shall not be responsible for any harm to persons or property in connection with such rights. In each case absent gross negligence or wilful misconduct on the part of Cam Iron or such Project Company.

6.7 Effect of Reservation. Any reservation of a right by the State to enter upon the Project and to make or perform any repairs alterations restoration or other work in to or about the Project which is the Project Companys obligation pursuant to this Convention or any other Project Agreement shall not be deemed to a impose any obligation on the State to do so; b render the State responsible to a Project Company or any other Person for the failure to do so; or c relieve a Project Company from any payment obligation to the State as otherwise provided in this Convention or any other Project Agreement. Nothing in this Convention or any other Project Agreement shall impose any duty upon the part of the State to do any work required to be performed by the Project Company hereunder and performance of any such work by the State shall not

constitute a waiver of the Project Companies default in failing to perform the same. 6.8 No Request to Contractors. Nothing contained in this Convention shall be construed as constituting the request of the State express or implied by inference or otherwise to any Contractor or Subcontractor for the performance of any labour or service or the furnishing of any materials for the improvement alteration addition or repair of the Project or any part thereof. 6.9 Police Fire Emergency and Public Safety Access Right. Notwithstanding any other provision of this Convention at all times during the Term of the Project and without notice unless in the discretion of the State there is adequate time for such notice or compensation to Cam Iron or the Project Companies any police fire and emergency services and any other security or emergency personnel including the armed forces and any Governmental Entity with jurisdiction over the Project Area shall have access to the Project Area as necessary for emergency management and homeland security purposes prevention of practice drills for or response to a public safety emergency. Cam Iron and the Project Companies shall cooperate with police fire and emergency services and any other security or emergency personnel including the armed forces in respect of such emergency management and homeland security purposes. The State shall use its reasonable efforts obligation de moyens to minimize a the duration and scope of any such declaration; b the adverse impact that any such declaration may have on the Project Operations; and c any public perception that Cam Iron or the applicable Project Company is acting in conjunction with any of the foregoing State efforts. including 7 TERM OF THIS CONVENTION AND SURVIVAL 7.1 Term of the Project and Survival Without prejudice to the provisions of Article 4.1 this Convention shall take effect on the Date of Entry into Force and except as provided herein shall remain effective for the Term of the Project. Articles 1 Definitions 2 Interpretation 4 Conditions Precedent 36.3 Bonus Payment 44 Confidentiality 56 Dispute Resolution and 59 Legislation in Force 60 Entire Agreement 61 No Waiver and 62 Severability and any other sections that survive by their terms shall survive the termination of this Convention. 7.2 Termination Notwithstanding Article 7.1 the Exploitation Permit may be withdrawn and this Convention may be terminated prior to expiry of the Term of the Project in accordance with in Article 50 and the

Legislation. I v .. pagel46 SECriO.S U M INING O PERATIONS 8 MINTNG OPERATIONS AND
I.XPLOIT A TION PEIUdIT 8.1 Granting of the Exploita tion Pe rmit a nd of the Explo ita tion Lease a
Within fonyfivc 45 Days of Date of Entry into Force or such longer period as may be reasonably
required by the State the State shall i ii publish in the Ollicial Gazette a decree of the appropriate
authority upon proposition of the Minister an arrete of the Minister authorising and acknowledging
the transfer of the Exploitation Permit from Cam Iron to the Mine Project Company to the extent
required under the Legislation and in accordance with the terms of this Convention; and gr.mt an
Exploataaon Lease to the Mine ProJect Company for an initial term of twentyfive 25 years as from
the Date of Entry into Force wath an opuon to extend automatically on the extension of the
Exploitation Permit and to requirements. applicable conditions subject b The initial transfer of the
Exploitation Pemait from Cam Iron to the Mine Project Company shall be exempt from any Tax
including any Bonus Paymenl. 8.2 Renewal of the Exploitation Pe malt and of the Exploitation Lease
a b Upon expiry of the iniuat validity period of the Exploataation Permit the Mine Project Company
may apply for. in accordance nh Anacle 66 of the Mining Code Implementing Decree at least
twentyfour 24 months prior to ns cxpary date the renewal of the Exploitation Permat for a maximum
penod of ten l 0 years. The Exploataation Permit may subsequently be renewed by maximum
successive penods of ten 10 years with the renewal application being made at least twelve 12
months prior to 1 he then expiry date. Subject to Article 8.2c the Exploitation Permit sha ll be
renewed subject to Cm Iron and the Project Companies as well as their successors and respective
Assignees having complied with their contrnactual obligations under this Convention and the other
Project Agreements including the absence of material breach of such agreements; and if the Mine
Project Company demonstrates the commercial nature of the Mbalam Ore in accordance with
section 482 of the Mining Code. c The State agrccs that 11 will 001 unreasonably deny or delay any
properly completed and submiued application for renewal of the Exploitation Pennit. 8.3 Rights Gra
nted Tbe Exploitation Lease will grant according to its tenns the Mine Project Company the right 10
access and 10 occupy on an exclusive and temporary basis subject lo the Reserved Rights of the

State the land located within the Exploitation Area to carry out the Mining Operations therein in accordance with the terms and conditions thereof of this Convention and of the Legislation.

8.4 New Discoveries

a b c If the Mine Project Company discovers within the framework of its Mining Operations a reasonably material amount of mineral substances other than iron ore within the Exploitation Area the Mine Project Company and Cam Iron undertake to promptly notify this discovery to the Minister in accordance with the provisions of the Mining Legislation. If the Mine Project Company indicates its intention to exploit such other mineral substance within the Exploitation Area, this exploitation shall require the application and approval of a new mining title as well as the conclusion of a new mining convention in accordance with the provisions of the Legislation. The State shall reasonably consider such application in accordance with the provisions of such mining Legislation. Determination of the manner and participants in any exploitation of the mine shall be among the State's Reserved Rights and if the Mine Project Company and the Minister are able to negotiate a mining convention on mutually satisfactory terms, the Minister shall grant such application. If within two (2) years following the notification to the State of a discovery of another mineral substance within the Exploitation Area or such longer period as may be reasonably requested by the Mine Project Company provided it demonstrates it is diligently pursuing the prerequisites to mining such other mineral substance the Mine Project Company fails to appropriately apply for an exploitation permit in accordance with the Mining Code to exploit this other mineral substance or remains silent the State may freely grant exploration rights and subject the commercially extractable mineral an exploitation permit to one or more Third Parties under conditions which would not materially interfere with the performance of the Project; provided that the granting of an exploitation permit shall not release the recipient of such rights of any obligation to the Project Companies and where the Mine Project Company has complied with this Article and has made an application for an exploitation permit pursuant to the Mining Legislation, to confirming that For the avoidance of doubt it is expressly agreed that the exploration and exploitation of any natural resources including any mineral substances including iron ore outside the Exploitation Area would

fall outside the scope of this Convention.

9 CONDUCT OF THE MINING OPERATIONS

9.1 Rights to carry out the Mining Operations

a As of the later of the date when the Exploitation Permit is transferred to the Mine Project Company in accordance with Article 8.1 and the date when the Mine Project Company becomes a Party to this Convention in accordance with Article 6.4 the Mine Project Company shall have the right to carry out the Mining Operations under this Convention and the Exploitation Permit.

b Cam Iron undertakes and stands surety for the Mine Commissioning page[48 .. v under the conditions of this Convention. Cam Iron the Mine Project Company and the State undertake to comply with their respective obligations to cooperate to ensure Mine Commissioning.

c Following Project Commissioning production of Product will be ramped up during for a period of three 3 Calendar Years from the Date of Project Commissioning and Cam Iron undertakes to ensure the Minimum Annual Ore Production will be reached in the third 3 full Calendar Year post Project Commissioning.

9.2 General Obligations of Mine Project Company in the Conduct of the Mining Operations

9.2.1 Until the exhaustion of the High Grade Ore from the Exploitation Area and except as consented to by the State during any period in which High Grade Ore from the Exploitation Area is being mined the Mine Project Company must maintain the Minimum Annual Ore Production measured on a rolling average over a thirtysix 36 month period as adjusted on a pro rata basis for periods in which no High Grade Ore is being mined from Exploitation Area or the area covered by the Nabeba Permit.

9.2.2 The Mine Project Company shall undertake to carry out the Mining Operations diligently and in compliance with the Operating Standards the Legislation and to the extent applicable any specific standard contained in the applicable Project Agreements. This obligation shall include the requirement to a b c d e I follow Good International Industry Practices in order to effectively manage the mineral resource; ensure that all materials supplies facilities and equipment that the Mine Project Company or its Contractors and Subcontractors use within the framework of the Mining Operations are compliant with the Operating Standards and remain in a good state of use; use the resources available in the Exploitation Area such as water sand. gravel and wood in the most rational manner possible for the exclusive

purposes of the Mining Operations; place the scrap and waste in recipients built for that purpose and dispose of such scrap and waste in accordance with the Operating Standards and Legislation; take all usual measures taken in accordance with Good International Industry Practice in order to avoid damages to areas outside Mining Operations and prevent emissions in excess of approved levels and in each case mitigate any damages and emissions through customary means including payment of damages; supervise in a competent manner and continuously develop the employees of the Mine Project Company during Mining Operations. To this end the Mine Project Company shall develop training programmes to ensure the employees are skilled to perform the task they are employed for; g ensure that its Contractors and Subcontractors comply in their respective fields i with the standards and practices required by the Project Agreements including Good [nternational Industry Practice; ii with the Legislation; iii iv with the Environmental and Social Assessment and Management Plan; and with the applicable Project Companies quality safety and health policies; and h pay all Taxes. duties. fees and other miscellaneous payments provided for tmder this Convention and the Legislation.

9.3 Annual Works Programs and Corresponding Budgets.

On or before 30 September of each Calendar Year following the Calendar Year in which Project Commissioning occurred the Mine Project Company shall submit for review and comment to the State the production program of Mbalam Ore and the corresponding budget set for the following Calendar Year which shall notably demonstrate Cam rons ability to fulfil its obligations under Article 9.1c.

9.4 Legal Regime Ap plicable to the Assets of the Mine Project Company.

a b c d The State acknowledges that the Mining Operations shall not be drawn up as a BOOT model however the State may elect to purchase all or some of the Assets of the Mine Project Company which are necessary used or desintble in connection with the Mining Operations upon the expiry withdrawal or terrn.ination of the Exploitation Permit in exchange for cash consideration equal to the fair market value of such Assets. The State shall promptly pay the consideration required by this Article 9.4a and the Assets selected by the State shall upon payment transfer to the State. The Mine Project Company shall not pay any Taxes triggered by the transfer of such Assets to the State. Any Assets

transferred to the State in accordance with Article 9.4a shall be transferred free and clear of all security interests, liens and encumbrances including in favour of the Lenders and the Mine Project Company shall cause all such security interests, liens and encumbrances to be removed prior to transfer. The Mine Project Company shall keep an up-to-date inventory of its Assets at its expense under the conditions set forth in this Convention. The Mine Project Company shall not without the States' prior consent not to be unreasonably withheld: i) transfer with or without consideration all or part of the Assets of the Mine Project Company save in the case of any Assets that may be replaced or become surplus in the ordinary course of business; or ii) create a security right or grant any other right whatsoever over said Assets except for the purposes of financing but not refinancing in a manner that grants a security interest in the Assets of the Project Companies within the last five (5) years of the Mineral Terminal Agreement and Railway Agreement to the Project and in favour of the Lenders of such financing. c) The State must not unreasonably withhold its consent to any transfer referred to in Article 9.4d where the transferee agrees to be bound by the obligations to the State under this Convention with respect to the Assets of the Mine Project Company.

10 BENEFICIATION OPERATIONS

The Parties acknowledge that the Beneficiation of the Low Grade Ore and the construction of the Beneficiation Facility and Beneficiation Power Station constitute a decisive part of the Project and the State is granting the Exploitation Permit, the Railway Concession and the Mineral Terminal Concession based on the long-term nature of the Project of which Beneficiation is an essential component.

10.1 Beneficiation Operations and Beneficiation Feasibility Study

a) b) c) d) The Parties agree that the grant and if requested the renewal of the Exploitation Permit by the State in favour of the Mine Project Company must allow the Mine Project Company to produce commercially exploitable Mbalam Ore. As a consequence the Parties confirm their agreement to enable Beneficiation of the Low Grade Ore in order to produce Beneficiated Ore, conducting Beneficiation Operations in Subject to the occurrence of the events referred to in Articles 6.4 and 8.1a) the Operating Standards and the provisions of this Convention the Mine Project Company shall have the right to carry out the Beneficiation Operations under this Convention any applicable Project

Agreement and the Exploitation Permit. Prior to the Date of First Commercial Shipping Cam Iron must have completed and provided to the State a prefeasibility study regarding the Beneficiation Power Station. The foregoing prefeasibility study shall be prepared by Cam Iron or the Mine Project Company but shall be reviewed by an Independent Engineer selected by the State. Thirtysix 36 months from the Date of First Commercial Shipping and on every second 2 anniversary thereafter until the ending point specified in the Beneficiation Agreement if a Positive Beneficiation Determination has not occurred Cam Iron must have completed and provided the State with a Beneficiation Feasibility Study and a feasibility study relating to the design and construction of the Beneficiation Power Station containing the items customarily considered for a study of this type Beneficiation Power Station Feasibility Study. The Beneficiation Feasibility Study and the Beneficiation Power Station Feasibility Study shall be prepared on behalf of Cam Iron or the Mine Project Company but be reviewed by an Independent Engineer selected by the State. The State shall have the right to use and share with Third Parties the Beneficiation Power Station Feasibility Study for the purpose of constructing the Beneficiation Power Station. The Project Companies shall keep the State informed of their timetable for preparing the Beneficiation Feasibility Study and Beneficiation Power Station Feasibility Study so that the State may arrange for the prompt review by its Independent Engineer. The Independent Engineer shall be engaged by the State at the sole expense of the State but the Mine Project Company will set aside for multiple studies if needed five hundred thousand 500000 US Dollars to fund such expense from dividends due to the State from the Mine Project Company to review the Beneficiation Feasibility Study or updated prefeasibility study or review the draft Beneficiation Power Station Feasibility Study or prefeasibility study. The Project Companies and their Subsidiaries shall and shall cause any person or entity preparing the Beneficiation Feasibility Study and Beneficiation Power Station Feasibility Study to cooperate with the Independent Engineer as it conducts its business and provide them with any materials they request. It is acknowledged that Cam Iron will in its work be utilising information provided by itself or the Project Companies; and in particular detail categories of information

substantially similar to those of the Feasibility Study including A B C D the mineral resources and mineral reserves of Low Grade Ore present within the Exploitation Area for Mbalam Ore and the exploitation area covered by the Nabeba Pennit with respect to the Nabeba Ore; provided. that the resources and reserves of the area covered by the Nabeba Permit are for planning purposes only and shall not be included in the calculation of IRR; the mineral resource and mineral reserves estimate of High Grade Ore present within the Exploitation Area for Mbalam Ore and the surface area of the Nabeba Pennit with respect to the Nabeba Ore; the extent to which the Mine Project Company shall continue to mine any High Grade Ore at expiration of the BF Commissioning Deadline subject to having reached and maintained the Initial Beneficiation Production Capacity. insofar as the volumes of Low Grade Ore present within the Exploitation Area so allow the conditions under which Congo Iron shall continue to mine any High Grade Ore at expiration of the BF Commissioning Deadline where at anytime thereafter the Mine Project Company is not mining sufficient High Grade Ore from the Exploitation Pennit to satisfy the Minimum Annual Ore Production. The Beneficiation Feasibility Study is to describe the ongoing transport and blending of the High Grade Ore from the Nabeba Project by Railway Project Company and Mineral Terminal Project Company as the case may be with whatever High Grade Ore is available from the Exploitation Pennit and how this will coexist with the Mine Project Company having a Beneficiation Facility which is conducting Beneficiation Operations with respect to paragraph 52 the Low Grade Ore present within the Exploitation Area and which is to be processed through the Beneficiation Facility with either the Initial Beneficiation Production Capacity or the Interim Beneficiation Production Capacity as the case may be E the manner in which the Mine Project Company proposes to continue to mine High Grade Ore and at the same time undertake Beneficiation Operations in order to reach a beneficiation production capacity that is higher than the Initial Beneficiation Production Capacity or Interim Beneficiation Production Capacity as the case may be including details of the Beneficiation Capacity Expansion Works and when they will be undertaken; F the site plan of the Beneficiation Facility within the Exploitation Area; G the Beneficiation Specifications; H I J K L M an analysis of all

of the BF Construction Conditions and the reasonable conclusions taken in good faith by Cam Iron regarding the conditions governing their satisfaction; a provisional timetable for building the Beneficiation Facility which shall take into account the deadlines referred to in this Article 10; a study of the environmental and social effects of the Beneficiation Facility including emissions disposal of dirt and waste water treatment and mitigation and the resulting management plan; a study specifying the needs of the Beneficiation Facility in terms of gas water and electricity and the manner in which Mine Project Company proposes to meet said needs; the full economic analysis of the Beneficiation Operations and a calculation of the Internal Rate of Return; and any other topic customarily addressed by such studies or that is appropriate in the particular context of these studies Beneficiation Feasibility Study. g During the period prior to the delivery to the State of the Beneficiation Power Station Feasibility Study the Mine Project Company shall i conduct or procure the conduct of technical and economic studies relating to the building of or contracting a Third Party to build the Beneficiation Power Station or provide the required power on a regular basis and in accordance with any related provisions established in the Beneficiation Agreement; and inform the State of the findings of such studies. page 153 ii v h i j k l m During the preparation of the Beneficiation Feasibility Study and Beneficiation Power Station Feasibility Study the Mine Project Company shall consult with the State in order to determine whether the State wishes to ensure that there is sufficient capacity within the Beneficiation Power Station to produce power in excess of the Mine Project Company's requirements for the purposes of its Beneficiation Operations and to the extent the State wishes there to be such additional capacity it must provide such incentives or financial support to ensure the Mine Project Company does not incur a tariff for electricity which is greater than it would have had the capacity of the Beneficiation Power Station been no more than was needed for the purposes of the Beneficiation Operations. Within one hundred and eighty (180) Days following the date on which the State receives the Beneficiation Feasibility Study the State can provide the Mine Project Company with any comment or objection to the Beneficiation Feasibility Study. The Mine Project Company shall to the greatest extent possible take into account the

comments or objections provided by the State in order to achieve a consensual Beneficiation Feasibility Study no later than ninety 90 Days following the date on which the Mine Project Company receives comments from the State on the Beneficiation Feasibility Study. If the Parties are unable to achieve a consensus on the Beneficiation Feasibility Study then either Party may refer the disagreement to the Expert Procedure for resolution as a Technical Dispute; provided that a dispute regarding whether the IRR threshold component in the BF Construction Conditions has been met shall be subject to resolution as an ordinary Dispute rather than a Technical Dispute. Where a Beneficiation Feasibility Study demonstrates that the conditions in the BF Construction Conditions are not met then the State cannot require the Mine Project Company to conduct the Beneficiation Operations. If by operation of Article 10.1 j above and notwithstanding anything else in this Article 10 if the Mine Project Company is not obliged to conduct the Beneficiation Operations then the Mine Project Company may nevertheless commit in writing to conduct the Beneficiation Operations subject to the terms of the Project Agreements a Beneficiation Election. A Positive Beneficiation Determination means if i a Beneficiation Feasibility Study demonstrates that the BF Construction Conditions have been met; or ii a Beneficiation Election has been made. Upon the occurrence of a Positive Beneficiation Determination the State and Cam Iron or the Mine Project Company shall agree on a set of milestones for the construction and commissioning of the Beneficiation Facility.

10.2 Obligation to Conduct Beneficiation Operations a The Mine Project Company undertakes to construct and commission the Beneficiation Facility and conduct the Beneficiation Operations in accordance with the Beneficiation Specifications and generally in accordance with and subject to this Article 10 and the Beneficiation Agreement. For the avoidance of doubt the Beneficiation Facility shall be built specifically to allow Beneficiation of the Low Grade Ore in accordance with the provisions of this Convention and the Beneficiation Agreement. At any time during the Term of the Project in the event of there being a processing unit within the territory of the State capable of processing the Beneficiated Ore produced by the Mine Project Company the Mine Project Company must sell at least fifteen percent 15 in the aggregate of the total production of

Beneficiated Ore to local processing facilities or steel mills whether owned by the State or a Third Party located within the State under financial terms and conditions that are consistent with international benchmark pricing and trading terms. If no Beneficiated Ore is able to be sold locally and in any case for all Beneficiated Ore which is not sold locally it is to be exported as is. d If any Beneficiated Ore is processed into pellets by the Mine Project Company and there is a pelletisation facility that is a Cameroonian company that could process a portion of the Beneficiated Ore then at least fifteen percent (15%) of the Beneficiated Ore will be processed by the Cameroonian company on reasonable terms and competitive prices.

10.3 Power Supply a The Parties acknowledge that i ii a key factor in being able to establish Beneficiation Operations is the establishment or obtaining of a power supply which is of sufficient capacity as to support those Beneficiation Operations; in order to provide the power referred to in Article 10.3ai following a Positive Beneficiation Determination. i The State may within a period established in the Beneficiation Agreement elect in its discretion to construct own and operate or procure the construction and operation of the Beneficiation Power Station. In the event the State does not elect to do so the Mine Project Company shall designate one or more Third Parties approved by the State such approval shall not be unreasonably withheld to build own and/or operate the Beneficiation Power Station. The provisions set forth herein regarding the obligations of the Mine Project Company in respect of causing the construction and operation of the Beneficiation Power Station shall be set forth in the Beneficiation Agreement and shall apply to the State in the event it elects to construct own and operate or procure the construction and operation of the Beneficiation Power Station; iii the Mine Project Company will enter into a power purchase agreement on commercially reasonable and customary terms to purchase the power required by the Mine Project Company based on either the Targeted Annual Beneficiation Production Capacity or Production Capacity as applicable and the State anticipates entering into a power purchase agreement on commercially reasonable and Initial Beneficiation Production Capacity page 155 customary terms to purchase the excess power that the Mine Project Company is not reasonably expected to progressively consume. The terms of the power purchase agreements

will be described in greater detail in the Beneficiation Agreement; and iv the Beneficiation Power Station must be capable of providing a power supply of the quantity and quality that is at least sufficient enough to carry on the Beneficiation Operations. b c While the Parties anticipate that the Mine Project Company shall cause to be built the Beneficiation Power Station the Beneficiation Agreement will contain provisions allowing the State to elect to supply power to the Beneficiation Facility in its sole discretion. The Beneficiation Agreement shall describe a process by which the Parties will consider different alternatives and cooperate to identify and pursue a plan for building and operating the Beneficiation Facility and Beneficiation Power Station.

10.4 Obligations of the Builder Owner and Operator with Respect to the Power Supply If the State does not elect to build the Beneficiation Power Station the Mine Project Company shall obtain or cause the Third Party designated to construct the Beneficiation Power Station to obtain whatever authorisations approvals consents and licences that are necessary for such Third Party to build and operate the Beneficiation Power Station.

10.5 Procurement Model for the Power Supply The Beneficiation Agreement will in accordance with Article 10.3 address the procurement framework for the output of the Beneficiation Power Station and consider components of the tariff based on a reasonable return of and return on equity and other factors and b the term of the concession which will be tied to the duration of the Exploitation Permit. The Beneficiation Agreement on mutually agreeable terms shall also provide the State with an option to build or cause to build the Beneficiation Power Station and to participate in the equity funding of the Beneficiation Power Station. Power sold to purchasers other than the Mine Project Company will not be included in the return to the equity holders of the owner and operator of the Beneficiation Power Station.

10.6 Calculation of Internal Rate of Return The Beneficiation Agreement shall address the details regarding the determination of whether the BF Construction Conditions have been met including specifying the formulae and methodology for calculating the Internal Rate of Return. The Parties acknowledge that in determining whether the BF Construction Conditions have been satisfied the calculation of the Internal Rate of Return shall be based on an assumption that the Beneficiation Facility has achieved the Targeted Annual Production

Capacity for each year of Beneficiation Operations notwithstanding the fact that the Beneficiation Facility may only be constructed to achieve the Initial Beneficiation Production Capacity or the Interim Beneficiation Production Capacity or may otherwise achieve less than the Targeting Annual Production Capacity as page 156 b a result of the flexibility being afforded to the Mine Project Company in achieving the Targeted Annual Production Capacity; and include the estimated investment and exploitation costs known as at Lhc BF Construction Deadline including reasonable contingency escalation and inflation allowances and the estimated charge for power supply referred to in Article I 0.5 and the forecast iron ore prices for the relevant iron ore products based on a mutually agreeable forecast such as the CRU forecast for relevant iron ore price for the years of the Beneficiation Operations including the long term average where applicable as of that date being such that they would enable the marketing of the Beneficiated Ore at an internationally competitive price. The Mine Project Company is to achieve an Internal Rate of Return for the Beneficiation Operations of not less than a rate equal to the Reference Rate plus five hundred 500 basis points.

10.7 Construction and Commissioning of the Beneficiation Facility Subject to the provisions of this Article I 0 and Article 55 Cameroon guarantees and stands surety for the Mine Project Company to complete the construction of the Beneficiation Facility and cause to be completed the construction of the Beneficiation Power Station by the date BF Construction Deadline that is the latter of one hundred and twenty 120 months following the Date of First Commercial Shipping as the same may be adjusted pursuant to this Convention and the Beneficiation Agreement. The Parties anticipate that the Beneficiation Agreement will address changes to the construction timeline based on the Positive Beneficiation Determination being made after the time period necessary to develop the Beneficiation Power Station and Beneficiation Facility by the anticipated deadlines. Notwithstanding the BF Construction Deadline the Mine Project Company must notify the State of the actual date of commencement of construction of the Beneficiation Facility and Beneficiation Power Station within seven 7 Days of that date. Once construction of the Beneficiation Facility and Beneficiation Power Station has commenced it must not be terminated nor must it be suspended for a period of sixty 60

Days or more for any reason other than the occurrence of a Force Majeure Event Legitimte Cause Economic llardship or as part of the construction plan where such suspension does not impact the completion of construction by the BF Construction Deadline. Where a Force Majeure Eventr Legitimate Cause or Economic Hardship as referred to in Article J0.7c occurs the Mine Project Company must promptly notify the State and must make all reasonable efforts obligation de moyens to overcome the event. Once overcome the Mine Project Company must immediately notify the State and the period the BF during which Commissioning Deadline. that event occurs shall be added onto The normal or early expiration of the BF Construction Deadline will be made official by the issuance of a Finding of Compliance. In the event that he State makes any observations such observations will specify the pogo l 57 a b c d e v reservations that must be addressed prior to the BF Commissioning. The Mine Project Company will have a period of one hundred and e ighty l 80 Days or such longer period where the Mine Project Company demonstrates in good faith that the observations cannot be accommodated within the one hundred and eighty 180 Day period to complete the works aimed at addressing the reservations of the State and the SF Conunissioning Deadline will be extended correspondingly without imposing any penalties on the Mine Project Company. In the event that one or the other of the Parties refuses to sign the Finding of Compliance free of any reservations the most aggrieved Party shall initiate an Expert Procedure. f Subject to the tenns of this Article 10 and Article 55 the Mine Project Company undertakes to carry out the commissioning of the Beneficiation Facility on the basis of at least the Initial Beneficiation Production Capacity and the Interim Beoeficiation Production Capacity or Targeted Annual Production Capacity to the extent the Beneficiation Faci lity is ftrSt built the case may be the BF Commissioning within a time frame not to exceed three hundred a nd sixty five 365 Days after the BF Construction Deadline is reached the BF Commissioning Deadline. to such capacity as g Notwithstanding the applicable BF Commissioning Deadline the Mi ne Project Company must notify the State of the actual date of commissioning of the Beneficiation Facility within seven 7 Days of that date. 10.8 Fin ancing of Ben eficiation Each of the Project Companies and the State as a future shareholder shall use its

reasonable endeavours to facilitate the conclusion of the financing for the Beneficiation Facility based on project financing and minimize the amount of equity financing required. The State must approve any such financing documents to which it is a party. The Mine Project Company shall maintain reserves funded by undistributed profits as contemplated by Article 10.9.1 necessary to fund the equity component if anticipated by the Parties of the financing of the Beneficiation Facility and not require any contribution of equity from their Shareholders without the prior written consent of the State which consent shall not be unreasonably withheld. The other Project Companies shall similarly maintain reserves solely for the purpose of funding modifications if required to accommodate the transport or handling of any such Beneficiated Ore with respect to their specific Project Operations but nothing in this Article shall require a Project Company which is established to build and operate the Beneficiation Power Station to create such a reserve.

10.9 Beneficiation Incentives and Escrow.

10.9.1 Beneficiation Escrow Account. a The Mine Project Company Cam Iron and the State will enter into an escrow agreement the Beneficiation Escrow Agreement pursuant to which an escrow account shall be established Beneficiation Escrow Account with an independent escrow agent in a neutral country. The Mine Project Company shall contribute to the Beneficiation Escrow Account from profits from the sale of the High Grade Ore mined from page 158 f; i ii for the Exploitation Area which would otherwise be available distribution an amount equal to twentyfive percent 25 of the total funds required to finance the Beneficiation Facility funded annually from twentyfive percent 25 of otherwise distributable cash until such amount is reached; provided that at the time of a Positive Beneficiation Determination the frequency and amounts of such ti.UJding may be increased on a mutually agreeable schedule reasonably designed and adjusted to enable the Mine Project Company to achieve the target of twentyfive percent 25 of the total funds required to finance the Beneficiation Facility prior to the anticipated deployment of such funds. The funds in the Beneficiation Escrow Account shall be used pursuant to the following terms which will be detailed the Beneficiation in Agreement and the Beneficiation Escrow Agreement if there is a Positive Beneficiation Determination the funds in the Beneficiation Escrow Account shall be

available for providing the equity portion of the financing needed for the Beneficiation Facility and any amounts not necessary for the equity funding requirements shall be distributed to the shareholders of the Mine Project Company on a pro rata basis; and if there is a Positive Beneficiation Determination and the Mine Project Company does not comply with its obligations under this Convention and the Beneficiation Agreement regarding construction and commissioning of the Beneficiation Facility such funds shall be available to the Mine Project Company for the purpose of financing the construction of the Beneficiation Facility using any structure chosen by the State. The Beneficiation Escrow Agreement shall provide that such funds shall remain in escrow for a period not to exceed ten 10 years from the date it is determined in good faith that the Mine Project Company will not be complying with its obligation to construct the Beneficiation Facility to be available to the State for deployment for the purpose of financing the Beneficiation Facility provided that such funds shall only be available to the Mine Project Company to finance the Beneficiation Facility and to the extent not all funds are necessary for such financing such excess amounts shall be distributed to the Shareholders of the Mine Project Company on a pro rata basis being the shareholders immediately prior to the determination that the Mine Project Company will not cause the construction of the Beneficiation Facility to be built. If the State through the Mine Project Company, has not arranged for the utilization of such funds for the purposes referred to in this Article by the tenth anniversary then such funds shall be distributed to the Shareholders of the Mine Project Company on a pro rata basis based on the ownership interests of such Shareholders on the date that it is determined that the Mine Project Company will not be complying with its obligation to construct the Beneficiation Facility.

10.9.2 Impact on Term of the Railway Agreement and Mineral Terminal Agreement. The Railway Agreement and Mineral Terminal Agreement shall provide that a if the Mine Project Company complies with its material obligations regarding the construction of the Beneficiation Facility and Beneficiation page 159 b c Power Station to be constructed if required the term of the Railway Concession set forth in the Railway Agreement and Mineral Terminal Concession set forth in the Mineral Terminal Agreement shall upon BF

Commissioning be extended from twenty five 25 years to thirty 30 years; provided that the base tariff chargeable to Third Party users will be allocated one hundred percent 100 to the State beginning at the start of year twenty nine 29; if there has been a Positive Beneficiation Determination and the Mine Project Company does not comply with its material obligations regarding the construction of the Beneficiation Facility and Beneficiation Power Station the State shall have the option to hire new employees or contractors to operate the Railway; and if there has been a Positive Beneficiation Determination and the Mine Project Company does not comply with its material obligations regarding the construction of the Beneficiation Facility and Beneficiation Power Station but the State does not cause through the Mine Project Company to use the funds in the Beneficiation Escrow Account to finance the equity portion of the construction of the Beneficiation Facility the terms of the Railway Concession set forth in the Railway Agreement and Mineral Terminal Concession set forth in the Mineral Terminal Agreement shall at the State's election in its sole discretion, be shortened to terminate on the tenth anniversary of the date of the release of the funds from the Beneficiation Escrow Account.

10.9.3 Impact on Equity of Project Companies. The Shareholders Agreements shall provide that if there has been a Positive Beneficiation Determination and the Mine Project Company does not comply with its material obligations regarding the construction of the Beneficiation Facility and Beneficiation Power Station then on the tenth anniversary of Project Commissioning fiftyone percent 51 of the total equity in each Project Company shall automatically transfer to the State from Cam Iron.

10.10 Beneficiation Construction and Commissioning a b v If a Positive Beneficiation Determination has occurred Cam Iron and the Mine Project Company shall obtain all statutory and regulatory approvals leases licences permits, consents and authorisations required to be obtained to finance, construct, commission and properly operate the Beneficiation Facility and all other infrastructure and facilities necessary to enable proper operation of the Beneficiation Facility. The State shall to any related permits and not unreasonably withhold approval authorizations requested by Cam Iron or the Mine Project Company and such Project Company shall provide notice to the State Project Committee of such withholding. If a Positive Beneficiation

Determination has occurred the Mine Project Company shall commence construction of the Beneficiation Facility no later than eighty four 84 months of the Date of First Commercial Shipping as the same may be adjusted pursuant to this Convention and the Beneficiation Agreement BF Construction Commencement Date and cause the Third Party it procured to build the Beneficiation Power Station to commence construction of the Beneficiation Power Station no later than a date agreed to in the Beneficiation Agreement BF Power Station Construction Commencement Date. c The Beneficiation Agreement shall address among other topics the identification and method of obtaining the permits necessary for the Beneficiation Operations remediation environmental compliance bank guarantees and construction timelines. I 0.1 Waiver of Conditions a The BF Construction Conditions are for the sole benefit of the Mine Project Company. b Without prejudice to its obligations under the terms of Article 10.12 a BF Construction Condition is waived if and only if the Mine Project Company gives a written notice of waiver of that condition to the State. 10.12 Obligation to Satisfy Beneficiation Conditions a b Each Party including the Mine Project Company must use their reasonable endeavours to do those things that are required of them or within their control and cooperate with each other to ensure that i the BF Construction Conditions and the commissioning of the Beneficiation Facility are satisfied on or before the BF Construction Commencement Date or the BF Commissioning Deadline as applicable or as soon as practicable thereafter and ii the commencement of the Beneficiation Power Station and the commissioning of the Beneficiation Power Station are satisfied on or before the BF Power Station Construction Commencement Date or the BF Commissioning Deadline as applicable or as soon as practicable thereafter. If a Party including the Mine Project Company becomes aware that a BF Construction Condition or commissioning of the Beneficiation Facility will not or is unlikely to be satisfied by the BF Construction Deadline or the BF Commissioning Commencement Date as applicable then that Party must give written notice to the other Party identifying the relevant BF Construction Condition or a BF Commissioning Deadline as applicable that will not or is unlikely to be so satisfied. I 0.13 Production Capacity of the Beneficiation Facility a Subject to this Article 10 and as it may be

modified in the Beneficiation Agreement the Parties agree and acknowledge and Cam Iron undertakes to ensure that i the Beneficiation Facility shall initially be constructed and commissioned to achieve at least the Initial Beneficiation Production Capacity or the Interim Beneficial Production Capacity in certain circumstances including where the amount of High Grade Ore remaining on the Exploitation Area is insufficient to enable the Mine Project Company to achieve the Minimum Annual Ore Production; ii as from the date of BF Commissioning and other than as is provided page 61 for in this Convention the Beneficiation Facility will after ramp up produce no less than the Minimum Annual Beneficiated Ore Production; and iii as the capacity to produce High Grade Ore from the Project reduces over time the production capacity of the Beneficiation Facility will be increased in order to ensure the Beneficiation Facility once built to a capacity of thirtyfive 35 million Tonnes per annum and after ramp up produces Beneficiated Ore in an amount not less than the Targeted Annual Production Capacity. b e The Parties acknowledge that notwithstanding the Mine Project Company achieving the BF Commissioning Deadline and after any Beneficiation Capacity Expansion Works there will be a rampup period which will be set out in the Beneficiation Feasibility Study during which actual production will not be at the required levels referred to in Articles 10.13a and ii and during this time the Mine Project Company will not be in breach of this Convention or another Project Agreement. Subject to Articles 10.14 and 55. following the completion of BF the Mine Project Company must carry out all Commissioning Beneficiation Capacity Expansion Works necessary to maintain actual annual production capacity at a level equal to the Targeted Annual Production Capacity. The capacity of the Beneficiation Facility will need to be expanded where either i ii the High Grade Ore that is being blended no longer contains within the blend the the Minimum Annual Ore Production Exploitation Permit; and/or from the total High Grade Ore being mined from the Exploitation Permit and the Nabeba Permit together with the Minimum Annual Beneficiated Ore Production is less than the Targeted Annual Production Capacity. d On each occasion that the Mine Project Company must undertake Beneficiation Capacity Expansion Works in order to maintain the Targeted Annual Production Capacity the Mine Project Company must i ii iii iv

notify the State of the proposed schedule for the commencement of construction and the completion of the relevant Beneficiation Capacity Expansion Works the Proposed Expansion Schedule at the commencement of such construction works; least one hundred and eighty (180) Days prior to obtain the States approval which will not be Unreasonably withheld for any changes to the Proposed Expansion Schedule; notify the State of the actual date of commencement of construction of the relevant Beneficiation Capacity Expansion Works within seven (7) Days of that date; and notify the State of the actual date of the completion of the Beneficiation Facility Commissioning of the relevant Beneficiation Capacity Expansion Works within seven (7) Days of that date. 10.13 The acknowledgement referred to in Article 10.13(diii) applies to each time Beneficiation Capacity Expansion Works are undertaken. 10.14 Beneficiation Expansion Conditions The Project Companies are responsible for obtaining all Governmental Approvals necessary for Beneficiation Capacity Expansion Works and the State will not unreasonably deny a request for such Governmental Approvals. 10.15 Legal Regime applicable to the Assets comprising the Beneficiation Facility Except as set forth in the Project Agreements the State may elect to purchase all or some of the Assets comprising the Beneficiation Facility made available acquired constructed, installed and/or processed by the Mine Project Company or on its behalf or for its benefit upon the expiry withdrawal or termination of the Exploitation Permit in exchange for cash consideration equal to their fair market value. The Assets purchased by the State shall upon payment transfer to the State without any obligation of the Mine Project Company to pay any Taxes triggered by the transfer of such Assets to the State. 10.16 Procurement The Mine Project Company may procure for its benefit the conduct of all the design construction and maintenance operations of the Beneficiation Facility by any Subsidiary Contractor or Subcontractor. 10.17 Beneficiation of Other Low Grade Ore The Project Companies will not beneficiate Other Ore in the Exploitation Area without the consent of the State. 10.18 Early Beneficiation a This Article 10.18 contains Cam Irons commencement to undertake Beneficiation and the Parties agree that in the Beneficiation Agreement, they will include provisions which allow Cam Iron or the Mine Project Company to commence Beneficiation both i

earlier than contemplated in this Convention; and ii using a Beneficiation Facility that is sized differently to the size of what has been contemplated to date. b Notwithstanding Article 10.18a nothing in that Article is intended to limit or release Cam Iron and the Mine Project Company of any liability or commitment to build a Beneficiation Facility capable of achieving the Targeted Annual Production Capacity and its other obligations under Article 10. v paget63 SECTrON ITI CONNECTED OPERA TrONS II MINERAL TERMINAL SPECIFICATIONS AND RAIL WAY SPECIFTCA TJONS I 1.1 Capacity. While the Railway and Mineral Tenninal will only be initially built to handle the thirty five million 35000000 Tonnes of Ore in a Calendar Year as described in more detail in the Railway Agreement and the Mineral Terminal Agreement as applicable the Railway and the Mineral Terminal will be designed in a mmmer based on the assumptions and principles set forth in the Railway Agreement and Mineral Terminal Agreement respectively suited to eventually handle the Design Capacity without materially adversely impacting a b Initial Capacity and Expansion Capacity for a total capacity equal to the Design Capacity; or technical aspects of the Railway haulage services and Mineral Tenninal services being provided to any party up to the Design capacity. 11.2 Tariffs The tariffs payable with respect to the Railway and Mineral Terminal shall be calculated substantially in accordance with the drafi Tariff Frameworks for the Railway and Mineral Tem1inal which are attached to this Convention as Annex ill as the same may be modified after the Signature Date. 11.3 Dual Trac.k Design Without limiting the foregoing following receipt of the updated Feasibility Study contemplated by Article 4.1 a the State may in its sole discretion elect by the Date of Entry into Force to fund the costs required to build out the foundation for a dual track design. In such. event the State Cam Iron the Railway Project Company and the Mineral Tenninal Project Company shall agree to modify the Specifications and time frames referred to in this Convention and the Mineral Tenninal Agreement and Railway Agreement to the extent necessary to reflect any additional requirements with respect to the dual track design and will examine any additional direct costs to the Mainline Railway. TI1e Railway Project Company and the Mineral Tenninal Project Company shall be required to build the Railway and the Mineral Terminal in

accordance with such Specifications and the State shall be required to provide the requisite funding to the Railway Project Company and the Mineral Terminal Project Company as applicable, and the allocation of the equity component of the tariffs for the Expansion Capacity shall be adjusted accordingly at such time as the second track has been constructed and is being utilized. In addition the Parties may enter into discussions without any obligation to reach agreement pursuant to which Cam Iron or its Subsidiaries may agree to fund a portion of the costs in exchange for additional Expansion Capacity.

12 RAILWAY OPERATIONS AND SPUR LINES

12.1 Railway Operations

12.1.1 Rights to carry out the Railway Operations.

Railway Agreement and Creation of the Railway Project Company

a The Parties acknowledge that the transportation of the Mambong Ore from the Exploitation Area and other iron ore from either within or outside the territory of the State up to the Mineral Terminal Area constitutes a decisive part of the Project.

b c d The Railway Specifications which shall be based on the National Railway Master Plan of the State will be provided to the Railway Project Company by the State and after the Railway Project Company's review the State and the Railway Project Company will agree on the final Railway Specifications which shall be a part of the Railway Agreement. As of the later of the date when the Railway Concession is granted to the Railway Project Company and the date when the Railway Project Company becomes a Party to this Convention in accordance with Article 6.4 the Railway Project Company shall have the right to carry out the Railway Operations under this Convention the Railway Concession and the Railway Agreement. The Railway Agreement is to be drawn up as a BOOT model and shall along with the Railway Project Company Shareholder Agreement provide and set the framework of the conditions for the funding and conduct by the Railway Project Company for the Railway Operations within the Railway Area. The Railway Facility is to be built within a Project Lease in accordance with the Railway Specifications and in the compliance with Legislation and the Operating Standards. The provisions of the Railway Agreement e Cam Iron or the Railway Project Company as applicable shall operate the Railway in a manner that allows the Railway to i ii f handle Initial Capacity and Expansion Capacity up to the Design Capacity subject to the terms of the

Railway Agreement; and incorporate technical requirements that reflect the Beneficiation Operations Railway haulage services and Mineral Terminal services being provided to any party up to the Design Capacity. The Railway Agreement also provides that the Railway Project Company shall operate the Railway to provide any Expansion Capacity that may be built and provide adequate working capital to finance its operations related to Expansion Capacity for clarification this does not include capital expenditures to finance the construction of Expansion Capacity. For purposes of determining adequate working capital the Railway Project Company shall be permitted to include the value of any liquid security provided by the user of Expansion Capacity. g The Railway Agreement also provides that the Railway Project Company shall i ii maintain and keep the Railway Facilities in sound working order and in accordance with this Convention and the Operating Standards; and conduct all the works necessary and all the repairs of any damages that occur in compliance with the provisions of the Railway Agreement. b The Railway Project Company shall vii within three 3 months of the end of every two 2 year period commencing upon Project Commissioning page J65 [f provide to the State an independent report prepared by an independent expert approved by the State such approval not to be Unreasonably withheld on the maintenance carried out during the past two 2 years and the maintenance required during the succeeding two 2 year period in order to ensure the Railway Project Company's obligations under Article 12.1.1 f are being met. The Railway Agreement will contain the form of instructions to be provided to the independent expert in connection with its audit. Subject to the provisions of the Railway Agreement Cam Iron guarantees and stands surety for the obligations of the Railway Project Company and for the commissioning of the Mainline Railway and the Initial Spur Line by the Railway Project Company the Railway Commissioning. under the conditions set forth in the Railway Agreement. Cam Iron the Railway Project Company and the State will undertake to comply with their respective obligations cooperate the Railway Commissioning. ensure to to Issuance of a Finding of Compliance will constitute the Railway Commissioning. The State may raise reservations that the Railway has not been constructed in accordance with the Railway Specifications in which case such reservations must be

resolved prior to Railway Commissioning. The Railway Project Company will have a period of one hundred and eighty 180 Days plus up to an additional ninety 90 Days to the extent that the Railway Company is diligently working to remove such reservations and demonstrates in good faith that the reservations cannot be resolved within the one hundred and eighty 180 Day period to do the works such as to allow the removal of such reservations. In case of refusal of either of the Parties to sign the Finding of Compliance without prejudice the most diligent Party shall refer the matter to Expert Procedure. The term of the Railway Agreement shall be for twenty five 25 years from the Date of Entry into Force to be modified as described in Article 10.9. Every five 5 years, during the term of the Railway Agreement the State and the Railway Project Company are to review the terms of the Railway Concession to ensure the expectations of both Parties are being met and to otherwise take account of anticipated operating conditions for the next succeeding five 5 year period and discuss in good faith opportunities to expand the Railway to provide services for additional mines or commodity producers the goal of which is increasing revenue for the Parties however such review is not to result in any adverse change to either i j k l i U1e operating conditions for the Railway Facilities; or ii the basis on which the tariff is being charged for the Initial Capacity. 12.1.2 Description for the Initial Capacity of the Railway Area a The Railway Project Company shall be authorised to carry out the Railway Operations within the surface area contemplated by the Railway Agreement the site plan of which deed notably on the basis of the page [66 findings of the Environmental and Social Assessment and Management Plan will be attached to the Railway Agreement the Railway Area. b For the term referred to in Article 12.1.1k the State and the Railway Project Company each within the surface area of which it is in charge as defined in the Railway Agreement undertake to take as and when necessary any measures and steps required in accordance with the Legislation international standards and best practice in the railway industry to identify i ii the geological environmental and archaeological nature of the Railway Area; and the impact on the local populations and communities of the conduct of the Railway Operations within the Railway Area and undertake at the sole expense of the Railway Project Company to take all appropriate precautionary measures and implement

mitigation and treatment measures with respect to the negative effects on the Environment. social structures or geology of the surrounding region arising from the Railway Operations or during the conduct of the Railway Operations. c In the event that despite the Parties reasonable efforts obligation de moyens to remedy by all means the events referred to in Article 12. L2b continuation of the Railway Operations requires a modification of the Railway Area the State Cam Iron and the applicable Project Companies undertake to take all reasonable measures necessary to modify the surface area contemplated by the Railway Agreement. 12.1 .3 Purpose and intended use of the Railway a The Railway shall be built to allow i transportation of the Sale Products Other Ores and other iron ore from within the territory of the State the transportation of which by their nature would not have adverse effects on the collection unloading storage loading and shipment of the Sale Products and Other Ores; and ii transportation of the Goods Nabeba Goods and any other goods agreed to by the State and the Railway Project Company. b It is expressly agreed that during the Term of the Project the Railway shall not be used for transporting passengers or transporting equipment materials and other goods that are not intended for the Project or the Nabeba Project except for the limited cases provided in this Convention and the Railway Agreement. 12.2 Railway Operations 12.2.1 Legal Regime applicable to the Assets comprising the Railway Facilities a the Assets comprising the Railway Facilities made available All acquired constructed installed and/or processed by the Railway Project Company or on its behalf which are necessary used or desirable in page 167 operating the Railway Facilities and the other Assets identified by the Parties in an annex to the Railway Agreement are the property of the Railway Project Company and will be automatically and directly transferred to the State upon expiry of the Railway Agreement with no financial contribution being due to the Railway Project Company. The Railway Project Company shall not pay any Taxes triggered by the transfer of such Assets to the State. Any Assets transferred to the State upon expiry of the Railway Agreement shall be transferred free and clear of all security interests liens and encumbrances including in favour of the Lenders and in good working condition and the Railway Project Company shall cause all such security interests liens and encumbrances to

be removed prior to transfer. The Railway Project Company shall keep an up to date inventory of its Assets at its expense under the conditions set forth in the Railway Agreement. The Assets and equipment comprising as the case may be any Additional Spur Line or Additional Road if applicable shall be treated in the same manner as provided for in Article 12.2.1a. The Railway Project Company shall not without the States prior consent b c d e i ii transfer with or without consideration all or part of the Assets comprising the Railway Facilities Project Roads and. as the case may be any Additional Spur Line or Additional Road save in the case of any of the Railway facilities and any Additional Spur Line that may be replaced in the ordinary course of business; or create a security interest or grant any other right whatsoever over said Assets except for the purposes of financing or refinancing of the Project and in favour of the Lenders of such financing provided that in connection with any refinancing. the Railway Project Company shall not be permitted to grant any security interest or other right on its Assets that relates to Debt which matures later than five 5 years prior to the expiration of the Railway Concession. Q The State must not unreasonably withhold its consent to any transfer referred to in Article 12.2.1e i where the transferee agrees to be bound by the obligations to the State under this Convention with respect to the Railway Facilities Project Roads Additional Spur Line or Additional Road. 12.2.2 Railway Ooperation a Upon the expiration of the initial twenty five 25 year term of the Railway Companys right to operate the Railway as same may be modified pursuant to the terms of this Convention the State may to the extent the State and the Railway Project Company have reached agreement on the details of an agreement to operate the Railway Facilities prior to the expiry of the Railway Agreement for which the State shall be under no obligation or the Railway Project Company exercising its right under Article 12.2.2c i grant to the Railway Project page 68 v Company the right for a period of ten 10 years after the expiry of the Railway Agreement to operate and maintain the Railway Railway Operations Agreement provided however that State shall not be required to negotiate any such new agreement with or extension to the Railway Project Company if a material default has occurred or is persisting within twenty four 24 months of the end of the term of the Railway Agreement; b Subject to the terms and provisions of

the Railway Operations Agreement and this Convention if the State and the Railway Project Company enter into a Railway Operations Agreement following the expiration of the Railway Agreement the State and the Railway Project Company agree that i for the term of the Railway Operations Agreement the Railway Project Company shall have the exclusive possession but not title of all Assets of the Railway Project Company that transferred to the State following expiration of the Railway Agreement except as may be requested by the State in the exercise of its Reserved Rights; ii the Railway Project Company shall A B C D be obliged to maintain and keep the Railway Facilities in sound working order and construct all necessary works and repair any damage that occurs from use of the Railway Facilities; be obliged to include in the tariff to be charged to a user other than with respect to the tariff being charged to the Mine Project Company and Congo Iron for the butial Capacity and the Reserve Expansion Capacity if being utilized a capital component prescribed by the State. which amount shall be solely for the benefit of the State; and for the avoidance of doubt the tariff will substantially reflect the tariff referred to in A1ticle 4 of the Tariff Framework excluding the State charge component referred to in Article 4.6 of the Tariff Framework but the State charge will be imposed on any usage above the bltial Capacity and Reserve Expansion Capacity. for not the purpose of the tariff being charged to the Mine Project Company and Congo Iron for the bltial Capacity include a base charge as that tem1 is Ullderstood but shall include a rerum of ten percent 1 0 nollllnal on the original capital cost of the Assets that create the bltial Capacity unless there are material economic changes prior to the initial financing and in that case the Parties wil l discuss an adjustment to this rate; and be entitled to include in the tariff to be charged to a user the fiXed and variable operating costs associated with the Railway Project Company providing a haulage service to the in Article user 12.2.2biiA and an equitable portion of any Sustaining Capital incurred by the Railway Project Company together including referred costs the to pago69 iii iv v vi vii with a Fixed Profit Margin for the benefit of the Railway Project Company on each of the ftxed and variable costs and on the Sustaining Capital; the State shall detennine which users other than lthe Mine Project Company or Congo Iron may be given access to a haulage

service and, subject to compliance with Article 18 on what basis provided that the use and enjoyment by the Mine Project Company and Congo Iron and any then existing user of Expansion Capacity shall not be materially adversely affected; the Railway Project Company shall within three 3 months of the end of every two 2 year period from the effective date of the Railway Operations Agreement provide to the State an independent report by an independent expert approved by the State on the maintenance carried out during the past two 2 years period and the maintenance required during the succeeding two 2 year period in order to ensure the Railway Project Company's obligations under Article 12.2.2biiA are being met. The Railway Agreement will contain the form of instructions to be provided to the independent expert in connection with its audit; the Mine Project Company or Congo Iron will be charged a tariff in the amounts prescribed by the applicable Railway Haulage Agreements being novated; provided that consumables and spare inventory that were previously purchased by the Railway Project Company and transferred to the State will contribute to the capital expense components of the tariff only to the extent the State pays any consideration for such items to the Railway Project Company; the users other than the Mine Project Company and Congo Iron shall be charged a tariff not less than the tariff charged to the Mine Project Company and Congo Iron; and the quality of the haulage services being provided to the Mine Project Company its Subsidiaries and Congo Iron at the termination of the Railway Agreement is to be no less than that being provided prior to the termination. c At the end of the initial twentyfive 25 year term of the Railway Project Company to operate the Railway as modified by Article 10.9.2a which for clarification excludes early termination of such right pursuant to the termination of the Railway Agreement before the end of said term if the State intends to grant a Third Party the right to operate the Railway Facilities and the material terms of such offer are more favourable to the operator than the last terms the State offered to Railway Project Company in the discussions in connection with Article 12.2.2a the State must offer to the Railway Project Company the right to match the offer from that Third Party and the State shall give the Railway Project Company material terms of any such offer and the Railway Project Company shall have thirty 30 Days from its receipt of those details in

which to advise the State of its position on the matter provided however that the State shall not be required to award such new agreement or extension to the Railway . pageJ70 Project Company if a material default has occurred or is persisting within twentyfour 24 months of the end of the tenn of the Railway Operations Agreement or if tile Beneficiation Operations have not commenced; the possession of the Assets described in Article 12.2.a shall pass to the State with no financial contribution being due to the Railway Project Company; the State shall have the right to access the employment records of the Railway Project Companys employees with a view to offering such employees ongoing employment by whomever will operate the Railway and the Railway Project Company will reasonably cooperate to enable the State or any subsequent Railway operator to make offers to those employees it wishes to employ; the State or whomever is to operate the Railway is to take a novation from Railway Project Company of all ongoing haulage se.rvice agreements which the Railway Project Company had entered into with users of the Railway and which remain in force on the expiry of the Railway Agreement or the Railway Operations Agreement as the case may be; the Railway Project Company shall to the extent legally permissible transfer assib1l or grant a perpetual license for no additional charge to use the nowhow and business systems for running the Railway to the State or whoever is to run the Railway; and the Railway Project Company and Cam Iron shall cooperate and take all reasonably requested actions to facilitate the transfer of the right to operate the Railway to a Third Party. ii iii iv v vi d Each of the State and the Railway Project Company shall commence negotiating the terms of the Railway Operations Agreement at least one l year prior to the expiry of the Railway Agreement and those negotiations are to i ii proceed in good faith with a view to the terms of the Railway Operations Agreement being agreed prior to the expiry of the Railway AbTCCment; and have regard to the matters referred to in Article 12.2.2 and to otherwise be on tenus which are to be generally accepted in railway operations agreements servicing the international mining industry. 12.2.3 Haulage Services Where the State and the Railway Project Company are unable to agree on the terms of the Railway Operations Agreement prior to the expiry of the Railway Agreement or after the end of the

term of the Railway Operations Agreement then the State shall operate or arrange for a Third Party to operate the Railway Facility on and from the expiry of the Railway Agreement or Railway Operations Agreement as the case may be such that the haulage service being provided to the Mine Project Company its Subsidiaries or Congo a v pagel71 Iron shall be in accordance with applicable Operating Standards on and from the expiry of the Railway Agreement or Railway Operations Agreement as applicable and shall be of a similar quality and regularity as that provided during the term of the Railway Agreement or Railway Operations Agreement as the case may be; b c the tariff charged by the State or the Third Party operator for the haulage service referred to in Article 12.2.3a shall subject to a component of the tariff being to contribute to Sustaining Capital be calculated on a substantially similar basis as was being charged on the expiry of the Railway Agreement or Railway Operations Agreement; and the State or the Third Party operator will coordinate the operation of the haulage service with the then operator of the Mineral Terminal Facility such that subject to the production by Mine Project Company and Congo Iron of Mbalam Ore and Nabeba Ore there is a continuous supply of Products to Mineral Terminal for loading onto vessels.

12.2.4 Access to the Railway Without prejudice to Article 18 and the Reserved Rights on the Date of Entry into Force to the extent any authorization is required under the Legislation the Railway Project Company is authorised to utilize the Railway Facilities in exchange for the applicable tariff for the purposes of transportation of the Sale Products the Goods and the Nabeba Goods in accordance with the terms hereof and the Railway Agreement and the applicable Railway Haulage Agreements. This authorization does not obligate the Railway Project Company to provide rail or haulage services which is addressed by separate agreement. This authorization is limited to any authorization required from the State under the Legislation and is not a contractual right to use the Railway. For avoidance of doubt the Parties acknowledge and agree that Nabeba Ore other than Nabeba Ore included in the Blended Ore is not contemplated as being hauled on the Railway pursuant to the Railway Haulage Agreement or the applicable tariff other than as through the creation of Expansion Capacity including the Reserve Expansion Capacity.

12.2.5 General Warranties of the State a The

State warrants to Cam Iron that i ii subject to the Railway Agreement the Railway Project Company may procure the conduct of all the Railway Operations and Road Operations by any Contractor or Subcontractor; and within the framework of the operation of the Railway Facilities and Project Roads neither the Railway Project Company nor the Contractors or Subcontractors shall be deemed to be a public carrier or have public service obligations. b The remaining general warranties of the State and the Railway Project Company shall be detailed in the Railway Agreement.

12.2.6 Sustaining Capital

The Railway Project Company shall incur expenditure by way of Sustaining Capital in order to maintain the Railway Facilities pursuant to the Operating Standards and page 72 such sums shall be spent by the Railway Project Company in a manner and at times appropriate for ensuring the efficient operation of the Railway Facilities. For Sustaining Capital that is not fully recovered from the users of the haulage services in the applicable tariff calculations at the time of the transfer of Assets to the State upon the expiry of the Railway Agreement in accordance with Article 12.2. 1a and was contributed within the last five 5 years of the Railway Agreement to fund unexpected Sustaining Capital if the State elects to receive the Asset for which the Sustaining Capital was expended the State must pay to the Railway Project Company an amount equal to the portion of such Sustaining Capital for that Asset that was not covered by insurance or reserves and has not been depreciated including with any accelerated depreciation.

12.3 Liabilities and Indemnities Railway

12.3.1 Where the State a

b employs any employees of the Railway Project Company as contemplated in Article 12.2.2ciii then there is to be an appropriate adjustment of the employee entitlements between the State and the Railway Project Company and each will indemnify the other for the period the employee was or is employed by them for the claims and liabilities arising during such period of employment; takes a novation of any haulage service agreement as contemplated in Article 12.2.2civ then the Railway Project Company is liable for all claims and liabilities arising prior to the novation and the State or whoever is to run the Railway is liable for all claims and liabilities arising after the novation except for the avoidance of doubt to the extent such claims and liabilities relate to the period prior to the novation and to the extent of their respective liabilities they will indemnify the other Party against

those liabilities; and c takes a transfer assignment or License of know how and business systems contemplated in Article 12.2.2cv each Party shall indemnify the other from any claim or liability arising during the period they held or used or hold or use such know how and business systems. 13

MINERAL TERMINAL OPERATIONS 13. I a b Rights to carry out the Mineral Terminal Operations Mineral Terminal Agreement and Creation of the Mineral Terminal Project Company The Parties acknowledge that the possibility to export Sale Products by way of shipment constitutes a decisive part of the Project. The Mineral Terminal Specifications upon the election of the State will be given to the Mineral Terminal Project Company by the State and after its review the State and the Mineral Terminal Project Company will agree on the final Mineral Terminal Specifications which will be recorded in the Mineral Terminal Agreement. c As of the later of the date when the Mineral Terminal Concession is granted to the Mineral Terminal Project Company and the date when the Mineral Terminal Project Company becomes a Party to this Convention in accordance with Article 6.4 the Mineral Terminal Project Company shall have the right to carry out the Mineral Terminal Operations under this Convention the Mineral Terminal Concession and the Mineral Terminal Agreement. d The Mineral Terminal Agreement is to be drawn up as a BOOT model and shall along with the Mineral Terminal Project Company Shareholders Agreement provide and set the framework of the conditions for the funding and conduct by the Mineral Terminal Project Company of the Mineral Terminal Operations within the Mineral Terminal Area. The Mineral Terminal Facility is to be built within a Project Lease in accordance with the Mineral Terminal Specifications in compliance with the provisions of the Mineral Terminal Agreement the Legislation and the Operating Standards. e Cam Iron or the Mineral Terminal Company, as applicable will operate the Mineral Terminal in a manner that allows the Mineral Terminal to handle Initial Capacity and Expansion Capacity up to the Design Capacity; and incorporate technical aspects of the Mineral Terminal services being provided to any party up to the Design Capacity. The Mineral Terminal Agreement also provides that the Mineral Terminal Project Company shall operate the Mineral Terminal to provide any Expansion Capacity that may be built and provide adequate working capital to finance its operations related to

Expansion Capacity for clarification itis does not include capital expenditures to finance the construction of Expansion Capacity. For purposes of determining adequate working capital the Mineral Terminal Project Company shall be permitted to include the value of any liquid security provided by the user of Expansion Capacity. g The Mineral Terminal Agreement also provides that the Mineral Terminal Project Company shall i ii b maintain and keep the Mineral Terminal Facilities in sound working order and in accordance with this Convention and the Operating Standards; and conduct all the works necessary and all the repairs of any damages that could occur in compliance with the provisions of the Mineral Terminal Agreement. The Mineral Terminal Project Company shall within three 3 months of the end of every two 2 years commencing upon Project Commissioning provide to the State an independent report prepared by an independent expert approved by the State such approval not to be unreasonably withheld on the maintenance carried out during the past two 2 years and the maintenance required during the succeeding two 2 year period in order to ensure that the applicable Mineral Terminal Project Company's obligations under itis Article 13.1h are being met. The Mineral Terminal Agreement will contain the form of instructions to be page 174 11 i j k l provided to the independent expert in connection with its audit¹. Pursuant to the terms of the Mineral Terminal Agreement Cam Iron undertakes and stands surety for the obligations of the Mineral Terminal Project Company hereunder and under the Mineral Terminal Agreement including commissioning of the Mineral Terminal Facilities by the Mineral Terminal Project Company Mineral Terminal Commissioning under the conditions set forth in the Mineral Terminal Agreement. Cam Iron the Mineral Terminal Project Company and the State undertake to comply with their respective obligations to cooperate to ensure the Mineral Terminal Commissioning. the Issuance of a Finding of Compliance viii constitute the Mineral Terminal Commissioning. The State may raise reservations that the Mineral Terminal has not been constructed in accordance with the Mineral Terminal Specifications in which case such reservations shall be resolved prior to the Mineral Terminal Commissioning. The Mineral Terminal Project Company will have a period of one hundred and eighty 180 Days or up to an additional ninety 90 Days to the extent that the Mineral Terminal

Project Company demonstrates in good faith that the reservations cannot be resolved within the one hundred and eighty 180 Day period and provided that it is diligently during such additional period to resolve such reservations to do Ute works so as to allow the removal of such reservations. In case of refusal of either of the Parties to sign the Finding of Compliance the most diligent Party shall refer the matter to the Expert Procedure. The term of the Mineral Terminal Agreement shall be for twenty five 25 years from the Date of Entry into Force to be modified as described in Article 10.9. Every five 5 years during the term of the Mineral Terminal Agreement the State and the Mineral Terminal Project Company are to review the terllIS of the Mineral Terminal Concession to ensure U1e expectations of both Parties are being met and to otherwise take account of anticipated operating conditions for the next succeeding five 5 year period and to d iscuss in good faith. opportunities to expand the Mineral Terminal to provide services for additional mines the goal of which is increasing revenue for the Parties however such review is not to result in any adverse change to either i ii the operating conditions for the Mineral Terminal Facilities; or the basis on which the tariff is being charged for the Initial Capacity.

13.2 Description of the Mineral Terminal Area a The Mineral Terminal Project Company shall be authorised to carry out the Mineral Terminal Operations within the surface subsurface and waterside areas contemplated by the Mineral Tenrlinal Agreement the site plan of which will be attached to the Mineral Terminal Agreement the Mineral Terminal Area. h The provisions of Articles 12.1.2h and 12.1.2c shall apply mutatis mutandis to the State and the Mineral Terminal Project Company for the l page 175 conduct of the Mineral Terminal Operations within the Mineral Terminal Area.

13.3 Purpose and Intended Use of the Mineral Terminal The Mineral Terminal shall be built to allow notably a the collection unloading storage loading and shipment i of the Sale Products. Other Ores and other iron ore from within the territory of the State the collection unloading storage loading and shipment of which by their nature would not have adverse effects on the collection unloading storage loading and shipment of the Sale Products and Other Ores; and ii of the Goods Nabeba Goods and any other goods agreed to by the State and the Mineral Terminal Project Company; as well as b c the conduct of the Blending Operations. The initial

lease for the Mineral Terminal Area may upon agreement include the land necessary to reach the Design Capacity.

13.4 Legal Regime applicable to the Assets comprising the Mineral Terminal Facilities

a b c d i v .. All the Assets comprising the Mineral Terminal Facilities made available acquired constructed installed and/or processed by the Mineral Terminal Project Company or on its behalf which are necessary used or desirable in operating the Mineral Terminal and the other Assets identified by the Parties in an annex to the Mineral Terminal Agreement are the property of the Mineral Terminal Project Company and will be automatically and directly transferred to the State upon expiry of the Mineral Terminal Agreement with no financial contribution being due to the Mineral Terminal Project. The Mineral Terminal Project Company shall not pay any Taxes triggered by the transfer of such Assets to the State. Any Assets transferred to the State upon expiry of the Mineral Terminal Agreement shall be transferred free and clear of all security interests liens and encumbrances including in favour of the Lenders and in good working condition and the Mineral Terminal Project Company shall cause all such security interests liens and encumbrances to be removed prior to transfer. The Mineral Terminal Project Company shall keep an up-to-date inventory of its Assets at its expense under the conditions set forth in the Mineral Terminal Agreement. Regardless of the category in which they fall the Mineral Terminal Project Company shall not without the State's prior consent transfer with or without consideration all or part of the Assets comprising the Mineral Terminal Facilities save in the case of any of the Mineral Terminal Facilities that may be replaced in the ordinary course of business or ii create a security interest or grant any other right whatsoever over said Assets except for the purposes of financing or refinancing of the Project and in favour of the Lenders of such financing provided that in connection with any refinancing the Mineral Terminal Project Company shall not be permitted to grant any security interest or other right on its Assets that relates to Debt which matures later than five (5) years prior to the expiration of the Mineral Terminal Concession. iii The State must not unreasonably withhold its consent to any transfer referred to in Article 13.4d where the transferee agrees to be bound by the obligations to the State under this Convention with respect to the Mineral Terminal Facilities.

13.5 Mineral

Terminal Operatorship a Upon the expiration of the initial twentyfive 25 year term of the Mineral Terminal Company's right to operate the Mineral Terminal as same may be modified pursuant to the terms of this Convention the State may to the extent the State and the Mineral Terminal Project Company have reached agreement on the details of an agreement to operate the Mineral Terminal Facilities prior to the expiry of the Mineral Terminal Agreement for which the State shall be under no obligation or the Mineral Terminal Project Company exercising its right under Article 13.5 to grant to the Mineral Terminal Project Company the right for a period of ten (10) years after the expiry of the Mineral Terminal Agreement to operate and maintain the Mineral Terminal Mineral Terminal Operations Agreement provided however that the State shall not be required to negotiate any such new agreement with the Mineral Terminal Project Company if a material default has occurred or is persisting within twenty four (24) months of the end of the term of the Mineral Terminal Agreement. b Subject to the terms and provisions of the Mineral Terminal Operations Agreement and this Convention if the State and the Mineral Terminal Project Company enter into a Mineral Terminal Operations Agreement following the expiration of the Mineral Terminal Agreement the State and the Mineral Terminal Project Company agree that i for the term of the Mineral Terminal Operations Agreement the Mineral Terminal Project Company shall have exclusive possession but not title of all Assets of the Mineral Terminal Project Company that are transferred to the State following expiration of the Mineral Terminal Agreement except as may be requested by the State in the exercise of its Reserved Rights; ii the Mineral Terminal Project Company shall A be obliged to maintain and keep the Mineral Terminal in sound order and conduct all necessary works and repair any damage that occurs from use of the Mineral Terminal; B be obliged to include in the tariff to be charged to a user other than with respect to the tariff being charged to the Mine page 177 Project Company and Congo Iron for the Initial Capacity and the Reserve Expansion Capacity if being utilized a capital component prescribed by the State which amount shall be solely for the benefit of the State; and for the avoidance of doubt the tariff will substantially reflect the tariff referred to in Article 4 of the Tariff Framework Agreement excluding the State charge component referred to in Article 4.6 of the Tariff

Framework but the State charge will be imposed on any usage above the Initial Capacity and Reserve Expansion Capacity; and C be entitled to include in the tariff to be charged to a user the fixed and variable operating costs associated with the Mineral Terminal Project Company providing a haulage service to the user including the costs referred to in Article 13.5biiA an equitable portion of any Sustaining Capital incurred by the Mineral Terminal Project Company together with a Fixed Profit Margin on each of the fixed and variable costs and on the Sustaining Capital. the State shall determine which users other than the Mine Project Company or Congo Iron may be given access to a handling and loading service and subject to compliance with Article 18 on what basis. provided that the use and enjoyment by the Mine Project Company Congo Iron and any thenexisting user of Expansion Capacity shall not be materially adversely affected; the Mineral Terminal Project Company shall provide to the State within three 3 months of the end of every two 2 year period from the effective date of the Mineral Terminal Operations Agreement an independent report by an independent expert approved by the State on the maintenance carried out during the past two 2 year period and the maintenance required during the succeeding two 2 year period in order to ensure the Mineral Terminal Project Companys obligations under Article 13.5biiA are being met. The Mineral Terminal Project Agreement will contain the form of instructions to be provided to the independent expert in connection with its audit; the Mine Project Company or Congo Iron will be charged a tariff in the amounts prescribed by the applicable Mineral Terminal Services Agreements being novated; provided that consumables and spare inventory that were previously purchased by the Mineral Terminal Project Company and transferred to the State will contribute to the capital expense components of the tariff only to the extent that the State pays any consideration for such items to the Mineral Terminal Project Company; the users other than Mine Project Company and Congo Iron shall be charged a tariff not less than the tariff charged to the Mine Project Company and Congo Iron; and the quality of the handling and loading services being provided to the Mine Project Company and Congo Iron after the termination of the Mineral Terminal Agreement is to be no less than that being provided prior to the termination. page 78 iii iv v vi vii c At the end of the initial

twentyfive 25 year term of the right of the Mineral Tenninal Project Company to operate the Mineral Terminal as modified by Article 10.9.2a which for clarification excludes early termination of such right pursuant to the termination of the Mineral Tenninal Agreement prior to the expiration of said tenn i ii iii iv v vi if the State intends to grant a Third Party the right to operate the Mineral Terminal Facilities and the material terms of such offer are more favourable to the operator than the last temlS the State offered to Mineral Terminal Project Company in the discussions in connection with Articlel3.5a the State must offer to the Mineral Tenninal Project Company the right to match the offer from that Third Party and the State shall give the Mineral Terminal Project Company material terms of any such offer and the Mineral Terminal Project Company shall have thirty 30 Days from its receipt of those details in which to advise the State of its position on the matter; provided however that the State shall not be required to award such new agreement or extension to the Project Company if a material default has occurred or is persisting within twentyfour 24 months of the end of the tcnn of the Mineral Terminal Operations Agreement or if the Beneficiation Operations have not commenced; the possession of the Assets described in Article 13.4a sball pass to the State with no financial contribution being due to the Mineral Terminal Project Company; the State shall have the right to access the employment records of the Mineral Tenninal Project Companys employees with a view to offering such employees ongoing employment by whomever will operate the Mineral Terminal and the Mineral Temtinal Project Company will reasonably cooperate to enable the State or any subsequent Mineral Terminal operator to make offers to those employees it wishes to employ; the State or whomever is to operate the Mineral Tenninal is to take a novation from Mineral Terminal Project Company of all ongoing handling and loading service agreements which the Mineral Terminal Project Comparly had entered into with users of the Mineral Terminal and which remain in force on the expiry of the Mineral Terminal Agreement or the Mineral Tenninal Operations Agreement. as the case may be; the Mineral Temtinal Project Company shall to the extent legally pennissible transfer assign or grant a perpetual license for no additional charge to use the knowhow and business systems for running the Mineral Terminal to the State or whoever is to rw1 the Mineral

Terminal; and the Mineral Terminal Project Company and Cam Iron shall cooperate and take all reasonably requested actions to facilitate the transfer of the right to operate the Mineral Terminal to a Third Party. d Each of the State and the Mineral Terminal Project Company shall commence negotiating the terms of the Mineral Terminal Operations Agreement at least one year prior to the expiry of the Mineral Terminal Agreement and those negotiations are to proceed in good faith with a view to the terms of the Mineral Terminal Operations Agreement being agreed prior to the expiry of the Mineral Terminal Agreement; and have regard to the matters referred to in Article 13.5 and to otherwise be on terms which are to be generally accepted in mineral terminal operation agreements servicing the international mining industry. 13.6 Handling Services Where the State and the Mineral Terminal Project Company are unable to agree on the terms of the Mineral Terminal Operations Agreement prior to the expiry of the Mineral Terminal Agreement or at the end of the term of the Mineral Terminal Operations Agreement then a b c the State shall operate or arrange for a Third Party to operate the Mineral Terminal Facility on and from the expiry of the Mineral Terminal Agreement or Mineral Terminal Operations Agreement as the case may be such that the handling service being provided to the Mine Project Company its Subsidiaries or Congo Iron shall be in accordance with applicable Operating Standards on and from the expiry of the Mineral Terminal Agreement or Mineral Terminal Operations Agreement as applicable and shall be of a similar quality and regularity as that provided during the term of the Mineral Terminal Agreement or Mineral Terminal Operating Agreement as the case may be; the tariff charged by the State or the Third Party operator for the handling service referred to in Article 13.6a shall be subject to a component of the tariff being to contribute to Sustaining Capital. be calculated on a substantially similar basis as was being charged on the expiry of the Mineral Terminal Agreement or Mineral Terminal Operations Agreement; and the State or the Third Party operator will coordinate the operation of the haulage service with the then operator of the Railway facility such that subject to the production by the Mine Project Company and Congo Iron of Mamba Ore and Nabeba Ore there is a continuous supply of Products to the Mineral Terminal for loading onto vessels. 13.7 Access to the Mineral Terminal

Without prejudice to the provisions of Article 18 and the Reserved Rights. on the Date of Entry into Force to the extent any authorization is required under the Legislation the Mineral Terminal Project Company is authorised to access the Mineral Terminal Facilities in exchange for the applicable tariff in accordance with the terms hereof and the Mineral Terminal Agreement and the Mineral Terminal Services Agreement. This authorization does not obligate the Project Companies to provide handling and loading services which is addressed by separate agreement. This authorization is limited to any authorization required from the State under the Legislation and is not a contract right to use the Mineral Terminal. For clarification Nabeba Ore other than Nabeba Ore included in the Blended Ore is not contemplated as being handled and loaded through the Mineral Terminal pursuant to the Mineral Terminal Services Agreement or the applicable tariff other than as through the creation of Expansion Capacity including the Reserve Expansion Capacity.

13.8 General Warranties of the State a The State warrants to the Mineral Terminal Project Company that i ii iii subject to the Mineral Terminal Agreement the Mineral Terminal Project Company may procure the conduct of all the Mineral Terminal Operations by any Contractor or Subcontractor; within the framework of the operation of the Mineral Terminal Facilities neither the Mineral Terminal Project Company nor the Contractors or Subcontractors shall be deemed to be autonomous port bodies or to have a public service port activity; subject to the Mineral Terminal Agreement this Convention the Legislation and any applicable Operating Standards in operating the Mineral Terminal Facilities the Mineral Terminal Project Company shall be entitled to undertake or exercise control over all operations including the arrival and loading of ships departure of ships time spent by the ships in the port environmental and safety operations; and iv in the conduct of the Mineral Terminal Operations the Mineral Terminal Project Company may dredge a ship channel and ship crossing area. b The remaining general warranties of the State and the Mineral Terminal Project Company shall be detailed in the Mineral Terminal Agreement.

13.9 Liabilities and Indemnities Mineral Terminal Where the State employs any employees of the Mineral Terminal Project Company as contemplated in Article 13.5 ciii then there is to be an appropriate adjustment of the employee

emittlements between the State and the Mineral Terminal Project Company and each will indemnify the other for the period the employee was or is employed by them for claims or liabilities arising during such period of employment; takes a novation of any band ling and loading agreements as contemplated in Miele 13.5civ then the Mineral Terminal Project Company is liable for all claims and liabilities arising prior to the novation and the State or whoever is to run the Mineral Tenninal is liable for all claims and liabilities arising after the novation except for the avoidance of doubt to the extent such claims and liabilities relate to the period prior to the novation and to the extent of their respective liabilities they will indemnify the other party against those liabilities; and takes a transfer assignment or license of know how and business systems contemplated in Article 13.5cv each Party shall indemnify the other from any claim or liability arising during the period they held or used or hold or use such know how and business systems. page 181 a b c v 13.10 Sustaining Capital a b

The Mineral Terminal Project Company shall incur expenditure by way of Sustaining Capital in order to maintain the Mineral Terminal Facilities pursuant to the Operating Standards and such sum. shall be spent by the Mineral Tenninal Project Company in a manner and at the times appropriate for ensuring the efficient operation of the Mineral Tenninal. For Sustaining Capital that is not fully recovered from the users of the Mineral Terminal services in the applicable tariff calculations at the time of the transfer of assets to the State upon the expiry of the Mineral Terminal Agreement in accordance with Article 13.4a and was contributed within the last five 5 years of the Mineral Tenninal Agreement to fund unexpected Sustaining Capital if the State elects to receive the asset for which the Sustaining Capital was expended the State must pay to the Mineral Terminal Project Company an amount equal to the portion of such Sustaining Capital for such asset that was not covered by insurance or reserves and has not been depreciated including with any accelerated depreciation.

14 PROJECT ROADS 14.1 Paving of Roads. Within the three 3 year period following Project Commissioning the Project Companies will provide a metallic surfacing on the Project Road Adjacent to the Railway from Lolabe to the intersection of an existing unpaved State road near Endenge; b provide a metallic surfacing for such existing road from where it connects to the Project

Road Adjacent to the Railway to Mbelem where such existing road intersects with the existing State road from Sangmelima to Ouessou which is or shall be paved by the State; c connect with the existing road from Sangmelima to Ouessou until that road intersects with the Project Road Adjacent to the Railway; and d provide a metallic surface for the final portion of the Project Road Adjacent to the Railway from that point where it intersects with the existing road from Sangmelima to Ouessou to Mbarga the Road Plan. The Road Agreement shall address the details of the Road Plan and other provisions regarding the Project Roads.

14.2 Rights to carry out the Road Operations

a b c The Parties acknowledge that the building of the Project Roads may be necessary for the purposes of the Project and where a Project Company is to build a Project Road then it shall do so at its cost and in accordance with the Project Road Specifications. Cam Iron shall have the right to carry out directly or through the Project Companies the Road Operations under this Convention and Project Agreements. As of the date when the Project Companies become a Party to this Convention in accordance with Article 6.4 the Project Companies shall have the right to carry out the Road Operations under this Convention and the Project Agreements. page 182

14.3 Purpose and intended use of the Project Roads

a b c d e The Project Roads shall be built specifically to allow for the construction and maintenance vehicles of a Project Company and its Contractors and Subcontractors to use the Project Roads during the construction of the Mainline Railway and Initial Spur Lines. Subject to the Reserved Rights and this Article 14 nothing in this Convention shall oblige Cam Iron or the Project Companies to grant access rights to the Project Road. It is expressly agreed that the Project Roads can be used by vehicles owned by, contracted to or licensed by a Project Company. The Parties agree that the Project Road Adjacent to the Railway the site plan of which is attached notably on the basis of the findings of the Environmental and Social Assessment and Management Plan shall until such time as the portions thereof shall become a Public Road pursuant to the Road Plan shall be built, commissioned and maintained by the Railway Project Company under the conditions set forth in the Railway Agreement. Cam Iron the Railway Project Company and the State undertake to comply with their respective obligations of reasonable cooperation to

ensure the commissioning of such applicable portions of the Project Road Adjacent to the Railway within the aforementioned deadlines. The issuance of a Finding of Compliance will materialize the commissioning of the portions of the Project Road Adjacent to the Railway which shall become a Public Road pursuant to the Road Plan. The State may issue reservations that the Project Road Adjacent to the Railway has not been constructed in accordance with the Project Road Specifications in which case such reservations shall be resolved prior to the commissioning of such applicable portion of the Project Road Adjacent to the Railway. The Railway Project Company will have a period of one hundred and twenty 120 Days to do the works such as to allow for the withdrawal of reservations and the commissioning period of such applicable portions of the Project Roads Adjacent to the Railway will be extended accordingly with no penalties to the Railway Project Company. In case of refusal of either of the Parties to sign the finding of Compliance the most diligent Party may, without prejudice make use of the Expert Procedure.

14.4 Use of a Project Road by the State

Through the exercise of its Reserved Rights including in the event of an emergency or for the purposes of national security the State may use a Project Road and where possible the State shall provide to the Railway Project Company advance notice of its intended use. The State shall also be permitted to use the Project Roads on a regular interference with Project basis subject to reasonable Operations. limitations preventing

14.5 Duration of Rights to Project Roads

Subject to the terms of any applicable Project Agreement and the Reserved Rights c.m.ru oorol b PProI fw oct RdcPfor as long as any Project Company is a party to the Railway Agreement or retains operatorship of the Railway Facilities or the Mineral Terminal Facilities or with respect to the applicable portions of Project Road Adjacent to Railway which shall become a Public Road pursuant to the Road Plan until such time as the construction of the Mainline Railway is complete and such Project Road is paved and becomes a Public Road. Except as set forth below on expiry of the term of the Railway Agreement the Project Roads other than the portions of the Project Road Adjacent to Railway that may have become Public Roads in accordance with the Road Plan and all Assets constituting automobiles spare parts maintenance and other support equipment owned by the

Railway Project Company will transfer to the State free and clear of all security interests liens and encumbrances and in good working condition and the Railway Project Company shall cause all such security interests liens and encumbrances to be removed prior to transfer. The foregoing transfer of the Project Roads shall not apply to the Project Roads located within the Exploitation Area which shall continue to be owned by the Mine Project Company upon the expiration of the Railway Agreement; provided that to the extent that the Project Road located within the Exploitation Area that runs along the portion of the Railway located within the Exploitation Area and is not being used by the Mine Project Company in connection with its Mining Operations such Project Road shall transfer to the State in accordance with the first sentence of this paragraph.

14.6 Access to Project Roads

a Without prejudice to Articles 14.3b and 18 to the extent required by the legislation on the Date of Entry into Force the Project Companies and their Contractors and Subcontractors are authorised to access the Project Roads for the purposes of transportation of the Sale Product the Goods and the Nabeba Goods and to facilitate the maintenance of the Railway Facilities in accordance with the terms of this Convention and the other Project Agreements. This authorization does not obligate the Project Companies to grant access which is addressed by separate agreements and is limited to any authorization required from the State under the Legislation. This authorization is limited to any authorization required from the State under the Legislation and is not a contract right to use the Project Roads.

b Subject to the Reserved Rights the Project Companies may close or limit the use of a Project Road as they see fit for maintenance or safety purposes and the State shall use its reasonable efforts obligation de moyens to do all things reasonably and appropriately necessary to assist and enforce such actions.

14.7 Public Roads

To the extent required by the Legislation Cam Iron 01e Project Companies Contractors and Subcontractors are authorised by the State to use all Public Roads subject to the Legislation and the State shall a b maintain the Public Roads being used for the Project to the standard appropriate to the classification of such road; and authorise Cam Iron the Project Companies their Contractors and Subcontractors to carry out whatever maintenance and strengthening pagol84 work on the Public Roads that is

appropriate in consultation with the State. 15 AERODROME The Parties acknowledge the significance of the Aerodrome to the Mining Operations. The Aerodrome is to be regulated by the Aerodrome Agreement which will address the location, object and use, authorizations, construction and operation, operation of air transport services, third party access, maintenance and other topics related to the Aerodrome and shall include, without limitation, provisions: a) granting the State, through the exercise of its Reserved Rights, including in the event of an emergency or for the purposes of national security, a right to use the Aerodrome; and requiring that the Aerodrome be operated in compliance with all Legislation applicable to privately operated aerodromes. 16

BLENDING OPERATIONS

16.1 Rights in the Blending Operations a) b) c) On the basis of the findings of the Feasibility Study, as reviewed and approved by the State, the Parties agree that in order to generate a higher return from the Project due to the higher levels of silica and other chemical characteristics of the Mbalam Ore contained within the Exploitation Area, the optimal upgrading of said ore could be reached by, in particular, Blending said ore with Nabeba Ore notwithstanding and without prejudice to the provisions of this Convention relating to the Beneficiation Operations. This Convention grants to Cam Iron the right to undertake the Blending Operations for the purposes of the Project. Cam Iron will permit the Mine Project Company to contract the Mineral Terminal Project Company to carry out all the Blending Operations in compliance with the provisions of this Convention, the Mineral Terminal Services Agreement, the Monitoring Agreement, Blending and the Blending Agreement. The Mineral Terminal Services Agreement and the Blending Agreement provide and set the framework of the conditions of conduct by the Mine Project Company of the Blending Operations within the Mineral Terminal Area.

16.2 Blending Operations rates The Mine Project Company shall pay to the Mineral Terminal Project Company compensation for the provision of blending services for the Mbalam Ore. This compensation will be described in the Mineral Terminal Services Agreement.

16.3 Relief from the State The State has satisfied itself that the Blending of the Mbalam Ore is appropriate and which the State is entitled to receive under the Convention and the Monitoring Agreement. Blending then the

State will not absent manifest need require a b any further specific technical information prior to the actual Blending of the Mbalam Ore with the Nabeba Ore; or the provision of any form of bank guarantee to cover the actual Blending of the Mbalam Ore with the Nabeba Ore.

17 MARKETING OPERATIONS AND TREASURY OPERATIONS

17.1 Marketing of Ore

The Parties will negotiate the Marketing Agreement and the Monitoring Agreement Marketing which shall collectively govern the marketing of Mbalam Ore and Blended Ore by the Marketing Company and which shall include provisions providing that all transactions involving Mbalam Ore and Blended Ore will be on terms and conditions that transparently pass the price paid less a logistic and financing fee of two and a half per cent 2.5 and an administrative fee of two and half per cent 2.5 for the Mbalam Ore. or the portion of Blended Ore that consists of Mbalam Ore back to the Mine Project Company in accordance with the provisions of the Marketing Agreement and subject to the Monitoring Agreement Marketing.

17.2 Offtake Agreements

Cam Iron covenants with the State that the Marketing Company shall enter into offtake agreements on Arm's Length Terms and if the Marketing Company agrees to sell any Product to a party that has a direct or indirect interest in the Project then the specifications for the Product that are incorporated into the offtake agreement shall not be set so as to reduce the value of the Product that is being sold to that offtake party. The Marketing Company shall act with transparency with respect to the commercial terms relating to all offtake agreements.

17.3 Right to Perform Treasury Operations

The Parties will negotiate the Treasury Agreement and the Monitoring Agreement Treasury which shall collectively govern the Treasury Operations by the Treasury Company.

18 CAPACITY AND CAPACITY EXPANSION

18.1 Initial Capacity

The Parties acknowledge that the Railway Facilities and Mineral Terminal Facilities are designed to be capable of handling the Design Capacity on Project Commissioning and, after ramp up will be capable of handling at least the Targeted Annual Production Capacity but that as a result of design construction or actual operations those facilities may be capable of initially handling more Tonnes than the Targeted Annual Production Capacity. Providing Expansion Capacity in an amount which together with the Initial Capacity achieves at least the Design Capacity constitutes a decisive

part of the Project.

18.2 Access Expansion Principles The Parties acknowledge that during the Term of the Project

- a the Project Company and Congo Iron may wish to increase their usage of the Railway haulage services and Mineral Terminal services beyond the Initial Capacity; Third Parties are to have a right to access the Railway Facilities and Mineral Terminal Facilities by way of provision by the Railway Project Company of Railway haulage services and by the Mineral Terminal Project Company of Mineral Terminal services; and
- c the Parties intend to use or offer to Third Parties services of the Railway and Mineral Terminal at least up to the Design Capacity, all of which may be made available in accordance with the provisions of this Article 18.

18.3 Expansion Stage

- a During Stage I ;
- i ii the Mineral Terminal Project Company is not obliged to provide any Mineral Terminal services to any person other than the Mine Project Company and Congo Iron; and the Railway Project Company is not obliged to provide any Railway haulage services to any person other than the Mine Project Company and Congo Iron.
- b Subject to the terms of this Article 18 during any Expansion Stage
- i ii c the Mineral Terminal Project Company may provide Mineral Terminal services to any person approved by the State; and the Railway Project Company may provide Railway haulage services to any person approved by the State.

A Project Company a Subsidiary a Shareholder or Third Party may fund an Expansion Stage by any method approved by the State including if mutually agreeable to the Parties by allowing such Project Company Subsidiary Shareholder or Third Party as the case may be to purchase equity in an Expansion Project Company.

18.4 Provision of Expansion Capacity Expansion Capacity may be provided to either

- n b the Mine Project Company Cam Iron or Congo Iron where that Expansion Capacity is part of the Reserve Expansion Capacity; or
- a Person other than a Project Company where the Expansion Project Companies are requested by the State to do so.

18.5 Reserve Expansion Capacity At all times after the conclusion of Stage I but prior to the tenth Anniversary of the end of Stage I not less than an aggregate of fifteen million 15000000 Tonnes per annum of Expansion Capacity as the same may be adjusted by mutual agreement pursuant to Article 11.3 is to be available on the Railway and Mineral Terminal respectively based on the initial design specifications

for achieving the Design Capacity which for clarification shall reflect any loss of capacity due to inefficiency created by any source for the Mine Project Company and Cam Iron on behalf of itself or Congo Iron to obtain Expansion Capacity for the Mba lam Ore and Nabeba Ore respectively over and above the Targeted Annual Production Capacity Reserve Expansion Capacity and this Reserve Expansion Capacity may be sought in one or more stages. The Mine Project Company and Cam Iron on behalf of itself or Congo Iron will have the right to request Expansion Capacity beyond the Reserve Expansion Capacity on the same terms as other Third Parties in accordance with this Article 18. The State will not give Expansion Directives to authorize the creation of Expansion Capacity that would prevent Expansion Capacity from being available for Reserve Expansion Capacity which the Mine Project Company and Cam Iron on behalf of itself or Congo Iron have a right to request pursuant to this Convention. For avoidance of doubt the rights of Mine Project Company and Cam Iron on behalf of Congo Iron to Reserve Expansion Capacity may not be assigned without the consent of the State in its sole discretion.

18.6 Submission of a Services Application The State has the right to determine which Third Parties may submit a Services Application and the Mine Project Company and Cam Iron on behalf of itself or Congo Iron may submit a Services Application for the Reserve Expansion Capacity without prior State approval. At any time following the end of Stage I a Third Party with State approval and the Mine Project Company or Cam Iron on behalf of itself or Congo Iron may submit a Services Application. The Services Application shall be delivered to the State the Expansion Committee and the Expansion Project Companies. Any original amended or cancelled Services Application received by any one of the Expansion Project Companies must be forwarded to the State as is. The Expansion Project Companies shall provide any potential applicant with the information necessary to submit a Services Application and assist applicants in preparing a Services Application.

18.7 Services Application Windows a b The Parties acknowledge that the Expansion Project Companies ability to offer Expansion Capacity may be subject to restrictions contained in the Finance Documents. The Expansion Project Companies must invite by notice published in the national newspaper in the territory of the State the submission

of Services Applications on at least one occasion in each two 2 year period the first such period is to commence within the two 2 year period following the expiration of Stage I and all Services Applications howsoever received shall be considered within two 2 months of the closing date of that invitation. The Expansion Project Companies may organize the time periods for submission of Services Applications into distinct windows to allow applicants to gain greater economic efficiency by creating Expansion Capacity in larger amounts rather than several smaller amounts but shall nonetheless be required to consider all reasonable Services Applications within a reasonable amount of time from when received if not received in a specified window. The Expansion Committee shall be consulted on the timing of applications and application windows. page 88 18.8 of a Services Application A Services Application must a be submitted in writing to the relevant Expansion Project Companies; and b contain the following information i the full name and registration details of the applicant; ii the ownership structure of the applicant and the applicants project; iii a general description of the applicants project; iv the status of the applicants project feasibility study; v the status of all statutory and regulatory approvals required to be obtained in respect of the applicant s project; vi the type of iron ore product to be produced by the applicant; vii the applicants current resource and reserve definition; viii the applicant s planned production profile being estimated tonnage of product produced per annum including ramp up and the duration of the proposed use of Railway haulage or Mineral Terminal services being applied for ix the applicants infrastructure requirements including requirements for A B the Mineral Terminal Project Company to provide Mineral Terminal services; and the Railway Project Company to provide Railway haulage services to the applicant; x a timetable for the construction commissioning and operation of the applicants project; xi details of the applicants proposed project financing; xii reasonably requested financial information; xiii an overview of any negative impact on environmental geological and societal conditions and mitigation measures; xiv xv v such other information as the Expansion Committee Expansion Project Companies or Ute State may reasonably request; and details of any assistance which the State has indicated it will be providing to the applicant. page 89 18.9 Single

Services Application In the event an applicant only requires either the Mineral Terminal services or the Railway haulage services then its Services Application should make this clear.

18.10 Completeness Review of Services Application a b c All Services Applications shall be submitted to the Feasibility Expert for a determination as to whether such Services Application is complete and sufficient to proceed with a Services Feasibility Study. If the Feasibility Expert determines that a Services Application is incomplete it shall advise the Expansion Committee of such deficiencies and the Expansion Committee shall notify the applicant and identify to the applicant the deficiencies in the Services Application. If an applicant receives a notice of the type referred to in Article 18.1 Ob then it must amend the Services Application within thirty 30 Days of its original submission otherwise it will be deemed that the applicant wishes to cancel its Services Application. On receipt of the amended Services Application the provisions of Article 18.1 Oa will apply.

18.11 Amendment or withdrawal of a Services Application An applicant may amend or withdraw its Services Application by notice in writing to the Expansion Committee at any time.

18.12 Review of a Services Application

18.12.1 Principle Other than for the provisions of this Convention applicable to the Project and the Naboba Project the possibility for anyone to use the Mineral Terminal Facilities or the Railway Facilities for the purposes of transportation routing storage vessel loading export and import of any products is expressly and strictly subject to the explicit prior authorization of the State.

18.12.2 Terms and Conditions applicable to the Review of the Services Application a b On receipt of the Services Application which substantially conforms to the requirements of Article 18.8 the Expansion Committee shall conduct the review process with respect to the Services Application. If the Services Application is substantially nonconforming then the Expansion Committee shall provide a written response to the applicant explaining the areas of nonconformance with a copy to be provided to the State. c The Expansion Committee shall consider the Services Application and i by unanimous instruction of the Cam Iron Representative and the State Representative a Services Application may be rejected; and ii by the instruction of the State Representative the Expansion Committee may direct that a Services Feasibility Study be prepared in accordance with the provisions of this

Article 18 based on the Services Application as well as provide any additional information required by the State at that time as U1e case may be. 18. 13 Conduct of a Services Feasibility Study

18.13.1 Identification of a Feasibility Expen. a The State and Cam Iron shall attempt to agree prior to the end of Stage 1 on a mutually acceptable independent expen which may be a group of experts or finus Fea sibility Expert to conduct completeness reviews of Services Applications pursuant to Article 18.10 and feasibility studies regarding requests for Expansion Capacity. If the State and Cam Iron have not agreed on a Feasibility Expert prior to the time the first Services Appjcation is submitted the State and Cam Iron shall each identifY an independent expert wiU1in sixty 60 Days of submission of the Services Application and the two independent experts will choose a third independent expert who shall be the Feasibility Expert. If a Party fails to identifY an independent expert the expert appointed by the other Party shall select the Feasibility Expert. Each of the State and Cam Iron may from time to time demand the removal of the Feasibility Expert provided that the Feasibility Expert shall complete any Services Feasibility Studies then in progress. Upon a demand for removal of the Feasibility Expert the State and Cam Iron shall attempt to identifY a mutually acceptable replacement Feasibility Expert but if they are unable to do so within one hundred and twenty 120 Days of the demand for removal then the procedures set forth in the second and third sentence of tbis paragraph shall apply with respect to the selection of the replacement Feasibility Expert. b If directed by the Expansion Committee the Feasibility Expert shall promptly commence the Services Feasibility Study and shall complete and send the Services Feasibility Study to the State within a reasonable time frame from the date of receipt of s uch direction having regard to the scope of work to be undertaken to produce the Services Feasibility Study. 18.13.2 Conduct of Services Feasibility Study. a b Upon instruction of the State the Feasibility Expert shall within a reasonable time frame complete and send a copy of the Services Feasibility Study to one or more of the Expansion Committee fue Expansion Project Companies the State and fue applicant for Expansion Capacity. The Feasibility Expert shall establish a process acceptable to the Expansion Committee the Expansion Project Companies and the State in their reasonable discretion for the

Project Companies the applicant for Expansion Capacity and the State to provide input and comments on the Services Feasibility Study which the Feasibility Expert may consider but is not required to accept. c If the Feasibility Expert is of the opinion that two or more Services Applications page 91 i ii are complementary the Feasibility Expert may conduct or cause to be conducted a single Services feasibility Study in relation to those Services Applications; or are not complementary the Feasibility Expert may conduct or cause to be conducted separate Services Feasibility Studies in relation to those Services Applications. d Based on Legislation but subject to any additional requests made by the State any Services Feasibility Study required in accordance with the provisions of this Article 18.13 must in particular i ii require an indepth review of the information provided by the applicant in its Services Application to determine including any anticipated delays and disruptions of the provision of Mineral Terminal services and Railway haulage services to the applicant on impact A B C D E f G H I the Mineral Terminal Operations including with respect to the Environment efficiency reliability and safety; the Mineral Terminal capital and operating costs payable by the applicant existing users of the Mineral Terminal and the Mineral Terminal Project Company; the Railway Operations. including with respect to the Environment efficiency reliability and safety; the Railway capital and operating costs payable by the applicant existing users of the Railway and the Railway Project Company; the obligations of the Mineral Terminal Project Company to existing users of the Mineral Terminal; the obligations of the Railway Project Company to existing users of the Railway; the legitimate business and commercial interests of the Expansion Project Companies; whether the requested Expansion Capacity will result in an increase to the aggregate tariffs paid by an existing user of the Railway and Mineral Terminal if there is no such increase then such determination shall be referred to as a Positive Economic Feasibility Determination; and then nominal impact other whether the requested Expansion Capacity will result in any adverse the Environment efficiency reliability and safety of the Railway Operations and Mineral Terminal Operations which shall include whether any proposed physical collateral of rolling stock or other movable assets operated by the Expansion Project Companies for the benefit of all users and

securing impacts on page 92 the financing for such requested Expansion Capacity could upon default thereunder reasonably be expected to result in a material adverse impact on the overall Railway and Mineral Terminal system or the loss of capacity for existing users if there is no such adverse impact or loss of capacity then such determination shall be referred to as a Positive Technical Feasibility Determination; iii identify any additional land over which an Expansion Project Company may need to obtain a Project Lease in order to ensure that company has security or title to the surface area of the land on which the Railway Facility or the Mineral Terminal Facility may need to be expanded onto in order to allow for the construction and operation of the Expansion Capacity; iv identify the statutory and regulatory approvals required to be obtained by the applicant and A B the Mineral Terminal Project Company for the provision of Mineral Terminal services; and the Railway Project Company for the provision of Railway haulage services; v review the applicant's financial capacity to fund the construction of any additional Railway Facility or Mineral Terminal Facility infrastructure and meet its obligations under the anticipated service agreement with respect to provision of each of A the Mineral Terminal services; and B the Railway haulage services to the applicant; vi review the financial capacity of the Mineral Terminal Project Company to finance the supply of Mineral Terminal services to the applicant; vii review the financial capacity of the Railway Project Company to finance the supply of Railway haulage services to the applicant; viii review current environmental geological and social conditions and analyse the expected impact on the same of the proposed services including with respect to noise pollution water use and availability endangered species archaeological remains nuisance and job creation; ix identify the applicant's lenders requirements in the context of the supply of A the Mineral Terminal services; and B the Railway haulage services v page 93 to the applicant; x make recommendations on each of the elements described above in Article 18.13.2d in order to contribute to the acceptance of the Service Application.; and xi include a reasonable timetable and deadlines for completing the works required to create the Expansion Capacity. e f g The outside expenses of conducting the Services Feasibility Study must be borne solely by the applicant including the cost of engaging the Feasibility Expert and the applicant shall

reimburse the reasonable expenses incurred by Cam Iron the Expansion Project Companies and the Expansion Committee. If a single Services feasibility Study is conducted in relation to more than one Services Application the costs of conducting that Services Feasibility Study must be apportioned between the applicants as the Feasibility Expert determines. The State shall provide information regarding the portion of the tariff allocated exclusively to it to allow completion of the Services Feasibility Study.

18.14 Outcome of a Services Feasibility Study a The State may deliver a notice an Expansion Directive to the Project Companies instructing them to proceed with the acceptance and implementation of a request for Expansion Capacity if i ii there has been a Positive Economic Feasibility Determination and Positive Technical Feasibility Determination; or there has been a Positive Technical Feasibility Determination but not a Positive Economic Feasibility Determination and the applicant for Expansion Capacity agrees to indemnify and provide reasonable security to existing users to the extent reasonably required by the users for the net amount of increased tariffs as a result of the requested Expansion Capacity. b c d If as a result of a Services Feasibility Study or any updated Services Feasibility Study there has not been a Positive Economic Feasibility Determination or a Positive Technical Feasibility Determination the applicant may make changes to its Services Application and with the approval of the State the Feasibility Expert shall prepare an updated Services Feasibility Study at the expense of the applicant. If the updated Services Feasibility Study would then allow the State to deliver an Expansion Directive pursuant to Article 18.14a then the State may deliver an Expansion Directive based on the updated Services Feasibility Study. An applicant may make multiple revised Services Applications including if a Services Application does not result in a Positive Technical Feasibility Determination and may with the approval of the State have multiple Services Feasibility Studies performed in respect of such revised Services Applications. d The State shall deliver an Expansion Directive if there has been a Positive Technical Feasibility Determination and a Positive Economic Feasibility Determination and the request is from the Mine Project Company and Cam Iron on behalf of itself or Congo Iron for Reserve Expansion Capacity pursuant to an application compliant with Article 18.8. e

If the Expansion Project Companies receive an Expansion Directive or decide to offer the applicant a Mineral Terminal Service Agreement and a Railway Haulage Agreement then i ii the Expansion Project Companies shall provide a form of Mineral Terminal Services Agreement and Railway Haulage Agreement which shall be based on the terms and conditions set forth in the applicable Mineral Terminal Services Agreement and Railway Haulage Agreement to which the Mine Project Company is a party; to the extent the applicant requests material changes to the proposed form of Mineral Terminal Service Agreement and Railway Haulage Agreement which are not acceptable to the Expansion Project then the Expansion Project Companies shall as Companies applicable submit to the Expansion Committee for resolution the details of the material changes being requested by the applicant which are not acceptable to the Expansion Project Companies and shall then negotiate with the applicant on the basis of changes determined by the Expansion Committee; and iii the Railway Project Company shall enter into the final Railway Haulage Agreement with the applicant and the Mineral Terminal Project Company shall enter into the final Mineral Terminal Services Agreement with the applicant. t [f requested the Expansion Capacity would result in the loss of future Expansion Capacity due to an inefficient use of resources or design the Expansion Project Companies and Expansion Committee may raise such concerns with the State for evaluation in the State's decision whether to authorize the requested Expansion Capacity. 18.15 Construction of Expansion Capacity a The State acknowledges that notwithstanding having requested that a Third Party be provided with Expansion Capacity or consented to the creation of Expansion Capacity after the completion of a Services Feasibility Study the Expansion Project Companies are not required to incur any additional capital expenditure in connection with the construction of such Expansion Capacity although they may in their sole discretion elect to do so in which case they shall advise the State and the applicant of this. b The applicant may itself construct or negotiate with the Expansion Project Companies or third parties to construct the Expansion Project. Regardless of who is constructing the Expansion Project the applicant and the Expansion Project Companies shall cooperate and agree on a plan including a completion certificate regarding design construction

and commissioning consistent with the Services Application and Services Feasibility Study that minimizes to the extent reasonably possible the disruption the construction causes to the existing users and addresses any detailed specifications for construction and commissioning not specified in the Services Application and Services Feasibility Study that are necessary to integrate the Expansion Project and existing assets. Any disputes between the Expansion Project Companies and applicant shall be settled pursuant to the procedures set forth in the Technical Dispute Resolution Agreement and, in connection with the issuance of an Expansion Directive the applicant shall be required to enter into an agreement agreeing to be bound by the procedures set forth in the Technical Dispute Resolution Agreement.

18.16 Ownership of the Assets used to create the Expansion Capacity Notwithstanding that the user of the Expansion Capacity may provide the funding to create that Expansion Capacity all assets, be they fixed or moveable that will be owned by an Expansion Project Company pursuant to the financing plan shall belong to the Expansion Project Company that is incorporating those assets into its operation and at the time of designing the works each Expansion Project Company must advise the user which of the assets will be fixed and which will be moveable having regard to accounting standards applicable to the operations of the Expansion Project Companies.

18.17 Tariffs The Rail Project Agreement and the Mineral Terminal Agreement will address the tariffs to be charged to all users of the Railway Facilities and Mineral Terminal Facilities respectively. These tariffs will substantially incorporate the Tariff Frameworks and for the users of Expansion Capacity including for any Reserve Expansion Capacity will include a b the additional base charge which is to be allocated i seventyfive percent 75 to the State and twentyfive percent 25 to the Rail Project Company or Mineral Terminal Project Company so long as the Rail Project Company or Mineral Terminal Project Company is operator of the Railway and Mineral Terminal as the case may be and ii one hundred percent 100 to the State A if the Rail Project Company or Mineral Terminal Company is no longer the operator or B if the length of the original twenty five 25 year term of the concession under the Railway Agreement and Mineral Terminal Agreement is extended for five 5 years pursuant to Article I 0.9.2a; and an additional State

charge determined by the State which shall be allocated and paid exclusively to the State notwithstanding such amount being collected by the Expansion Project Companies; provided that there shall be no such additional State charge on any Reserve Expansion Capacity.

18.18 Security for Third Party Funding Subject to Article 18.13.2dii a Third Party or its financier that is providing capital to fund the construction of any Expansion Capacity may call upon the Expansion Project Company if through the provision of capital an Expansion Project Company will own or operate assets used as collateral for the financing of the Expansion Capacity to provide reasonable security in favour of the applicant or its financier provided any such security does not create unreasonable credit risk or to be over assets other than those being acquired by the Expansion Project Company in order to create the Expansion Cap and the Expansion Project Company and subject to Lender approval such party shall enter into an agreement on reasonable terms for such security.

18.19 Mineral Terminal Agreement and Railway Haulage Agreement Without limiting the effect of Article 18.14e each Expansion Contract which is offered to an applicant shall contain reasonable customary terms substantially in accordance with the terms of the Railway Haulage Agreement and the Mineral Terminal Services Agreement in each case other than with regards to the duration and the tariff components described in Article 18.17 and the Expansion Project Companies shall cooperate with the State to develop prior to the end of Stage I a form of contract to be proposed to the applicant. These terms of any such Mineral Terminal Services Agreement and Railway Haulage Agreement may include if reasonable in the context amongst other things a appropriate take or pay terms; b c the applicants maximum entitlement to capacity; conditions precedent to provision of the services; d obligations of the Expansion Project Companies to provide services; e f g h i j obligations of the applicant to use the services; the apportionment of risk between the applicant and the Expansion Project Companies; the time for commencement of the services the term for which the services may be provided; the charges that will apply to the services integration infrastructure required for the provision of the services to the applicant; k performance targets and key performance indicators; l stockpiling arrangements; m planning and scheduling of services; n

changes in services; o p q provisions giving effect to the matters referred to in Article 18.14; ownership of facilities and infrastructure; and from and mitigation of any negative impact limitations on and v page 197 environmental and geological effects on the Exploitation Area or other relevant areas. Nothing in the contract must result in any existing user of services from either Expansion Company having to a b c receive a lesser service more than a de minimis degradation than that being enjoyed by them at that time; provided that moving from a run when ready or similar system appropriate for a single user to a system appropriate for multiple users and any resulting changes shaU not be a violation of this requirement; pay a higher tariff in more than a de minimis amount than that being paid by them at that time and pay any capital in more than a de minimis amount over and above that paid at that time or to be paid by way of Sustaining Capital. 18.20 T hird P arty Access Facilities a If during the ferro of the Project the State the Mineral Terminal Project Company. the Railway Project Company or a Third Party wishes to build or procure the building of any Third Party Facility then tbe State the Thlrd Party if applicable the Mineral Term.inal Project Company and the Railway Project Company shall come together in order to agree upon the conditions under whicb this Third Party Facility shall be built by either the Mineral Terminal Project Company or the Railway Project Company in the context of either i ii iii the Railway Agreement andor the Project Lease relating to the Railway or Project Roads; the Mineral Terminal Agreement andor as the case may be the Project Lease relating to the Mineral Terminal; and an Additional Specific Agreement and as the case may be a new Project Lease which shall at the minimum include the obligations as U1e case may be of the Railway Project Company concerning the Railway Facilities and the Project Roads or of the Mineral Terminal Project Company concerning U1e Mineral Terminal Facilities as provided in this Convention provided that if such request is made by U1e Railway Project Company or the Mineral Tem1inal Project Company the latter shall file an Additional Facility request under the conditions set torth in Article 19.1. b For the avoidance of doubt unless U1e Parties otherwise agree the building and maintenance of any Third Party Facility pursuant to this Article 18 shall not constitute a Railway Operation a Road Operation or a Mineral Terminal Operation within the

meaning of this Convention. 18.21 Cooperation. The Project Companies shall use their reasonable efforts to cooperate with and assist the Feasibility Expert and applicant in the preparation of a Services Application page 198 preparation of a Services Feasibility Study and other matters related to Expansion Capacity. 18.22 Expansion Committee 18.22.1 Creation of the Expansion Committee An Expansion Committee shall be set up for the Project. To facilitate the fulfilment of its function and the process of requests for Expansion Capacity the Expansion Committee may delegate any of its functions and roles to an Expansion Project Company from time to time. 18.22.2 Composition of the Expansion Committee a The Expansion Committee shall be composed of nine 9 members or another number determined by mutual agreement of the State and Expansion Project Companies i ii Cam Iron shall have four 4 members each assisted by an alternate appointed by the Expansion Project Companies during the Term of the Project and among whom Cam Iron shall designate a principal representative the Cam Iron Representative; and the State shall have five 5 members each assisted by an alternate and among whom the State shall elect a principal representative the State Representative. b c The alternates appointed by the Expansion Project Companies or the State shall act only in case a Cam Iron Representative or the State Representative respectively is unavailable. Each Party is entitled to replace its representatives or alternates at any time by giving written notice to the other Party of such replacement. to take part The State and Cam Iron may arrange for a reasonable number of their respective personnel in meetings of the Expansion Committee. However only the persons appointed as the Cam Iron Representative or the State Representative or in their absence their alternates shall have a right to vote on the Expansion Committee. Each Representative or in the absence his or her alternate representative shall have one 1 vote and shall be deemed to be authorized to represent and to bind the Party that appointed it on any subject within the competence of the Expansion Committee. Any person attending the meetings of the Expansion Committee shall be under a strict obligation of confidentiality with regard to the discussions the questions raised and the information disclosed. Nevertheless the Cam Iron Representative and the State Representative shall have the right to debrief their respective

principals and advisors on the discussions and questions raised. Disclosure of confidential information as required by the Legislation or other applicable law shall not be a violation of this restriction to the extent it involves any information that i is or becomes generally available to the public or in the industry other than as a result of a disclosure by the recipient in breach of this Convention ii was within the possession of the recipient or the Party with which it is affiliated prior to its being furnished to the recipient provided that the source of such information was not bound by a confidentiality agreement with or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such information iii is or becomes available to the recipient or the Party with which it is affiliated on a nonconfidential basis from a source other than the provider provided that such source is not bound by a confidentiality agreement with or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such information or iv was independently developed by such disclosing party.

18.22.3 Competence of the Expansion Committee

a The Expansion Committee shall have the roles rights and obligations set forth in the Project Agreements and shall also serve as a forum for discussing and coordinating expansion in general. Without limitation the Expansion Committee i is to be provided with a draft of the Services Feasibility Study for comment prior to it being released; ii is to review and provide comment on any Services Application. b The Expansion Committee examines all proposals seeking access to the Mineral Terminal Facilities and the Railway Facilities. Within this framework the Expansion Committee i reviews and provides any comments on A any approach to the State by a Third Party for a right of access to the Railway Facilities and the Mineral Terminal Facilities; and B any Services Application. ii is to be consulted by the State prior to the State giving notice to the Expansion Project Companies that it wishes them to conduct a Services Feasibility Study; iii is to meet to make a recommendation on any Services Application; iv v is to be provided with a draft of the Services Feasibility Study for comment prior to it being released to the Third Party; and is to consider any other matter with respect to accessing the Mineral Terminal Facilities or the Railway Facilities. c Each Expansion Project Company is to submit to the Expansion Committee i any

Services Application it receives; and ii any other matter associated with an Expansion Project Company giving consideration to granting of access to the Railway Facilities or the Mineral Temunal Facilities. d The members of the Expansion Committee shall consult one another on page 100] the matters submitted to them in order to reach a unanimous decision. When a matter is not decided unanimously during a meeting of the Expansion Committee the examination of such matter shall be postponed to a subsequent meeting of the Expansion Committee which shall take place as convened by Cam Iron at least ten (10) but not more than forty five (45) Days following the date of the first meeting. During this period the Parties shall meet and Cam Iron shall provide all information and details as may be required by the State in its capacity as a member of the Expansion Committee. If during the subsequent meeting the members of the Expansion Committee do not reach an agreement on the decision to be made a decision may be taken by a vote of a majority of the total number of members of the Expansion Committee. e The Expansion Project Companies will keep the Expansion Committee informed of all communications with applicants.

18.22.4 Meetings of the Expansion Committee

a b c The Expansion Committee shall meet at any time at the request of the State Representative or the Cam Iron Representative. Notices of meetings of the Expansion Committee will be sent in writing to the members thereof by the Party that took the initiative for the meeting at least fifteen (15) Days before the anticipated date of the meeting. Every notice of meeting shall contain an indication of the date time and place of the planned meeting and the intended purpose. Meetings of the Expansion Committee will be held in Yaounde Cameroon or another location agreed to by the Cam Iron Representative and the State Representative. When a Party takes the initiative to call a meeting it shall provide the other Party before the anticipated date of the meeting with all the items of information necessary for the taking of decisions at the meeting. Each of the Cam Iron Representative and the State Representative shall be entitled to add subjects to the agenda subject to giving written notice thereof to the other representative before the anticipated date of the meeting. No decision may be taken at a meeting of the Expansion Committee on a subject that has not been included on the agenda for the meeting in advance unless a unanimous

decision to the contrary is taken by the Cam Iron Representative and the State Representative.

18.22.5 Subcommittee The activities of the Expansion Committee may be referred to a subcommittee. 18.22.6 Chairing and secretariat Meetings of the Expansion Committee will be

chaired by the State Representative. The Cam Iron Representative will act as secretary and a member of the Expansion Committee appointed by the State will act as deputy secretary. 18.22.7

Minutes The secretary and the deputy secretary shall prepare written minutes of each meeting and shall send a copy thereof to the State Representative and the Cam Iron v page 1101 Representative following the meeting for approval or comments and the State and Cam Iron representatives will respond to the comments of the other Party s representatives within a reasonable time period.

18.22.8 Decision without meeting a Any question may be submitted to the Expansion Conunittee for a decision without giving rise to a formal meeting of the Expansion Committee on the condition that the Pany taking this initiative transmits the question to the other Pany in writing. In this even each of the Cam Iron Representative and the State Representative must inform the other of its vote within ten 10 Days of receipt of the said question. The absence of a response from either the Cam Iron Representative or the State Representative on the question under discussion shall be deemed to represent a negative vote. b Any decision adopted by the Cam Iron Representative and the State Representative according to the terms and conditions provided by Article l8.22.8a shall have the same value as a decision adopted in the context of a formal meeting of the Expansion Committee.

18.22.9 Funding of Expansion Committee a The budget of the Expansion Committee shall be prepared in accordance with Article 18.22.9b. The Expansion Project Companies shall pay the costs of its members and advisors to the extent provided in the budget the members may bring additional advisors at the expense of the member to attend meetings of the Expansion Committee but all other actual costs shall be divided equally amongst the Railway Project Company and the Mineral Terminal Project Company. The Panies shall agree on a medtod for paying a per diem amount to the Expansion Committee members. The Parties will also provide for the completion of any docwnents necessary for the Project Companies and their parent companies as the case may be to

comply with applicable provisions of Australian legislation regarding such payments. b At least fortyfive 45 Days prior to the beginning of each Calendar Year Cam Iron shall in consultation with the State send to the State a proposal for funding the Expansion Committee for the following Calendar Year on the basis of the estimated operational costs including the daily compensation of the State Representatives. c The State within fortyfive 45 Days following receipt of the aforementioned proposal shall i accept this proposal; or ii provide its comments and recommendations to Cam Iron. d e In case of the State s failure to respond within the aforementioned period the State shall be deemed to have accepted the proposal. In case of a disagreement between the State and Cam Iron the Parties undertake to seek an agreement on the funding of the Expansion Committee. In the absence of an amicable settlement within sixty 60 pageJ102 Days following receipt of the States comments and recommendations the amount of the Expansion Committees budget for the contemplated Calendar Year shall be equal to the higher of i the sum of one hundred percent 100 of the prior Calendar Years budget plus the Inflation Adjustment or ii the amount proposed by Cam Iron. f The Mine Project Company shall fund the approved budget of the Expansion Committee. 19 OTHER FACILITIES 19.1 Other Facilities a b the The Parties acknowledge implementation and that during development of the Project the building of facilities other than the Mining Facilities Railway Facilities Mineral Terminal Facilities and Beneficiation Facility may prove necessary either for the purposes of the Project or for the needs of Third Parties entitled to access the Railway Facilities and/or Mineral Terminal Facilities under the conditions set forth in this Convention. If the entity expressing the wish to build a new facility for the purposes of the Project is a Project Company the latter will have to provide the State with a written request for a new facility indicating to the extent appropriate or required by the Legislation i ii iii to what extent the building of the requested facility satisfies a need of the Project that cannot be met by the Project Facilities or other existing facilities in the territory of the State; and timetable the practical arrangements including the base area layout design commencement development materials construction layout and completion of said new facility determined on the basis of studies conducted

by a Subsidiary Contractor or Subcontractor; as well as the impact on the Project in terms of deadlines costs and profits; for the site plan of the requested facility and in particular whether it can be connected to the Exploitation Area the Railway Area or the Mineral Terminal Area and be the subject of an amendment to the relevant Specific Agreement; or on the contrary where it requires the delivery of a Project Lease or the conclusion of an Additional Specific Agreement; iv an environmental and social assessment and management plan specific to the requested facility and to the site plan of said facility substantially in the form of the Environmental and Social Assessment and Management Plan; v a Project Lease Request a draft Additional Specific Agreement or a draft amendment to an existing Specific Agreement; vi the identity of A the Project Company in charge of building the requested facility; and B the Contractors and Subcontractors contemplated by the tender or prequalified as the case may be for the design construction operation and maintenance of the requested facility; vii whether the exclusive purpose of the requested facility is to meet the needs of one or more Project Company or Project Companies or whether Third Party access may be technically envisaged without materially changing the data referred to in Article 19.1 b ii; and viii whether the operation of the requested facility being a facility that does not form part of any Expansion Capacity it allows for the generation of additional income the Additional Facility Request. c d e The requirements of Article 19.1b to provide the State with an Additional Facility Request will not apply where the costs associated with the construction of this facility and with making the facility and any related equipment operational does not exceed a total cost of twenty million 20000000 US Dollars adjusted by the Inflation Adjustment; provided that such Additional Facility Request must comply with the Environmental and Social Assessment and Management Plan as the same may be updated to address the impact of the requested facility. Any request for the construction of an additional facility formulated by a Third Party and sent to a Project Company must immediately be notified to the State. The State within the deadlines prescribed by the Legislation or failing this within one hundred eighty 180 Days following the receipt of the Additional Facility Request shall i ii provide its comments and recommendations to the Project Company that

made the Additional Facility Request; or dismiss the Additional Facility Request subject to such dismissal being justified by one or more of the following reasons A the needs justifying the building of the requested additional facility can be met by an existing Project Facility or another preexisting facility; B failure to comply with the Legislation; C material violation of any Project Agreements by a Project Company Contractor or Subcontractor over the trailing twentyfour 24 month period or the occurrence of five 5 or more breaches over the same such period which in the aggregate have a Material Adverse Effect; D if the said request does not materially comply with the practices generally accepted for highscale international iron . . . r pagef104 ore exploitation projects; or E said request does not comply with the States material interests and standards with respect to environmental or social poiJcies or other reasonable considerations. f Within the one hundred and eighty 180 Days following the date of receipt of the States comments and recommendations the Project Company that made the Additional Facility Request shall i ii iii supplement the Additional Facility Request to take into account the States comments and recommendations provided that they arc justified from a technical andor economical standpoim under the Legislation; prepare a draft Project Lease a draft Additional Specific Agreement or a draft amendment to the applicable Specific Agreement; and provide all s uch doclllnentation to the State together with any other infonnation as may be reasonably required by the State. g Unless the State dismisses the reques t under the same conditions as those set forth in Article 19.1eii the State shall authorise the building of the requested additional facility and i ii enter with the Project Company that made the Additional Facility Request into a Project Lease or an Additional Specific Agreement in accordance with the provisions of Article 20 or as the case may be an amendment to the applicable Specific Agreement; and consider in good fuith and not unreasonably withhold its consent to any applications in compliance with the Legislation for any Project Company of any other necessary permit authorisation or administrative document according to the Legislation to validly authorise the Project Company that made the Additional Facility Request to build the requested Additional Facility together the Additional Facility Authorisation. b i The State and the relevant Project Company shall use their reasonable

endeavours for the Additional Facility Authorisation to be delivered within the deadlines prescribed by the Legislation or failing this within one hundred eighty 180 Days following the date of receipt by the State of the revised and finalized file containing the Additional Facility Request. If the Additional Facility Authorisation could not be delivered for the Beneficiation Power Station due to a refusal of the State in accordance with Article 19.1 eiiC and the State considers at its sole discretion that the building of said facility is of particular significance for the needs of the local or national economy the State may i freely organise a public offering in compliance with the World Bank standards for the financing construction maintenance and operation of the Beneficiation Power Station on the basis of all the rights page 105 equivalent to those covered by an Additional Facility Authorisation and Articles I 0.3 and I 0.4 with a view to building said facility and provided that the service offering issued for the building of said facility generally is substantially similar in substance to the service offering that would have been issued for the facility initially requested by a Project Company; and ii the Suite and Cam subject to the successful bidder agreeing to supply the said services by the BF Construction Deadline or such earlier date as mutually agreed and paying damages agreed by commensurate with estimated losses to the Mine Project Company if it fails to provide the timely supply of the power compel the Mine Project Company requiring the power for the purposes of the Beneficiation Facility to enter into any agreement with the successful bidder in the context of the aforementioned public offering under conditions better than when accessed by the Mine Project Company or identical to those set forth in the Additional Facility Request. j Where the building of any additional facility has been the subject of a Project Lease an Additional Specific Agreement or an amendment to the applicable Specific Agreement this additional facility shall become a Project Facility and the legal regime applicable to the Assets comprising said additional facility the maintenance and repair obligations and as the case may be third Party access shall be treated in accordance with the provisions of this Convention applicable to the Project Facilities as supplemented as the case may be in the Project Lease. the Additional Specific Agreement or in the amendment to the existing Specific Agreement. 19.2 Existing Facilities a b c Subject to the approval

of the State and of all relevant third Parties the relevant Project Companies may instead of constructing additional facilities use all existing facilities under conditions mutually agreed between the Parties. Where such infrastructure is operated by a public entity or a semipublic entity Controlled by a Governmental Entity the State undertakes to reasonably facilitate the conclusion of the necessary agreements between the operator and the relevant Project Company. As the case may be the relevant Project Company may if it considers it appropriate, upgrade and maintain and repair any of the existing facilities which it uses and for these purposes the relevant Project Companies may become the exclusive manager or operator under conditions mutually agreed between the Parties in accordance with Article 19.2a. The Parties shall indemnify and hold each other harmless against all third party liability and damages to each Party's property except to the extent that such damage or liability is the fault of such Party or any Contractor or Subcontractor hired by such Party.

19.3 Hydrocarbon Facility a The Parties acknowledge that the Project Companies will be a very significant consumers of hydrocarbon products in the conduct of the Project Operations and that for that purpose the Mineral Terminal Project Company will need to establish or cause to be established at the Mineral Terminal a hydrocarbon facility which is suitable for the import storage and distribution of hydrocarbon products in compliance with the Legislation. b In developing the Mineral Terminal Facilities, the Mineral Terminal Project Company will develop or engage a Contractor to develop a hydrocarbon facility to meet the requirements of the Project Operations referred to in Article 19.3a and as part of its commitment to the State the Project Companies agree to work with the State to see how the hydrocarbon facility and the Mineral Terminal can be designed and developed to provide a capacity beyond the needs of the Project so as to support the hydrocarbon demand of the region around the Mineral Terminal Facility and without limitation the Mineral Terminal Project Company will i ii assist in the assessment of the regional demand for hydrocarbon products; in conjunction with a Contractor design a hydrocarbon facility which is sufficient to meet the requirements of both the Project and more broadly the region; iii work with the State to determine how best to integrate the requirements of the Project with the forecast

requirements of the region so as to use the Projects hydrocarbon demand as the catalyst for the development of a hydrocarbon facility which can support the requirements of the region; iv work with the State to develop a finding plan for the proposed hydrocarbon facility; and v use its proposed hydrocarbon product buying power to support or attract the involvement of a fuel supply and distributor to assist in the development of the hydrocarbon facility it being understood that the development and operation of such a hydrocarbon facility is not intended to adversely impact on the vi economics of the Project and in particular the tax and excise concessions on hydrocarbon products; vii occupation health and safety of the Mineral Terminal Project Company's operations; and viii operating philosophy of the Mineral Terminal Project Company.

20 ADDITIONAL SPECIFIC AGREEMENTS AND PROJECT LEASES

20.1 Purpose of the Additional Specific Agreements and of the Project Leases a The Parties agree that in the context of the implementation and development of the Project the delivery of the Project Leases and/or the conclusion of one or more Additional Specific Agreements may prove necessary to allow the Project Companies or their Contractors and Subcontractors to i temporarily use and occupy any portion of land located either A B outside the Exploitation Area the Railway Area or the Mineral Terminal Area for the purposes of the Project including for the procuring of building materials; or within the Exploitation Area the Railway Area or the Mineral Terminal Area ahead of the grant of a Project Lease for the purposes of the Project including for the procuring of building materials and ii determine more precisely the rights and obligations of the Project Company in the conduct of the Project Operations it is entitled to carry out. b c For the avoidance of doubt neither the Project Leases nor the Specific Agreements shall grant to their beneficiary any mining rights rights in the subsoil or rights in the mining substances and other natural resources contained in the soil and/or the subsoil of the State. It is further agreed that every time the use of another portion of land is necessary for the conduct of a commercial activity for the purposes of the Project the conclusion of an Additional Specific Agreement under conditions substantially similar to those of the Specific Agreements and/or the delivery of a Project Lease will constitute a mandatory prerequisite it being specified that the State shall have the right to

choose the legal instrument it deems most appropriate at its sole discretion.

20.2 Project Lease Request and proposed Additional Specific Agreement Any Project Lease Request or proposed Additional Specific Agreement to the State shall be made either i in the context of an Additional Facility Request; or ii as a separate requirement indicating the purpose of the Project Lease Request or the Additional Specific Agreement and indicate a detailed study specifying A B the situation area and layout of the lands for which the Project Lease or the Additional Specific Agreement is requested; and the extent to which such request cannot be satisfied within the Exploitation Area the Railway Area or the Mineral Terminal Area as they exist at the date of the Project Lease Request.

b Any Project Lease Request or proposed Additional Specific Agreement and any related rental fee if applicable shall be appraised and negotiated by mutual agreement between the Parties in compliance with the timetable determined by the party making the request or the proposal and the State according to the purpose of the request.

20.3 Grant of Project Leases The State shall grant to each of the Railway Project Company and the Mineral Terminal Project Company Project Leases over the areas identified in the Railway Concession and Mineral Terminal Concession as being needed to construct and operate the Railway and the Mineral Terminal and these Project Leases shall a b c be for the term of the Railway Concession and the Mineral Terminal Concession; and be on terms usually associated with project leases in the territory of the State and attract a rental of the greater of i a total of five hundred and ten million 5 1 000 000 CFA Franc or ii three 3 CFA Franc per square metre for the area comprising the Mineral Terminal Area Railway Area and area of the Project Road Adjacent to the Railway if not duplicative and continuing after the applicable portions of such road are dedicated to public use per annum paid half yearly in advance.

20.4 Temporary Use and Occupation Where Cam Iron or a Project Company or their Contractors or Subcontractors require building materials or sites for construction camps for the purposes of the Project as contemplated in Article 20. i ai the State shall employ reasonable efforts obligation de moyens consistent with applicable standards to promptly grant to the party the temporary use and occupancy rights requested provided that the application is in accordance with

the terms thereof and of the Legislation and does not otherwise adversely impact on the rights of Third Parties or the Reserved Rights of the State. The party requesting such temporary rights shall indemnify the State and the other Project Companies against any damage or liability resulting therefrom. Any such request shall take into account existing use and condition from an environmental geological and social standpoint of the land and take all reasonable measures to avoid or mitigate any negative effects thereon.

2.1 OPERATING REGIME FOR RAILWAY OPERATIONS AND MINERAL TERMINAL OPERATIONS

21.1 Access Protocol

In order for Mine Company Congo Iron an Subsidiary or a Third Party to be provided with a Railway services by the Railway Project Company; and b Mineral Terminal services by the Mineral Terminal Project Company it will be necessary for i the exact nature and range of services to be provided by each of the Railway Project Company and Mineral Terminal Project Company to be defined; ii the basis of the tariff to be charged for each service to be determined; and the variables for insertion into the Railway Haulage Agreement and Mineral Terminal Agreement to be determined and in order to achieve this each of the Railway Project Company and the Mineral Terminal Project Company will in addition to the requirements set forth in the Railway Agreement and Mineral Terminal Agreement ne.i to develop an access protocol for each of the Railway and Mineral Terminal Access Protocol.

21.2 Development of Access Protocols

The State and Cam Iron recognise that in order to develop the Access Protocols referred to in clause 21. 1 it will take time and require each of the Railway Project Company and Mineral Terminal Project Company to a b better develop the range of services each will be providing and how they will charge each user for those services; and develop the terms of each of the Railway Haulage Agreement and the Mineral Terminal Agreement and Cam Iron will cause each of the Railway Project Company and the Mineral Terminal Project Company to develop such Access Protocols both in a timely manner in consultation with the State and in accordance with internationally accepted access principles for bulk commodity supply chains.

SECTION IV PROJECT OPERATIONS JOINT PROVISIONS

22 GENERAL PROVISIONS CONCERNING THE EXPLOITATION AREA THE PROJECT LEASES AND THE

SPECIFIC AGREEMENTS In addition to the general warranties of the State contained in Articles 12.2.5 and 13.8 the delivery of the Project Lease or the conclusion of a Specific Agreement is to result in the holder or signatory Project Company being granted the following additional rights and protections.

22.1 General rights of Project Companies Each Project Company in charge of carrying out all or part of the Project Operations shall be entitled subject to the Project Agreements the Reserved Rights and the Environmental and Social Assessment and Management Plan a to a right to access and use the lands contemplated by the Ute Project Leases and the Specific Agreements under the conditions determined by the said documents. The State or any Third Party appointed to represent the State may access these lands at any time subject to a prior notification to the relevant Project Company and shall comply with the applicable provisions of the Legislation and the caution and security rules in force on the site of which it shall be advised by such Project Company; b subject to the provisions of Article 19.2 to a right to negotiate with the applicable Third Party to use pursuant to applicable Legislation the existing public facilities for the Project Operations including any pageJ 110 c aerodrome roads worksites and other similar facilities. in consideration of payment of the duties payable as the case may be for such a use in accordance with the Legislation provided that i such use does not materially interfere with the exercise of the Reserved Rights ii such use complies with any applicable usage restrictions and iii any user of such assets agrees to indemnify the State and applicable Project Companies for any liabilities or damages resulting therefrom; and to a right to exploit exclusively for required Project uses and in a reasonable and conservative manner the stone sand clay and gravels existing within the Project Area in accordance with the Legislation. without such exploitation being subject to any additional rent or fee. It is further agreed that save where exemption is granted by the State these substances found within such Project Area shall be used exclusively for the purposes of the Project Operations within the same Project Area other than to the extent such stone may be required in order to provide the ballast for standard gauge heavy haulage railway line connecting the Nabeba Project to the Initial Spur Line. Any use of such substances shall require indemnification by the user thereof to the State for any liabilities or

damages resulting therefrom and shall be preceded by a mutually agreeable mitigation plan for any displacement.

22.2 Covenants by the State on Conflicting Land Use a Subject to the Legislation and the Reserved Rights the State undertakes to i ii iii ensure that its various ministries do not create or authorize material conflicting land use with respect to the land on which the Project Operations are being undertaken or conservation operations which are being undertaken by Can1Iron or a Project Company to offset the impact of Project Operations including in accordance with U1e Conservation Convention; enforce any provisions of any concession licence agreement right or title that it has granted or entered into with a Third Party where the failure to do so is allowing that Third Party to cause or create a materially adverse land use with respect to the Project Operations; and not grant to a l11ird Party any rights to the land described in the Mineral Tenninal Agreement as being set aside for expansion of the Mineral Tenninal to achieve the Design Capacity nor will the State permit any ministry to utilise any of that land so set aside without having sought the confir1ation from U1e Mineral Tenninal Project Company that it no longer has any potential need for that land for the purpose of creating Expansion Capacity. To the extem possible the Parties will consider including this land in the initial Project Lease for the Mineral Terminal Facility to avoid potential conflicts. Any violation of the foregoing by the State may be deemed a Compensation Event subject to the definition set forth in Article 1 hereof and as such may qualify for Convention Compensation pursuant to Article 39 hereof. b The Project Companies shall give U1e State prompt notice of any event or pagel111 circumstances known to them which has or could be reasonably be expected to result in conflicting land use or other violation of the State s obligations of this Article 22.2 whether material or not so that the State may attempt to mitigate the impact and the Project Companies shall cooperate with the State and use their reasonable efforts to mitigate any such impact. c Where the State provides to i ii a Project Company a Project Lease then it undertakes subject to the Legislation and the Reserved Rights to ensure that no Third Party is granted any right to use the surface area of the Project Lease where such use materially adversely impacts the intended use of that surface area by the Project Company; and Cam Iron the Exploitation Permit

then any grant to a Third Party other than the Mine Project Company of substantially equivalent exploration or exploitation rights may be deemed a Compensation Event, subject to the definition set forth in Article I, and if so deemed may qualify for Convention Compensation pursuant to Article 39.

d e Where a Project Company establishes an offset programme in the territory of the State to offset any environmental and social damage which that Project Company may cause as a result of Project Operations then the State covenants that it shall employ reasonable efforts obligation de moyens to not do or cause or allow any Third Party to do anything which may materially damage or impair the offset programme without consulting with the affected Project Company. Where a Project Company has been responsible for or has funded the expropriation of villages or users of land such that the Project Company if granted a Project Lease is then able to undertake Project Operations on that land and as part of the expropriation the villages or users of land are given the rights to use other land by the State then the State will not the Project Company concerned without expropriate or allow a materially adversely conflicting use to be undertaken on that land for the benefit of a Third Party.

the consultation with 22.3 Third Party rights to access the Project. For the term of the Project the State agrees that if it builds or grants to any Third Party a right enabling the building of any road right of way right to access the water resources or any other right of any nature in any Project Area it shall obtain the prior consent of the Project Company that holds the rights to occupy the relevant Project Area provided that any refusal to consent by such Project Company shall only be motivated and reasoned to the extent that the grant of such rights is likely to have a Material Adverse Effect on the Project Operations carried out in the relevant Project Area any such material interference with Project Operations may be deemed a Compensation Event subject to the definition thereof in Article I hereof.

22.4 Emergency access to lands outside the Project Areas In case of emergency Cam Iron and any applicable Project Company Contractor or Subcontractor shall after having informed any competent authority thereof to the page 111 2 extent possible take any reasonable step or measure in order to prevent any imminent hazard or emergency situation of which it will be advised in the areas immediately adjacent to the Project Areas.

22.5 Prohibition on the right to sublease assign or

pledge The Project Companies will not have the right a b c to sublease all or part of the Project Areas; to assign all or part of their rights in the Project Areas; or to mortgage secure pledge assign by way of security or grant any other security interest over all or part of any Project Area except for the assignments or securities provided for under the Finance Documents.

23 WATER 23.1 Access to water resources for the purposes of the Project a b i ii The Parties acknowledge that the conduct of the Project shall require access to the water resources of the State for the industrial and human purposes of the Project and that the water in the Project Area is in pristine condition. According to the needs specified by the relevant Project Company and to the water facilities and resources available in the relevant Project Area the relevant Project Company can either negotiate to draw in a reasonable and conservative manner from the operators of water facilities available in the relevant Project Area in compliance with the Legislation negotiate to receive running water supplies by way of conclusion of a distribution contract with Camerounaise des Eaux or any other entity validly entitled to carry out water distribution activities in the territory of the State and in the event that the connection to the existing distribution networks requires the building of one or more facilities be granted the possibility to build or procure the building of such facilities within the framework of an Additional Facility Request; and iii request from the State an authorisation to exploit or procure the exploitation on its behalf of certain water resources in the territory of the State including the Project Area pursuant to a water usage agreement that will address the volume and manner of free use and standards of use all in compliance with the Legislation. c d The access referred to in Article 23.1 a shall be granted in the context of the grant of the Additional Facility Authorisations in accordance with the provisions of Article 19. 1g. Regardless of the manner in which any Project Company receives water supplies and of the contracts it enters into to this end it is expressly agreed that i ii all the water resources supplied to a Project Company or exploited by same or on its behalf shall be exclusively intended to satisfy its needs strictly required for the proper conduct of the Project Operations of which it is in charge including human needs excluding any other use with or without consideration; and the use of said water for any purpose whatsoever binds the relevant

Project Company to meet the provisions of the Legislation and use water in a manner that adequately protects the water resources and does not adversely impact existing use by Third Parties. If the building of an additional facility is necessary to enable the relevant Project Company to satisfy its obligations under this Article 23.1 d the Additional Facility Authorisation shall be deemed delivered under the conditions determined by the relevant Project Company and reasonably satisfactory to the State.

23.2 Rates and costs relating to access to water resources for the purposes of the Project a Where the water is being supplied by a Third Party the rates relating to the supply of water resources for the purposes of the Project shall be set and invoiced to the beneficiary Project Company by as the case may be Camerounaise des Eaux or CAMW ATER in accordance with the applicable provisions of the Legislation and any applicable agreements. b However and without prejudice to the provisions of the Legislation to such matters where the relevant Project Company contracts with i ii a private entity or semipublic entity Controlled by a private entity the applicable rates shall be the negotiated market rates as the case may be; or the State undertakes a public entity or semipublic entity Controlled by a Governmental Entity reasonable efforts obligation de moyens to facilitate the grant of preferential rates in compliance with the principle of nondiscrimination between operators of similar scale. to exercise c d As the case may be all the Costs relating as applicable for connection to the distribution networks as well as exploitation treatment and sanitation of the water resources including construction operation and maintenance of the facilities built to this end shall be fully borne by the Project Company beneficiary of the Additional Facility Authorisation. Where pursuant to this Article 23 an application is made to the State by a Project Company for water usage reasonably required by the Project Company for the Project. the State shall grant the authorization other than where it is in the national interest not to and the State shall not impose anything other than fees specified in Legislation or a nominal fee or charge on the application for or usage of the activity the subject of the application. par 1114 rm 23.3 No warranty of the State The provisions of this Article 23 shall not be construed as comprising any undertaking or warranty whatsoever from the State that the State's water resources whether exploited or not suffice

to meet the Project requirements in terms of water and Cam Iron expressly and irrevocably waives to seek, and stands surety for a subsidiary Contractor or Subcontractor not seeking the State's liability in case of insufficient water resources for the purposes of the Project provided however that this absence of warranty of the State shall not extend to the contractual liability of the State or other Governmental Entities under contracts entered into by Cam Iron, a subsidiary Contractor or Subcontractor with a Governmental Entity or with any other entity of which a Governmental Entity would be a shareholder.

24 POWER 24.1 Purchase and generation a b The Parties acknowledge that the conduct of the Project shall require a reliable supply of power to the Project Facilities for the industrial and human purposes of the Project. According to the needs specified by the relevant Project Company and to the power resources available in the relevant Project Area any Project Company may either i ii iii negotiate to receive power supplies by way of conclusion of a supply contract with AES SONEL or any other entity validly entitled to carry out power production and supply activities in the territory of the State and in the event that the connection to the existing transmission networks requires the building of one or more facilities have the possibility to build or procure the building of such facilities within the framework of an Additional Facility Request request from the State an authorisation to produce supply and consume power produced from a new Power Plant which in the case of the Mining Operations will be granted for generation on the Exploitation Area and in the case of the Beneficiation Power Station it shall file an Additional Facility Request for the building of the Beneficiation Power Station and the facilities required for the transmission and use of the power so supplied all in accordance with the Legislation or negotiate to purchase power from any alternate supplier of its choosing including outside the territory of the State to which the State undertakes as the case may be to consider in good faith and not to unreasonably withhold all the authorisations required to undertake such power transmission and supply activities for the purposes of the Project and the Project Companies shall also comply with the Legislation in such activities. c Notwithstanding anything in this Convention to the contrary if the State constructs or procures from a Third Party the construction of a power station to provide power to the Project

including the Beneficiation Power Station Cam Iron and any applicable Project Companies undertake to enter into a take-or-pay power purchase agreement for the term of the Project with the applicable Governmental Entity or Third Party on mutually agreeable terms consistent with practices applicable to international power production and generation plants managed by the private sector.

24.2 Rates and costs relating to access to power resources for the purposes of the Project where the power is being supplied pursuant to the arrangements referred to in either Articles 24.1b or iii then the rates applicable to the supply of power for the purposes of the Project shall be set and invoiced to the beneficiary Project Company by AES SONEL or any alternate Third Party supplier in accordance with the provisions of the Legislation and any applicable agreement.

b The provisions of Article 23.2b apply to power rates mutatis mutandis.

c d As the case may be all the Costs relating as applicable to connection to the transmission networks for power production and transmission operations including construction operation and maintenance of the facilities built to this end shall be fully borne by the Project Company beneficiary or any applicable third party operator of the Additional Facility Authorisation. Where pursuant to this Article an application is made to the State by a Project Company for the use of electricity reasonably required by the Project other than with respect to the Beneficiation Power Station for the Beneficiation Operations, for which the provisions in this Convention and the Beneficiation Agreement shall govern the State shall grant the authorization other than where it is the national interest not to and the State shall not impose anything for its account other than fees specified in Legislation and a nominal fee or charge on the application for or usage of the activity the subject of the application. The State will use its reasonable efforts to offer a concessional rate for any applicable leasing fees.

24.3 Third Party access to the power facilities in the event a Project Company files an Additional Facility Request for the building of a Power Plant other than with respect to the Beneficiation Power Station the Project Company may if the provider of power has a need enter into a long-term power supply agreement with such entity in charge of supplying power in the territory of the State including the applicable commercial rates which will ensure the Project

Company achieves an appropriate return on the additional capital it is required to spend in order to produce the surplus power and if it agrees to set aside a portion of production in accordance with as the case may be the provisions of the Legislation and/or the Additional Specific Agreement or the amendment to the applicable Specific Agreement and/or the principles and practices applicable to international power production and generation plants managed by the private sector in view of a commercial exploitation. Nothing in this Convention shall require the State or the Project Company to provide any Third Party subsidised power.

page 1116 24.4 No warranty of the State Subject to the provisions of Article 22 the provisions of this Article 24 shall not be construed as comprising an undertaking or a guarantee whatsoever by the State that the State's power resources suffice to meet the power needs of the Project and Cam Iron expressly and irrevocably undertakes not to seek and guarantees that no Subsidiary Contractor or Subcontractor shall seek the State's liability in case of insufficient power resources for the purposes of the Project provided however that this absence of a warranty of the State shall not extend to the contractual liability of the State or other Governmental Entities under contracts entered into by Cam Iron a Subsidiary a Contractor or Subcontractor with a Governmental Entity or with any other entity of which a Governmental Entity would be a shareholder.

25 GAS 25.1 Purchase a b c d The Parties acknowledge that the conduct of the Project may require a supply of gas to the Project Facilities for the industrial and human purposes of the Project in particular in case a Power Plant requiring a gas supply is built. According to the needs specified by the relevant Project Company and to the gas facilities and resources available in the relevant Project Area any Project Company may either i ii negotiate to receive gas supplies by way of conclusion of a supply contract with SNH or any other entity validly entitled to carry out gas production and supply activities in the territory of the State and in the event that the connection to the existing transportation networks requires the building of one or more facilities subject to applicable standards and requirements be granted the possibility to build or procure the building of such facilities in the framework of an Additional Facility Request; or purchase gas from any alternate supplier of its choosing including outside the State to which the State undertakes as the case may

be not to unreasonably withhold the authorisations required to undertake such gas transmission and supply activities for the purposes of the Project. The Project Companies shall comply with the Legislation in such gas related activities. Notwithstanding anything in this Convention to the contrary if the State constructs or procures the construction of a gas supply facility or terminal to provide gas to the Project Cam Iron and any applicable Project Companies undertake to enter into a take-or-pay gas purchase agreement for the Term of the Project with the applicable Governmental Entity on mutually agreeable terms consistent with practices applicable to international gas supply managed by the private sector. Regardless of the manner in which any Project Company receives gas supplies and of the contracts it enters into to this end it is expressly agreed that all the gas resources supplied to a Project Company shall be exclusively intended to satisfy its needs strictly required for the proper conduct of the Project Operations of which it is in charge including personnel needs excluding any other use with or without consideration.

25.2 Rates and costs relating to access to gas resources for the purposes of the Project

a b c i ii The rates applicable to the supply of gas for the purposes of the Project shall be set and invoiced to the beneficiary Project Company by SNH or any alternate supplier referred to in Article 25.1 b in accordance with the provisions of the Legislation. However and without prejudice to the provisions of the Legislation where the relevant Project Company contracts with a private entity or semipublic entity Controlled by a private entity the applicable rates shall be the negotiated market rates as the case may be; or a public entity or semipublic entity Controlled by a Governmental Entity the State undertakes to use its reasonable efforts obligation de moyens to facilitate the grant of preferential rates in compliance with the principle of nondiscrimination between operators of similar scale. As the case may be all the Costs relating to connection to the and transportation networks maintenance of the facilities built to this end shall be fully borne by the Project Company beneficiary of the Additional Facility Authorisation.

construction operation including

25.3 No warranty of the State Subject to the provisions of Article 22 the provisions of this Article 25 shall not be construed as comprising an undertaking or a guarantee whatsoever by the State that the State's gas resources suffice to meet the gas needs of the Project

and Cam Iron expressly and irrevocably undertakes not to seek and guarantees that no Subsidiary Contractor or Subcontractor shall seek the States liability in case of insufficient gas resources for the purposes of the Project provided however that this absence of warranty of the State shall not extend to the contractual liability of the State or oilier Governmental Entities under contracts entered into by Cam Iron a Subsidiary a Contractor or Subcontractor with a Governmental Entity or with any other entity of which a Governmental Entity would be a shareholder. 26 COMMUNICATIONS 26.1

Purchase and use a b The Parties acknowledge that the conduct of the Project shall require the implementation of communication means for the industrial and human purposes ofthe Project. According to the needs specified by the relevant Project Company and to the conunication means available in the relevant Project Area the Project Company will be able to either i negotiate a services agreement w ith CAMTEL or any other entity validly entitled to supply communication services and means in the page 1 118 territory of the State and in the event that the connection to the existing transmission networks requires the bui lding of one or more facilities be granted the possibility to request to build or procure the building of such facilities in the framework of an Additional Facility Request in a manner that complies with the Legislation. The State shall not unreasonably withhold its consent to such a request; ii iii iv request from the State for an authorisation to use its own satellite wireless optic fibre ullrahigh frequency UHF very high frequency VHF and other communication means in a manner that complies with the Legislation. The State shall not tmreasonably withhold its consent to such a request; file an Additional Facility Request for the building of said facilities; and negotiate to enter into any services agreement with any lbird Party or build the faci lities itself. c Notwithstanding anything in this Convention to the contrary if the State agrees to provide or procure the provision of conumutications services to any applicable Project Company such Project Company undertakes to pay the applicable Governmental Entity for the provision of such service to the extent provided and on mutually agreeable tenns consistent with practices applicable to international communications managed by the private sector. d Where the Project Company enters into any services agreement with a Third Party supplier

including one from outside the State the State undertakes to not unreasonably withhold all the authorisations required to undertake such communications activities for the purposes of the Project subject to such requests being in accordance with the legislation. e Regardless of the manner in which any Project Company receives communication means and of the contracts it enters into to this end, it is expressly agreed that all the communication means made available to a Project Company shall be exclusively intended to satisfy its needs strictly required for the proper conduct of the Project Operations of which it is in charge including human needs excluding any other use with or without consideration.

26.2 Rates and costs relating to access to communication means for the purposes of the Project

a Where the communications are being supplied by CAMTEL or any alternate supplier the rates applicable to the supply of communication means for the purposes of the Project shall be set and invoiced to the beneficiary Project Company by CAMTEL or any alternate supplier in accordance with the provisions of the Legislation and applicable agreement. b However and without prejudice to the provisions of the Legislation where the relevant Project Company contracts with

i I V a private entity or semipublic entity Controlled by a private entity page1 19 the applicable rates shall be the negotiated market rates as the case may be weighted according to the volumes; or ii a public entity or semipublic entity Controlled by a Governmental Entity the State undertakes to use its reasonable efforts obligation de moyens to facilitate the grant of preferential rates, in compliance with the principle of nondiscrimination between operators of similar scale. c As the case may be, all the Costs relating to connection to the communication and including construction operation and maintenance of the facilities built to this end shall be fully borne by the Project Company beneficiary of the Additional Facility Authorisation, transmission networks d Where pursuant to this Article an application is made to the State by a Project Company, the State shall grant the authorization other than where it is the national interest not to and the State shall not impose for its own account anything other than fees specified in Legislation and a nominal fee or charge on the application for or usage of the activity the subject of the application.

26.3 No warranty of the State Subject to the provisions of Article 22 the provisions of this Article 26 shall not be

constructed as comprising an undertaking or a guarantee whatsoever by the State that the States communication means suffice to meet the needs for communication means of the Project and Cam Iron expressly and irrevocably undertakes not to seek and guarantees that no Subsidiary Contractor or Subcontractor shall seek the States liability in case of insufficient communication means for the purposes of the Project provided however that this absence of warranty of the State shall not extend to the contractual liability of the State or other Governmental Entities under contracts entered into by Cam Iron a Subsidiary a Contractor or Subcontractor with a Governmental Entity or with any other entity of which a Governmental Entity would be a shareholder.

27 EXPLOSIVES

27.1 Use of Explosives

The Project Companies will use significant quantities of blasting agents both during Construction Phase and the Exploitation Phase. Operating plans will be developed to ensure that blasting agents are transported stored manufactured and used in a safe secure and auditable manner and in accordance with the Central African Monetary Union Council of Ministers Regulation No. 299/UEACCM/654 the Legislation and international standards in relation to the manufacture transportation storage and use of explosives.

27.2 Explosives Agreement

The Parties acknowledge the significance of Explosives to the Construction Phase and the Exploitation Phase and as a result they have agreed that the use of Explosives is to be regulated by the Explosives Agreement and the Legislation.

28 EXPROPRIATION AND COMPENSATION

28.1 Occupation and use of private land

The warranties granted to the Project Companies under this Article 28.1 award where necessary a right to occupy and to authorise use of the land fully owned or occupied by individuals and considered by the State and the relevant Project Company as essential for the proper conduct of the Project. At the time of delineating any Project Area for Mining Operations or Beneficiation Operations the occupation of which is requested by the Mine Project Company within the framework either of the conclusion of a Specific Agreement or of a Project Lease Request or proposed Additional Specific Agreement the expropriation of the land in such Project Area shall be governed by the Mining Code. The Railway Agreement and Mineral Terminal Agreement shall discuss expropriation of any lands needed for the Railway Operations and Mineral Terminal

Operations but the Parties agree that no new land will need to be expropriated for the Mineral Operations other than for the turnaround loop because a port facility has already been created and expropriation of the land needed for the Railway Operations will result in the State owning such land and leasing it to the Railway Project Company.

28.2 Fees and indemnification

The Mine Project Company shall be liable to pay all indemnities due to Third Parties as a result of i ii any expropriation carried out pursuant to the provisions of Article 28.1b; any disturbance of peaceful possession by a Third Party of the land they occupy or the activities they conduct therein as a result of A the grant to such Project Company of rights to occupy this Project Area; or B the conduct of activities in the same area; and iii any loss or damage caused to a Third Party or their assets by a such Project Company its Contractors or Subcontractors including their employees in compliance with the provisions of Article 28.2b . b With respect to indemnities due to Third Parties under Articles 28.2ai 28.2aii and 28.2aiii i the costs indemnities and more generally all charges resulting from the application of measures aimed at releasing and granting a right of enjoyment in the taxable land are borne by the Mine Project Company; and v page 1121 ii the Mine Project Company shall fulfil its payment obligation within thirty 30 Days following receipt of said terms and conditions for payment expressly provided that the rights to occupy and enjoy any land granted to the Mine Project Company is conditional upon the prior payment by the Mine Project Company. c The Mine Project Company shall be liable for the payment of all fees duties and charges incurred by any Governmental Entity in connection with the implementation and conduct of any expropriation procedure carried out pursuant to the provisions of Article 28.1 b.

28.3 Publications The land concerned by the expropriation measure and by the indemnities paid to Third Parties and the latter's identity pursuant to the provisions respectively of Articles 28.1 and 28.2 shall be published in the Official Gazette to the extent required by Legislation.

28.4 Direct right of Third Party beneficiary Each Third Party beneficiary of the indemnities referred to in Article 28.2a shall be entitled to the direct benefit of the provisions of this Article 28.

29 HEALTH AND SAFETY ENVIRONMENT AND COMMUNITY

29.1 General provisions a b The Parties acknowledge that the protection of the

Environment and the issues of safety health and protection of Living beings and local communities are a key element of the Project. As a consequence each Project Company its Contractors and Subcontractors shall undertake the Project Operations of which they are in charge or for which they operate in accordance with the provisions of this Article 29 and in accordance with i ii iii iv v the Legislation including Sections 84 85 and 87 of the Mining Code Sections 118 and J 19 of the Mining Code Implementing Decree and the laws relating to vapour and gas pressure vessels Law n20020 13 of 30 December 2002 and the law relating to establishments classified as hazardous unhealthy and uncomfortable; that portion of the Environmental and Social Assessment and Management Plan which relates to their respective activities and any environmental and social assessment and management plan required pursuant to the provisions of Article 19.1 b iv; with respect to the Beneficiation Operations the provisions of the other applicable Project Agreements; Good International Industry Practice; and more generally international standards applicable to protection of the Environment safety health and protection of living beings generally accepted in the mining railway and port industries. page 122 IIJ v c d Each Project Company shall be responsible for compliance by each Contractor and Subcontractor it uses for the purposes of the Project Operations of which it is in charge with the obligations contained in this Article 29. Subject to Article 50.4 the State shall be entitled to exercise its Reserved Rights to rectify or prevent any actual or reasonably anticipated violation of the health safety environmental and other related standards set forth in the Project Agreements and such exercise for the avoidance of doubt shall not serve to entitle any Project Company or Cam Iron to any compensation or indemnification except in the event of a State Fault. 29.2 Environment 29.2.1 Environmental obligations a b c d i ii i Cam Iron hereby and each Project Company by the Specific Agreements undertake to strictly perform all their respective obligations under the Environmental and Social Assessment and Management Plan and as the case may be any environmental and social assessment and management plan required pursuant to the provisions of Article 19. 1biv. In this Article 29 any reference to the Environmental and Social Assessment and Management Plan includes any environmental and social assessment and

management plan implemented pursuant to the provisions of Article 19. ^{1biv}. Each Specific Agreement shall bind the signatory Project Company to and shall further detail the obligations for which it is liable under the Environmental and Social Assessment and Management Plan. The Environmental and Social Assessment and Management Plan shall be revised upon mutual agreement of the Project Companies and the State to take into account the evolution of the Project and the environmental constraints attached to the Project according to the following schedule with respect to the obligations borne by Mine Project Company at the time of renewal of the Exploitation Permit if any; and with respect to the obligations borne by the other Project Companies on the date determined by each Specific Agreement. In order to secure the obligations it bears under the Environmental and Social Assessment and Management Plan and this Convention including in terms *inter alia* of remedying the damages it caused to the Environment rehabilitation of the Project Area it occupies and, more generally proper performance of its environmental obligations the Mineral Terminal Project Company or Cam Iron on behalf of the Mineral Terminal Project Company shall within ten 10 Business Days from Project Commissioning issue a Bank Guarantee the Mineral Terminal Project Company Environmental Bank Guarantee in an amount equal to twenty million 20000000 US Dollars and shall maintain such Mineral Terminal Project Company Environmental Bank Guarantee in place until one 1 year after the expiration of the concession to operate the Mineral Terminal v page 1123 ^{fr}A Concession. ii the Mine Project Company or Cam Iron on behalf of the Mine Project Company shall within ten 10 Business Days as from the commencement of ground construction in the Construction Phase of the Project Facilities shall issue a Bank Guarantee Mine Project Company Environmental Bank Guarantee in an amount of twenty million 20000000 US Dollars and shall maintain such Mine Project Company Environmental Bank Guarantee until one year after the expiration of the Mining Permit; provided that at such time as the total amount of cash on deposit in the Rehab Escrow Account reaches twenty million 20000000 US Dollars the Mine Project Company Environmental Bank Guarantee may be terminated or reduced. e l g h is 1be State may draw down on the Mineral Terminal Project Company Environmental Bank Guarantee or

the Mine Project Company Environmental Bank Guarantee every time the relevant Project Company has failed to fulfil through its own action or that of a Contractor Subcontractor or other Third Party involved in the Project Operations of in charge. its obligations under Legislation regarding which it protection of the Environment and health and human safety its obligations under Article 29.2 including its obligations under the Environmental and Social Assessment and Management Plan subject however to a prior formal notice and the Project Company not remedying the Breach Events including any outstanding payment obligations within a reasonable time frame. The provisions of this Article 29.2.1e do not affect in any manner the right of each Project Company to pursue remedies against said Contractor Subcontractor or other Third Party involved in the Project Operations of which it is in charge where it considers that party to be responsible for the Breach Event for which the State has drawn down on the applicable Environmental Guarantee. The State shall discharge whichever of Cam Iron or the Project Company which provided the applicable prior Bank Guarantee upon receipt of a certificate issued by the bank which issued such Bank Guarantee or by a mutually agreeable replacement Environmental Guarantee. substitute bank delivering a It is expressly agreed that in case of total or partial draw down of the company Environmental Guarantee either Cam Iron or the applicable Project Company as that such Environmental Guarantee shall be promptly restored for its initial amount adjusted as the case may be. the case may be undertakes For the avoidance of doubt. it is expressly agreed that neither the existence nor the drawdown of any Environmental Guarantee shall limit the States right of remedy against Cam Iron or any default.1g Project Company in case the amounts of such Environmental Guarantee proves insufficient to cover the amounts due by such Project Company. i Rehabilitation A In addition to the foregoing in fulfilment of its obligations under Articles 130 to 133 under the Implementation Decree page I 124 . . in the first year Cam Iron and the Mine Project Company shall establish an escrow account the Rehab Escrow Account and escrow agreement the Rehab Escrow Agreement at a bank with a physical presence in the State that is under the supervision and regulation of the States national monetary authority and shall make annual contributions into such escrow account following Project commencing

Commissioning. Such contributions shall be in the aggregate amount equal to fifty eight million 58000000 US Dollars made in ten (10) equal annual payments of five million eight hundred thousand 5800000 US Dollars beginning on December 31 of the year in which Project Commissioning occurs which sum represents an estimate of the rehabilitation costs for the Exploitation Area based initially on the exploitation of the High Grade Ore and following commencement of the Beneficiation Operations two hundred fifty eight million 258000000 US Dollars inclusive of any amounts in escrow based on the initial fifty eight million 58000000 US Dollar contribution made in fifteen (15) equal annual payments of thirteen million three hundred and thirty three thousand three hundred and thirty 13333333 US Dollars beginning on December 31 of the year in which BF Commissioning occurs assuming the Rehab the time of BF Escrow Account is fully funded at Commissioning which sum represents an estimate of such rehabilitation costs for the exploitation of aU of the Mbalam Ore. The Parties shall assess the amount of annual contributions into such escrow account every five (5) years and make appropriate adjustments; B under including obligations The State may draw down on the funds in the Rehab Escrow Account any time the Mine Project Company has failed to fulfil through its own action or that of a Contractor Subcontractor or other Third Party involved in the Project Operations of which it is in charge its obligations under Article 29.2 the its Environmental and Social Assessment and Management Plan and its obligations under Legislation regarding protection of the Environment and health and human safety subject however to a prior formal notice and the Mine Project Company is not remedying the Breach Events including the outstanding payment obligations within a reasonable time frame. The provisions of this Article 29.2 shall not affect in any manner the right of the Mine Project Company to pursue remedies against said Contractor Subcontractor or other Third Party involved in the Project Operations of which it is in charge where it considers that party to be responsible. C 11 is expressly agreed that in case of total or partial draw down of the funds in the Rehab Escrow Account the Mine Project Company shall promptly restore it to the amount that was in the Rehab Escrow Account immediately prior to such draw. In addition to any remedy provided in the Legislation each Project participant Company shall pay to the State any

amounts provided under the Legislation in connection with i any violation of the Legislation related to protection of the Environment health or safety or ii a failure to implement the Environmental and Social Assessment and Management Plan.

29.3 Health and safety

a Each Project Company shall prepare implement and comply with and require all Contractors and Subcontractors to comply with i ii an accident prevention scheme and emergency plans to be implemented in case of loss or threatened loss that poses a risk to the Environment personnel or to the safety of persons and Assets; and appropriate and detailed procedures in order to guarantee optimum conditions for health and safety of personnel and all the Third Parties involved in the Project Operations or having a right to access the Project Facilities and/or the Project Areas.

b c Each Project Company Contractor and Subcontractor shall conduct awareness campaigns on safety health and diseases aiming at informing the personnel Third Parties involved in the Project Operations or having a right to access the Project Facilities and/or the Project Areas and the members of communities immediately neighbouring the Project Areas. Any accident occurring or any hazard identified within a Project Area or in the immediate surroundings thereof shall be promptly notified to the State.

29.4 Environmental Requirements

Each Project Company Contractor and Subcontractor shall take the actions set forth in this Article 29.4 to protect the Environment in each case in compliance with the Legislation and standards set forth in this Convention and to the extent not inconsistent with Good International Industry Practice

a Prior to commencing work on the Project Area prepare and in the case of a Contractor or Subcontractor submit to the Project Company for approval waste management procedures and comply with such procedures. In particular Project Companies Contractors and Subcontractors shall i ii iii ensure that all waste is disposed of in an environmentally sensitive manner and in accordance with Legislation; take all reasonable steps to minimise the release of dangerous waste into the Environment; ensure that all of the Contractors and Subcontractors waste litter scrap parts and machinery are disposed of daily at a location that is approved by the Project Company and in accordance with the Legislation; iv keep the Project Area clean and tidy to the reasonable satisfaction of page 1126 . v the Project Company; and v as soon

as practicable and in no case more than twenty one 21 Days after the end of a contract in the case of a Contractor or Subcontractor or the end of the Term of the Project in the case of the Project Companies remove all rubbish accumulated during the performance of the works and shall leave that part of the Project Area it was operating on in a clean and tidy condition. This obligation survives termination of this Convention; b c d e t g h Each of the Project Companies Contractors and Subcontractors shall in accordance with the standards set forth in this Convention and Legislation minimise the dust generated or caused by operating equipment and take measures to direct dust away from any public facility or access the public at large or any operational personnel; The Project Companies Contractors and Subcontractors shall only use designated wash down areas for cleaning machinery; The Project Companies Contractors and Subcontractors shall take all reasonable steps to minimise the release of hydrocarbons into the Environment and each shall implement procedures to ensure that there is no spillage of hydrocarbons on the Project Area. Any soil fill or other material contaminated by fuel or oil shall be removed from the Project Area; The Project Companies Contractors and Subcontractors shall confine their activities and movements and those of their personnel to that part of the Project Area on which they are designated to perform the work. The Project Companies Contractors and Subcontractors shall ensure their personnel minimise lighting any fires making any track or constructing any road such that will disturb the ground surface or the established flora and fauna habitats; The Project Companies Contractors and Subcontractors are to maintain a hazardous chemicals register. The register is to contain a list of all chemicals fuels oils gases reagents cleaning and other hazardous fluids and other chemicals kept on the Project Area; Storage handling and disposal and the reporting of any related incidents shall be in accordance with the Legislation. Reporting of such incidents must be done in accordance with the Project reporting procedures and For the avoidance of doubt Good International Industry Practice as used in this Convention including in this Article 29.4. shall include as applicable implementation of the following standards i ii the 2012 IFC Performance Standards on Environmental and Social Sustainability; the IFC World Bank Environmental Health and Safety Guidelines including the following A General; v

paget127 I B Mining; C Railways; D Toll roads; E Ports Harbours and Tenninals; F Construction materials extraction; G WastcManagemem Facilities; and H Water and Sanitation. iii Voluntary Principles on Security and Human Rights; iv v vi International Labour organisation ILO Convention The Indigenous and Tribal Peoples in independent Counrries 1989; in The United Nations Declaration on the Rights of Indigenous Peoples 2007; Intemational Cow1cil on Mining development principles guidelines and toolkits; and and Metals sustainable vii World Commission on Dams. 29.5 Su stainable development and community su pport 29.5.1 Management of the direct environmental and social impact a b c d As the Project is located in the heart of the second largest ecological reserve in the world and in the border area with the Republic of Congo. the Republic of Gabon and the Central African Republic the State has determined it is necessary to implement a specific planning and development program for the South and East Reions of Cameroon the South and East Regions Plan with a view to managing the social and environmental impact resulting from the Project. Although it is primarily the States responsibility the implementation of the South and East Regions Plan calls for an involvement of Cam Iron as a corporate citizen to prevent the risk of the adverse social and environmental impact that will be generated by the Project. Cam Irons joint social liability with the State shall not be deemed to relieve it of its obligations under the Environmental and Social Assessment Management Plan to address the immediate impact of the Project. Accordingly in addition to its other obligations under this Convention Cam Iron undertakes to make a cash contribution of twenty million 20000000 US Dollars per year for five 5 years commencing on the Date of Entry into Force to fmance the South and East Regions Plan. e The State has announced an overall fmancing commitment to implement pagel128 f g h i lthe Soulh and East Regions Plan of eight hundred million 800000000 US Dollars and in funherance thereof the State commits to contribute funds for the Soulh and East Regions Plan in an amount at least equal to the contribution of Cam Lron set forth in the preceding paragraph and during the same five 5 year period. For avoidance of doubt the foregoing announcement shall in no manner give rise to any claim or cause of action by Cam Iron or a Project Company against the State with respect to such funding

commitment. Contributions of Cam Iron and the State in respect of the South and East Regions Plan shall be made to a specific fund administered in a manner determined by the State that shall be set up to finance the South and East Regions Plan the Special Development Fund. The State hereby agrees to hereinafter organize the Special Development Fund. With respect to the long term funding of the development of the area impacted by the Project the State intends to allocate thirty percent 30 of its portion of the base charge tariff paid by Expansion Capacity users and 30 of the lease payments it receives in connection with the Mineral Terminal Site and Railway Site to fund the Special Development Fund. For avoidance of doubt the foregoing intention shall in no manner give rise to any claim or cause of action by Cam Iron or a Project Company against the State with respect to such funding commitment. In addition the Project Companies shall also contribute or shall cause Marketing Company to contribute to the Special Development Fund which in addition to other uses may be used for university and technical educational purposes an amount equal to 0.75 of the gross sales price of Mbalam Ore sold whether it is sold as part of Blended Ore or otherwise. This fund shall be managed by a Fund Committee to be implemented by the State which is to develop a plan for managing and overseeing the use of the funds in the Special Development Fund for the activities set forth in the South and East Regions Plan. The Fund Committee shall consist of a number of representatives equal to twelve 12 of which four 4 will be appointed by Cam Iron but only during the Term of the Project four 4 by the State and four 4 will be appointed from among local representatives and development experts. The Parties may vary this arrangement by mutual agreement. In addition to the Special Development Fund Cam Iron undertakes to fund a sustainable development and community support fund pursuant to which Cam Iron or the Project Companies will contribute A from the Date of Entry into Force until the Date of First Commercial Shipping the aggregate sum of seven hundred thousand 700000 US Dollars per year adjusted by the Inflation Adjustment and B from and after the Date of First Commercial Shipping for the Term of the Project contribute three quarters of one percent 0.75 of the Project Companies net profits after Tax to enable Cam Iron and the Project Companies to carry out environmental and community support

programs within the framework of the sustainable development undertakings entered into under the Environmental and Social Assessment and Management Plan. j The Parties agree that all amounts expended from any fund established in accordance with this Article should be audited. page 1129

rm k The Parties will agree on a protocol to manage the Special Development Fund and Fund Committee to ensure there is clarity and transparency with respect to the fonnation operation and accountability of both the Special Development Fund and the Fw1d Committee. 29.5.2 Protection of Biodiversity and Sustainable Development ofUF A I 0034. a Given the contiguous perimeter of the Exploitation Area with that of the Forest Management Unit FMU No. 10034 the Parties agree to include this FMU as an important part of the biodiversity conservation and sustainable development component of the Project. The Parties shall enter into a convention that shall detail the basis for the management and operation of activities within the FMU Conservation Convention and without limiting the Conservation Convention it shall include provisions dealing with i the conservation of the FMU as a biodiversity area and the preservation of aU carbon credits associated with the FMU for the benefit of the Project Companies; ii the establishment of an ecotourism facility within the FMU; and iii the protocols for securing the FMU and dealing with trespasses. b The State shall i ii not unreasonably withhold its consent to a request to issue to Cam Iron the necessary authori7.ations for such conservation activity after the Sitllature Date; and use its reasonable efforts to do all that might be reasonably necessary from time to time to enable the Project Companies to utilize the carbon credits associated with the FMU. c d e I Cam Iron will in accordance with the Conservation Convention submit to the State a plan for conservation and sustainable management of the FMU I 0034. Cam Iron shall also i pay an annual fee of two thousand 2000 CFA Franc per hectare from the Date of Entry into Force until the date of Project Commissioning and three thousand 3000 CFA Franc per hectare from and after the date of Project Commissioning in each case into a fund established pursuant to the Conservation Convention and ii to fund the expenses related to such conservation. Further Cam Iron will fund its conservation activities within the FMU. All funds generated by after offsetting the reasonable costs of ecotourism activities in the FMU shall be

transferred to the Special Development Fund. Where for the purpose of any Legislation the Project Companies are required to obtain carbon credits for their activities then the Project Companies may source those carbon credits from the FMU at no cost. page 1130 30 ADMINISTRATIVE AND TECHNICAL SUPERVISION AND FINANCIAL AUDIT 30.1 Applicable standards The Project Companies shall conduct and ensure that their Contractors and Subcontractors conduct the Project Operations of which they are in charge in accordance with among other applicable standards Legislation. the Environmental and Social Assessment and Management Plan the Operating Standards and Good International Industry Practice with respect to the mining exploitation and processing railway port and other applicable industries with consideration of the scale of the Project. 30.2 Administrative supervision a b i ii For the Term of the Project the State has the right to audit and inspect for all the Project Operations as contemplated in Article 30.2bi and all other operations activities and assets of the Project Companies. This right is exercised either by mining officials or by authorised and qualified representatives of the States tax administration or by customs agents appointed for that purpose by other representatives of the State or by consultants authorised by the State the Auditors. The purpose of the administrative supervision in Article 30.2a is to control the technical regularity of the conduct of the Project Operations and in particular the conditions referred to of conduct by each Project Company Contractor Subcontractor or Subsidiary of the Project Operations of which it is in charge; of compliance by any Project Company Contractor Subcontractor or Subsidiary with its obligations under the Environmental and Social Assessment and Management Plan; iii of preservation of public safety safety and health of the personnel; and iv of compliance with the Project Agreements and the Legislation. c In addition the State has the right to cause the records and books of account relating to the Project Operations to be examined by the Auditors in accordance with the provisions of an accounting procedure to be agreed to by the Parties prior to the Date of Entry into Force. d It is understood that the Auditors shall have the right to. inter alia i ii V access and inspect at any time the sites premises facilities works vehicles ships aircraft machines and other equipment in particular the devices for counting and measuring the Sale

Products with regard to mining sites used for the purposes of the Project Operations and subject to presentation of a sheet of the regulatory form delivered by the Ministry in accordance with the provisions of Section 101 of the Mining Code; examine and receive copies or extracts of documents reports and other documents relating to the Project Operations; page 1131 iii witness during the period up to Project Commissioning all material tests trials and controls initiated by any Project Company and the Project Companies shall use its reasonable efforts to notify the State of all such material tests trials and controls at least seven 7 Days prior to their commencement except where the nature of the test requires less notice and the State will use its reasonable efforts obligation de moyens to notify the relevant Project Company of its plans to participate; and iv carry out any examination and investigation to make sure the provisions of the Legislation and those of this Convention and the Project Agreements are complied with. At least fifteen 15 Days prior to the commencement of any administrative and technical supervision or financial audits under this Article 30 the State shall inform the relevant Project Company of the conduct of such audits their purpose the Auditors identity and the duration of such operations and audits. In the performance of their duties the Auditors shall comply with all the internal rules and procedure in force with the Project Company during their stay in the latter's premises and facilities provided that such an obligation shall not hinder their task. The State will use reasonable efforts obligation de moyens to notify the Project Companies in advance of audits but has the right to forgo such notice and conduct surprise audits. Before undertaking an audit as provided in this Article 30.2 the State shall ensure that the Auditors advise the chairman of the Joint Committee of the pending audit and the chairman shall use reasonable efforts obligation de moyens to ensure that the Auditors do not create an unreasonable administrative burden on the Project Operations. At least fifteen 15 Days prior to the commencement of any administrative and technical supervision or financial audit undertaken pursuant to the terms of the Finance Documents the relevant Project Company shall keep the State abreast of the time table for said audits of their purpose and of the duration of these audits. The relevant Project Company shall supply all necessary assistance to the Auditors and shall put at the

Auditors disposal the reasonable material means required to enable the Auditors to fulfil their duties. The relevant Project Company shall abide by any reasoned measures for which it is notified during the inspection operations or after such operations including the installation at its expense of equipment aiming at preventing or remedying any likely hazard attributable to the Project Operations to public safety its personnel the Environment archaeological sites and reserves classified reserves public buildings sources of water and groundwater and public roads; provided that the measures in question have been discussed in the presence of the Parties. e f g h i The relevant State ministries shall oversee the drafting of a mutually agreeable manual describing the procedures applicable to all Project Areas which will reiterate the provisions of this Article 30 and detail the frequency at which the Auditors can undertake the operations described above which are not to exceed i one 1 time per Calendar Year for tax audits; page 132 ii two 2 times per Calendar Year for customs audits; and iii one 1 time per Quarter for any other audits unless the State has in good faith formed the view that an unscheduled audit is justifiable. 30.3 Reports a In addition to any other reports required by the Legislation the Mine Project Company shall provide to the Minister the activity reports relating to the Mining Operations in accordance with the provisions of the Mining Legislation that is to say as of the date of this Convention i ii at the latest the fifteenth 15th Day of each calendar month following Project Commissioning a detailed report on the production of Mbalam Ore and as the case may be the Blended Ore and the Beneficiated Ore including all details on the quantity and value of the Products so generated during the preceding calendar month; at the latest on the ninetieth 90 Day after the conclusion of each Calendar Year after which the Date of Entry into Force has occurred A a report containing details on all the works undertaken in connection with the Exploitation Permit in particular the details relating to the production of all Products. the development works exploration works and other useful information in terms of geology and mining resources the Exploitation Area and B any information required specifically for mining companies listed on the Australian Securities Exchange in respect of the reporting of resources and reserves even though the Mine Project Company may not be listed on that exchange; and in iii prior to March 31 of each Calendar Year

after which the Date of Entry into Force has occurred a statistical report for each permit and authorization comprising A the number of the mining permit or authorization; B the date of establishment or renewal; C D an analytical summary of the progress report of the works carried out during the previous year; an executive geological and mining report illustrated by an appropriate plan; E the number of staff working Days; F the weight nature and of extracted raw materials; G the weight nature and of obtained market minerals; H the weight nature and of various consignments of exported minerals indicating the places and dates of dispatch and delivery; page 1133 I J K a report of stocks of raw products and market products as at 31 December; the list of accidents which have led to more than 4 four Days of industrial disability; and the volume in the case of the geothermal deposit spa or thermomineral waters as concerns the statistics required for subsections F G H and I above must be provided. b Each Project Company shall also provide within the time limits set forth in the Legislation i ii c d the status of implementation of the Environmental and Social Assessment and Management Plan; and the audited financial statements of each respective Project Company prepared by the Independent Accountant. The Mine Project Company shall also provide in form reasonably satisfactory to the Minister reports with respect to minerals reserves and resources compliant with JORC NI43101, SAMREC or other mutually agreeable standards. The obligations of the other Project Companies in terms of preparation and submission of reports to the State as specified in each Specific Agreement shall include notably the provision of the audited financial statements within the time limits set forth in the Legislation. 30.4 Measures Each Project Company shall adopt procedures for counting and measuring the Sale Products including tonnage granulometry and metallurgical in line with the practices generally accepted in the international iron ore industry with a view to drawing up the reports and calculating the fees referred to in Article 34.1 . To the extent feasible the Project Companies shall use automated devices for these procedures which will need to be certified by an independent expert in such certifications. A certificate of authenticity shall be issued to this effect by the laboratory of the Ministry or any laboratory approved by the Minister. The Project Companies Contractors and Subcontractors shall maintain all physical

books and records related to the Project other than with respect to environmental health and safety matters for a period of five 5 years and all electronic records and physical records relating to environmental health and safety matters shall be maintained throughout the Term of the Project and five 5 years thereafter as each such period may be extended as required by Legislation.

30.5 Joint Committee

30.5 .1 Creation of the Joint Committee Within thirty 30 Days following the Date of Entry into Force the committee described in this Article 30.5 the Joint Committee shall be established for the Project.

30.5.2 Composition of the Joint Committee a The Joint Committee shall initially be composed of ten 10 members and thereafter may be modified upon agreement of the Project Companies and the State

i ii b c v for Cam Iron half of the total representatives each assisted by an alternate as the existing Project Companies during the Term of the Project and representatives having specific expertise in terms of health safety and Environment finance and administration and port and human resources who shall be designated by Cam Iron in agreement with the Project Companies and among whom Cam Iron shall elect one Representative; and representative principal Cam Iron for the State half of the total representatives and alternates as those appointed for their specific expertise in terms of mining finance and customs employment law and immigration Environment port and transportation notably by rail who shall be designated by the State and among whom the State shall elect a principal representative the State Representative. The alternates appointed by a Party shall act only in case the representatives designated by said Party are unavailable. Each Party is entitled to replace its representatives or alternates at any time by giving written notice to the other Party of such replacement. The State and Cam Iron may arrange for a reasonable number of members of their personnel to take part in meetings of the Joint Committee. However only the persons appointed as representatives of the State and of Cam Iron or in their absence their alternates shall have a right to vote on the Joint Committee and be included for purposes of determining the budget for the Joint Committee. Each permanent representative or in the absence of a permanent representative his or her alternate representative shall have one 1 vote and shall be deemed to be authorized to represent and to bind the Party that appointed it on

any subject within the competence of the Joint Committee. Any person attending the meetings of the Joint Committee shall be under a strict obligation of confidentiality with regard to the discussions the questions raised and the information disclosed. Nevertheless representatives of the State and of Cam Iron shall have the right to debrief their respective the discussions and questions raised. principals and advisors on Disclosure of confidential information as required by the Legislation or other applicable law shall not be a violation of this restriction and confidential information may be disclosed to the extent that it i is or becomes generally available to the public or in the industry other than as a result of a disclosure by the recipient in breach of this Convention; ii was within the possession of the recipient or the Party with which that recipient is affiliated prior to its being furnished to the recipient provided that the source of such infonnation was not bound by a confidentiality agreement with or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such infonnation; iii is or becomes available to the recipient or the Party with which that recipient is affiliated on a nonconfidential basis from a source other than the provider provided that such source is not bound by a confidentiality page 135 ft agreement with or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such information; or iv was independently developed.

30.5.3 Competence of the Joint Committee a The Joint Committee shall examine all matters put on its agenda with respect to the orientation programming and control of the conduct of the Project Operations. Within this framework the Joint Cornmillee is empowered to i review and provide any comments on the annual work programs and related budgets in accordance with the provisions of Article 9.3 as well as any potential modifications thereof; ii control the execution of the budgets for the Joint Committee; iii iv dee on U1e matters which it is expressly meant to deal with under this Convention; and be consulted about key appointments to the management of the Project Companies. b Each Project Company shall submit its proposals to the Joint Committee concerning i ii the annual works programs and related budgets of sucl1 Project Company; any modifications to be made to such annual works programs and related budgets of such Project Company; iii matters needing determination under this

Convention; and iv key appointment to the management of Project Companies. c The members of the Joint Committee consult one another on the matters submitted to them in order to reach a unanimous decision. When a matter is not decided unanimously during a meeting of the Joint Committee the examination of such matter shall be postponed to a subsequent meeting of the Joint Committee which shall take place as convened by Cam Iron at least ten 10 but no more than forty five 45 Days following the date of the first meeting. During this period the Parties shall meet and Cam Iron shall provide all information and details as may be required by the State in its capacity as a member of the Joint Committee. If during the subsequent meeting the members of the Joint Committee do not reach an agreement on the decision to be made minutes of the meeting must be prepared in order to expose the position taken by each Party. d The role of the Joint Committee with respect to the matters referred to in Article 30.5.3aiv is merely one on which it is to be consulted and no decision of the Joint Committee shall be required. 30.5.4 Meetings of the Joint Committee v .

page 136 OTI a b c The Joint Committee shall meet at any time at the request of the State Representative or the Cam Iron Representative and at least twice 2 per Calendar Year. Notices of meetings of the Joint Committee will be sent to the members thereof by the Party that took the initiative for the meeting at least thirty 30 Days before the anticipated date of the meeting. Every notice of meeting shall contain an indication of the date time and place of the planned meeting and the proposed agenda of such meeting. Meetings of the Joint Committee will be held in Yaounde Cameroon or another location agreed to by the Cam Iron Representative and State Representative. When Cam Iron takes the initiative to call a meeting it shall provide the State Representative within a period of at least fifteen 15 Days before the anticipated date of the meeting with all the information necessary for the taking of decisions at the meeting. Each of Cam Iron Representative and the State Representative shall be entitled to add subjects to the agenda subject to giving notice thereof to the other representative at least fifteen 15 Days before the anticipated date of the meeting. No decision may be taken at a meeting of the Joint Committee on a subject that has not been included on the agenda for the meeting in advance unless otherwise agreed to by each of the

Cam Iron Representative and the State Representative. 30.5.5 Consultation a b At any time before the Joint Committee is referred to assist in the making of a decision as provided under Article 30.5.3 a Partys representative may submit the matter to the other Partys representative who has the expertise required to examine the matter and such representatives shall endeavour to determine the matter before submitting it to the Joint Committee. Where the matter referred to in Article 30.5.5a is substantial it shall be referred to the State Representative who after having consulted with the Cam Iron Representative may refer the matter to the Joint Committee for examination. 30.5.6 Subcommittee The activities of the Joint Committee may be referred to a subcommittee. 30.5.7 Chairing and secretariat Meetings of the Joint Committee will be chaired by the State Representative. The Cam Iron Representative will act as secretary and a member of the Joint Committee appointed by the State will act as deputy secretary. 30.5.8 Minutes The secretary and the deputy secretary of the Joint Committee shall prepare written minutes of each meeting and shall send a copy thereof to the State Representative and the Cam Iron Representative within fifteen 15 Days of the date of the meeting for approval or comments and the State Representative and Cam Iron Representative v page 1137 will respond to the comments of the other Partys representatives will respond within a reasonable time period. 30.5.9 Decision without meeting a Any question may be submitted to the Joint Committee for a decision without giving rise to a formal meeting of the Joint Committee for example in the event of an emergency on the condition that the Party taking this initiative transmits the question to the other Party in writing. In this event each of the Parties must inform the other of its vote within twenty 20 Days of receipt of the said question unless the question submitted to the vote requires a decision to be made within a shorter period which period save in urgent cases shall reasonably provide for notice and opportunity to respond not to exceed the twenty 20 Days noted above. The absence of a response from a Party on the question under discussion shall be deemed to represent a negative vote. b Any decision adopted by the Parties according to the terms and conditions provided by Article 30.5.9a shall have the same value as a decision adopted in the context of a formal meeting of the Joint Committee. 30.5. 10 External

specialists The Joint Committee may decide to hear any person whose interview is requested by one of the Parties. Each Party may also at its own expense arrange for meetings of the Joint Committee to be attended by external specialists of its choice on condition that it obtains a confidentiality undertaking from such specialists.

30.5.11 Funding of Joint Committee

a At least fortyfive 45 Days prior to the beginning of each Calendar Year Cam Iron shall in consultation with the State send to the State a proposal for funding the Joint Committee for the following Calendar Year on the basis of the estimated operational costs including the daily compensation of the State Representatives.

b The State within fortyfive 45 Days following receipt of the aforementioned proposal shall i accept the proposal; or ii provide its comments and recommendations to Cam Iron.

c d In case of the State's failure to respond within the aforementioned period the State shall be deemed to have accepted the proposal. In case of a disagreement between the State and Cam Iron the Parties undertake to seek an agreement on the funding of the Joint Committee. In the absence of an amicable settlement within sixty 60 Days following receipt of the State's comments and recommendations the amount of the Joint Committee's budget for the contemplated calendar Year shall be equal to the higher of i the sum of one hundred percent 100 of the prior Calendar Year's budget plus the Inflation Adjustment; or ii the amount proposed by Cam Iron.

The Parties will also discuss a method of paying per diems to such members of the Joint Committee.

e The Mine Project Company shall fund the approved budget of the Joint Committee.

30.6 Transparency

a In order to ensure the State can properly discharge its rights to monitor the activities associated with the Project it is agreed between the Parties that the following agreements will be entered into i Monitoring Agreement Blending; ii Monitoring Agreement Marketing; and iii Monitoring Agreement Treasury.

b The Parties will enter into or otherwise arrange for the provision of any documents necessary for the Project Companies and their parent companies to comply with applicable provisions of Australian legislation regarding any payments received on account of service on the Joint Committee.

31 BANK GUARANTEES

31.1 Issue of Bank Guarantees

a b c Cam Iron or the Mine Project Company will cause a Bank Guarantee Mine Project Company General Bank Guarantee to be issued for the benefit of the State

in an amount of twenty million 20000000 US Dollars subject to the Inflation Adjustment and to be available for draw in the event that the Mine Project Company is obliged to pay to the State for breaches of its obligations under the Project Agreements other than environmental breaches occurring on and from the Date of Entry into Force until one (1) year after the date Project Commissioning occurs. The State shall release any Bank Guarantee provided in Article 31.1 b. The State shall release the Mine Project Company General Bank Guarantee if the State has made no payment request under the terms of the Mine Project Company General Bank Guarantee upon the expiration of the term the Mine Project Company is required to maintain the Mine Project Company General Bank Guarantee. If one or more of the conditions described in Article 31.1b have not been met for either Cam Iron or the Mine Project Company the term of any Bank Guarantee shall be extended for one (1) or several successive one (1) year periods until all of the conditions referred to above have been met it being understood that the fulfilment of such conditions will be assessed only at the end of each aforementioned one (1) year period. d Pursuant to Article 54.2 each of the Railway Project Company the Mineral Terminal Company and other applicable Project Company shall cause Bank Guarantees to be issued for the benefit of the State. pagol139 31.2 Issuer of Bank Guarantee For the purposes of Articles 29 and 31 a Bank Guarantee must be issued by a bank with an Acceptable Bank Rating. 31.3 Bank Guarantee Claims a Each Bank Guarantee issued on behalf of any Project Company must guarantee i ii payment of any damages and reimbursement of any mitigation or cure expenses incurred by the State for violations of a Project Agreement by the respective Project Company its Contractors and Subcontractors; the resolution of all issues associated with the reservations potentially issued by the State at the time of the transfer to it by the Railway Project Company and Mineral Terminal Project Company respectively of those Assets which each is to transfer pursuant to Articles 12.2.1 and 13.4 and iii the payment of any penalties owed by such Project Company in accordance with the provisions of Article 50. b c d e f The Bank Guarantee must guarantee the payment of any penalties owed by Cam Iron or the Project Companies in accordance with the provisions of Article 50. In the event of a total or partial claim on

a Bank Guarantee Cam Iron or Project Company U1at caused U1e issue of the Bank Guarantee shall immediately replenish such Bank Guarantee at its initial amount as soon as possible with updated amounts as the case may be. For the avoidance of doubt neither the existence nor a claim to any Bank Guarantee shall limit the State from submitting a claim against the Project Companies in the case where U1e amounts guaranteed happened to be insufficient to fully meet the obligations of a Project Company in accordance with this Article 31.3. The State shall nOL be required to subordinate its rights under any Bank Guarantee to any Lender o r Third Party. Bank Guarantees shall be specific to the Project Company delivering them and shall not also cover obligations of other Project Companies unless expressly provided for.

32 PERSONNEL

32.1 Scope of the Collective Bargaining Agreement a The Project Companies and their Affiliates incorporated as Cameroonian Companies shall apply the Collective Bargaining Agreement to their Cameroonian employees. The Project Companies Contractors and Subcontractors which are pagel140 b v incorporated as Cameroonian Companies shall have the choice to enter into and apply the Collective Bargaining Agreement to their employees who are specifically used to carry out services in connection with the Project. c The Project Companies Affiliates operating in Can1eroon Contractors and Subcontractors which are incorporated as foreign i.e. non Cameroonian companies shall have the choice to enter into and apply the Collective Bargaining Agreement to their employees who are specifically used to carry out services in coMccction with the Project. The Cameroonian employees of the Project Companies foreign Affiliates Contractors and Subcontractors incorporated as foreign companies shall be granted employment terms and conditions not less favorable than those provided for in the Collective Bargaining Agreement.

32.2 Scope of Article 32 a b i ii The provisions of this Article 32 shall apply to the Project Companies and their Affiliates incorporated in Cameroon. The following provisions of this Article 32 shall apply mlllatis mutandis to the Project Companies. Contractors and Subcontractors irrespective of whether such entities are incorpomted as Cameroonian Contractors or Cameroonian Subcontractors or foreign entities operating in Cameroon provisions relating to priority given to Cameroonian nationals as set fonh in Article 32.3; provisions on working time and

annual leaves as set forth in Article 32.8 for their Cameroonian employees and for employees whose work contract is subject to Legislation it being specified that work contracts of foreign employees working on Rosters during the Construction Phase shall not be required to be subject to Legislation; iii general employment provisions as set forth in Article 32.10; iv HSECS provisions set forth in Article 32.11; and v application process Personnel as per Article 32.12. for Immigration Documents for Foreigners

c The following provisions of this Article 32 shall apply in accordance with their terms to the Main Contractors and Main Subcontractors of the Project Companies which operate in Cameroon: i provisions on priority given to Cameroonian nationals as set forth in Article 32.3; ii provisions on quotas set forth in Article 32.4; iii provisions on professional training and transfer of knowhow as set forth in Article 32.5 excluding for the avoidance of doubt the financing obligations in Article 32.6; iv provisions on working time and annual leaves as set forth in Article 32.8 for their Cameroonian employees and for employees whose work contract is subject to Legislation it being specified that work contracts of foreign employees working on Rosters during the Construction Phase shall not be required to be subject to Legislation; v general employment provisions as set forth in Article 32.10; vi HSECS provisions set forth in Article 32.11; and vii application process Personnel as per Article 32.12. for Immigration Documents for Foreigners

d Consequently the Project Companies shall require in their contractual arrangements with their Contractors operating in Cameroon that the latter comply with the above provisions and that such Contractors shall impose the same obligations on their Subcontractors operating in Cameroon and on their own subcontractors operating in Cameroon if applicable so as to give full effect to this Article 32.2.

32.3 Priority to Domestic Employment Throughout the Term of the Project a Throughout the duration of the Project the Project Companies the Contractors and Subcontractors undertake to give priority to the employment of Cameroonian nationals subject to their availability at the time of recruitment and required level of qualification and professional experience. or the avoidance of doubt in making this assessment the Project Companies shall not discriminate against Cameroonian nationals based on the work conditions applicable to Article 32.11. The Project Companies shall

procure that their Contractors and Subcontractors shall comply with this obligation. them pursuant to

b Accordingly the Project Companies the Contractors and Subcontractors shall recruit their operational staff working on the Project in Cameroon as follows i from the local Cameroonian nationals residing in the region of the Exploitation Area Minera I Tenninal Area and Railway Area throughout the duration of the Project; ii from the ranks of the constmction contractors Cameroon national construct ion workforce; and iii throughout Cameroon and from the international Cameroon diaspora. The Project Companies undertake to timely provide the Labor Committee with details on the workforce number level of qualification etc. that shall be needed to carry out all the major construction and operation related works of the Project for the Labor Committee to be in a position to assist in sourcing local Cameroonians for such works. Where Cameroonian nationals with the required level of qualification and professional experience cannot be identified or are not available foreign nationals may be recruited. page142 c d v 32.4 Quotas a The Parties acknowledge that their joint intention is each Project Company and the Main Contractors and Main Subcontractors achieve during the Exploitation Phase the following minimum quotas of Cameroon nationals among their employees located in Cameroon and working on the Project i ii iii iv for managerial positions at least fifty percent 50 of national employees five 5 years after the beginning of the Exploitation Phase ramping up to sixty percent 60 of national employees seven 7 years after the beginning of the Exploitation Phase; for supervisory positions at least 60 of national employees three 3 years after the beginning of ti1e Exploitation Phase and seventy five percent 75 of national employees seven 7 years after the beginning of the Exploitation Phase and for unskilled positions at least eightyfive percent 85 of national employees three 3 years after the beginning of the Exploitation Phase. len 10 years after the beginning of the Exploitation Phase ninety percent 90 of all categories of employees shall be Cameroonian nationals. b c The quotas above shall be calculated by taking into account the workforce at the level of the Project Company and based on the full time equivalent the pan of the workforce of the Main Contractors and Main Subcontractors who are employed or used for the purpose of the Project as idemified in the safety and acent prevention plan required by the Project

Companies the Main Subcontractors, the Main Contractors and from The Parties acknowledge that the above quotas are nonbinding targets but that it is in their best interest to maximize U1e Cameroonization of U1e workforce involved in the Project and that the undertakings relating to professional training and financing thereof set forth in Articles 32.5 and 32.6 are given in order to further such joint interest.

32.5 Professional Training and Transfer of KnowRow a b The Project Companies shall from the beginning of the Construction Phase and throughout the Exploitation Phase provide a budget as indicated in Article 32.6a below and deliver or require the Main Contractors and/or Main Subcontractors to deliver professional ongoing training ptOTIlms on i health safety and risk management and ii trades required for the Exploitation Phase of the Project with a view to maximizing the Cameroonization of the workforce and more generally to providing development and careers opportunities their Cameroonian workforce. for Accordingly each Project Company undertakes to implement or require the Main Contractors and/or Main Subcontractors except those in charge of construction during the Construction Phase to implement, in close V

page143 I On cooperation with the competent departments of the State professional training structures and programs for its Cameroonian workforce in the business segment in which it operates for the Exploitation Phase of the Project. c If required and in order to assist the Project Companies in implementing or causing the implementation by the Main Contractors and/or Main Subcontractors of the contemplated training programs the State and the their Main Contractors and/or Main Project Companies Subcontractors shall agree upon the technical requirements that shall be referenced for an individual to be officially recognized as a qualified professional in any trade relevant to the Exploitation Phase of the Project. and

32.6 Financing of Professional Training and Transfer of KnowFlow a The Project Companies commit to a minimum training budget as follows which they will use directly or through their Main Contractors and/or Main Subcontractors i during the Construction Phase. a m1mmum amount of seven 7 million US Dollars in aggregate which shall be broken down into two million 2000000 US Dollars per year during the first two 2 years of the Construction Phase and three million 3.000000 US Dollars for the third 3 year of the Construction Phase it being agreed

by Cam Iron that should U1e Construction Phase extend beyond three 3 years it shall conunit to renew the training budget for an amount not less than two 2 million US Dollars per year calculated pro rata per month of extension; and ii during the first ten 10 years of the Exploitation Phase an amount of three million 3000000 US Dollars in aggregate per year. b c At the end of the tenth 10111 year of the Exploitation Phase the Project Companies shall convene with the State and submit a report in writing outlining the detail of the number of their respective domestic and foreign employees who work on the Project at such time with a view to assessing whether the quotas set forth in Article 32.4a and calculated in accordance with Article 32.4b are fulfilled at the level of each Project Company at such time. In the event the quotas set forth in Article 32.4a are not fulfilled at the end of the tenth 10 year of the Exploitation Phase at the level of each Pwject Company. the Parties shall agree on methods to achieve such quotas within an agreed timeframe and on the corresponding budget. The training budget set forth in Articles 32.6ai and 32.6aaii shall be fifty percent 50 and relevant divided equaUy between internal external fifty percent 50 training. Internal training shall include professional training centers within the Project Companies scholarships for staff or prospective staff with potential to undertake specific undergraduate and postgraduate university courses linked to the Project Companies business needs and internships within the Project Companies andor their Main Contractors and Main Subcontnmctors. External training may include setting up or contributions to trade academies linked to the Project Companies activities.

page 1144 32.7 Annual Report The Project Companies s hall provide the Labor Committee with an annual report outlining the detail of the number of domestic and foreign employees who have worked on the Project for the past year and anticipated number thereof for the coming year together with details on the tmining programs that were and shall be implemented. 32.8 Working Time and Annual Leave a the Project Companies. The Parties recognize the need for the Contractors and Subcontractors to have the flexibility to organize different Shifts Rosters rest and rumual leave arrangements in order to meet their various operational requirements of the Project which should however not prejudice the safety and wellbeing of their employees. The State shall use its

reasonable endeavors to facilitate the implementation of the flexibility required for continuous operation of the Project as per the provisions of this Article 32.8. b Accordingly the Project Companies Contractors and Subcontractors shall be authorized to implement Shifts and Rosters under the following conditions i ii their respective employees shall not work Shifts extending beyond twelve 12 hours a Day; their respective employees shall not work in excess of sixty 60 hours a week on average over a full Roster period and that every fourteenth 14 Day during such rotation period is a Business Day; and iii any work period within a Roster does not exceed eight 8 weeks during the Exploitation Phase. c Should the Project Companies the Contractors or the Subcontractors require Shifts and Rosters to be implemented in excess of the terms and conditions set forth in the preceding paragraph the State shall consider how such flexibility could be implemented in particular as regards the work inspector authorizations for overtime and subject to the interest of the Cameroonian workforce shall facilitate such flexibility. d During the Construction Phase annual leaves for employees under a Roster may be considered taken during weeks off and details thereof shall be set forth in their respective employment contracts. 32.9 Labor Committee on Recruitment and Training A Labor Committee on Recruitment and Training the Labor Committee shall be established by the State and Cam Iron prior to the Construction Phase and for the Term of the Project. a The different roles of the Labor Committee are the following i assist in sourcing Cameroonian employees for all lines of work having to be carried out by the Project Companies and their affiliates Contractors and Subcontractors as applicable connection with the Project and issue deficiency certificates *certificats de carence* in cases where suitably qualified and experienced Cameroonian employees were not available so as to facilitate and help speed up the issuance of the necessary Immigration Documents; review annual reports from Cam Iron on its and the other Project Companies record with respect to recruitment training and labor relations; collect feedback from the State on the States expectations and assessment of Cam Irons and the other Project Companies performance with respect to recruitment training and labor relations; review the performance of the Project on recruitment training and labor relations with respect to compliance with

i Legislation; ii the Convention; and iii the Collective Bargaining Agreement; promote communication between the Project Companies and any other entity having signed to the Collective Bargaining Agreement the trade unions and the State on labor relations matters and assist in the voluntary and without prejudice mediation of any laborrelated disputes when requested by Cam Iron or a Project Company; ii iii iv v vi assist in the establishment of training arrangements between the Project Companies Contractors and Subcontractors and academic and vocational training institutions in Cameroon; vii establish the Protocol relating to the process and issuance of Immigration Documents as provided in Article 32.12c; viii review the training programs designed to meet or improve the progressive quotas for national staff set forth in Article 32.4a; ix audit the implementation of the training programs; x xi review the budget allocated to training programs as defined under the Convention and provide advice and recommendations to the Project Companies and their Contractors and Subcontractors to facilitate the establishment training and longterm employment of a skilled and harmonious workforce and the maintenance of good labor relationships. b The Labor Committee shall be composed of an equal number of State and Project Company representatives and shall be chaired by a State representative. The State representatives shall be representatives of relevant labor and employment ministries and shall also include a representative of the Immigration Department. There shall be a representative of each Project Company Mining Project Company Railway Project Company and Mineral Terminal Project Company. A representative chosen among their members by the trade unions that have entered into the Collective Bargaining Agreement shall attend the Labor Committees meetings as an expert. v page 1146 c The Labor Committees operation mode shall be decided upon by the Labor Committee it being agreed that the first meeting of the Labor Committee will take place within six 6 months following the receipt by Cam Iron of the Exploitation Permit and the Labor Committee shall meet as often as deemed necessary by at least three 3 of its members comprising at least a State and a Project Company representative and at the minimum once every six 6 months at a venue in Cameroon to be agreed by the constituent parties and may also consult and exchange by email videoconference or teleconference. 32.10 General

Employment Provisions the priority given to Cameroonian nationals in accordance with Subject to Article 32.3 the Project Companies the Contractors and Subcontractors shall not engage in discrimination of any nature whatsoever with regard to race sex religion or nationality. The Project Companies the Contractors and Subcontractors shall not use child labor or forced, including bonded or prison labor for the Project.

32.11 Health Safety Environment Community and Security USECS

The Project Companies, the Contractors and Subcontractors shall comply with the following main HSECS obligations that may be further developed in the Health and Safety Management Plan referred to below for all staff working on Mining Operations Railway Operations or Mineral Terminal Operations i ii iii iv v develop and implement x a detailed Health and Safety Management Plan and y a detailed environmental and social management plan .hat shall both be approved by the State and shall ensure compliance with internationally recognized standards such as ISO 9001 2008 Quality management system requirements ISO 310002009 Risk management Principles and guidelines ISOIEC 3 to I 02009 Risk management Risk assessment techniques. ISOIEC 170212011 Conformity assessment; provide a safe work place with safety systems in compliance with OHSAS 18001; the relevant Project Companies be responsible for the safety of all staff and visitors to the site on which and Subcontractors operate which shall include the supply and timely replacement of all personal protective equipment for all such staff and visitors; Contractors provide trained medical staff including doctors and nurses as well as safety equipment including ambulances medicines and dressings for injuries that may occur; and provide first response medical facilities equipped to stabilize any serious casualties arising from work related accidents or health issues and maintain adequate medical evacuation plans and facilities to transfer casualties to an appropriate treatment center.

32.12 Immigration Documents for Foreign Personnel a The Project Companies, the Contractors and Subcontractors shall file applications each an Application for working permits and visas as well as any other authorization or document that may be required for Foreign Personnel as defined below to lawfully enter and work in Cameroon for the sole purpose of carrying out their work activities in connection with the Project each an Immigration

Document for any and all non-Cameroonian nationals who are hired for the purpose of carrying out services in connection with the Project in Cameroon whether as employees consultants or otherwise the Foreign Personnel. In order to streamline the Applications and help speed up the issuances of Immigration Documents the State shall set up a single entry application procedure for the review processing of Applications and issuances of Immigration Documents. The Parties have agreed that the Labor Committee shall prepare in consultation with each relevant administration in charge of the review processing and/or issuance of Immigration Documents a comprehensive document outlining the procedure that must be followed for any and all Application as well as expected deadlines for the issuance of Immigration Documents such deadlines being set forth as an objective in view of Project operational requirements the Protocol. b c d The Project Companies the Contractors and Subcontractors shall lodge the Applications in accordance with applicable Legislation and the Protocol.

32.13 Townships and villages to contribute to the Exploitation Area with a view Cameroon undertakes to build permanent housing for employees working in the implementation of a township and villages in such location which shall be completed in accordance with any town planning requirements. Cameroon undertakes to supply the related conceptual urban planning scheme within six (6) months of the Signature Date together with the updated Feasibility Study it being specified that the State shall be in charge of setting up or having set up the public facilities of the township such as schools water and electricity networks. Cameroon will provide a construction camp for its workforce working in the Mineral Terminal Area and after construction if the Mineral Terminal Area urban development plan makes land available to Cameroon or the Mineral Terminal Project Company for accommodation purposes the latter shall to the extent necessary build permanent housing for the employees working in the Mineral Terminal.

33 USE OF CAMEROONIAN GOODS AND SERVICES

33.1 Principle Subject to the provisions of Article 33.2 and the Legislation the Project Companies may subject to the reasonable approval of the State where any trade is material choose their suppliers Contractors and Subcontractors regardless of their nationality or place of registration in order to obtain Goods and high quality services with a view

page] 148 view to carrying out the Project Operations of which they are in charge. For the purposes of this Article 33.1 disapproval by the State shall be deemed reasonable if the selection of a supplier Contractor or Subcontractor is or has been within the last twelve 12 months wtder investigation by the State is i not in compliance with all Legislation and applicable professional licensing requirement ii deemed materially deficient in any Tax payment owed to the State or iij not in good standing. 33.2 Minimum thresholds and objectives For the purposes of reinforcing the national industrial base each Project Company undertakes to Cameroonian Contractors and Cameroonian Subcontractors to grant priority a b during the Construction Phase of the Project Facility at least fifty percent 50 of the total value of all contracts for the procurement of Goods other than goods which Cameroonian Contractors and Cameroonian Subcontractors cannot source and which must be imported for use in the Project or the supply of services assessed over every two 2 year period shall be contracted to Cameroonian Contractors and Cameroonian Subcontractors and the Project Companies shall use reasonable efforts to increase such percentage to the extent Cameroonian Contractors or Cameroonian Subcontractors have the ability to meet the technical timing cost and other required performance standards; during the Exploitation Phase of the Project Facility at least fifty percent 50 of the total value of all contracts for the procurement of Goods or the supply of services assessed over every two 2 year period shall be contracted to Cameroonian Contractors and Cameroonian Subcontractors and the Project Companies shall use reasonable efforts to increase such percentage to the extent Cameroonian Contractors or Cameroonian Subcontractors have the ability to meet the technical timing cost and other required performance standards and provided that the selection of Contractors and Subcontractors to meet the above requirements is on the basis of the best conditions in terms of availabmty experience competitiveness and solvency including insurances and ability to provide proper performance guarantees which may be supported by the State pursuant to Article 43.2. Each of the Project Companies shall on an annual basis provide the State with a report as to compliance with the minimum levels set forth in Articles 33.2a and 33.2b during tiHl applicable phase of ti1e Project. 33.3 Cameroonian Contractors and Cameroonian Su

bcontractor s For the purposes of this Article 33 Cameroonian Contractor or Cameroon¹¹ Su
hcontracror shall refer to an entity registered in the State that meets one or more of the following
criteria a at least five percent 5 of the equity interests are owned by citizens of the State; or b more
than tifty percent 50 of the employees are citizens of the State. The Project Companies will give
reasonable preferences to entities with more significant ties to Cameroon. page149 m SECTION V
ECONOMIC AND TAX PROVISIONS 34 ROYALTY 34.1 Royalty P ayment The Mine Project
Company shall in respect of any month for the Tenn of the Project pay to the State a Royalty equal
to two and one half percent 2.5 of the Mine Gate Value of all High Grade Ore and Beneficiated Ore
from the Exploitation Area. During each month during the Term of the Project ninety percent 90 of
the amount of such Royalty shall be estimated and paid to the State at the time such Product is
loaded by the Mineral Terminal Project Company onto a ship for delivery or as otherwise agreed and
the remaining ten percent 10 of such Royalty shall be paid at the end of the month in which the final
value is determined and reflect a true up for actual amounts and prices. 34.2 Weighing and assaying
The Mine Project Company must a b at the Mine Loading Area weigh in wet tonnes and regularly
collect and analyse assays of all Products transported from the Exploitation Area; and at the Mineral
Terminal Area weigh in wet tonnes and regularly collect and analyse assays of all Products
delivered to the car dumper. 34.3 Reporting of assay results a b The Mine Project Company must
regularly provide the State with the weight and assay results obtained under Articles 34.2a and
34.2b. The Mine Project Company may supply the weight and assay results obtained under Articles
34.2a and 34.2b to all Third Parties contributing Other Ore and the governments of the countries
from which Other Ore is derived. 34.4 Audit a At least once in every Calendar Year that the Mine
Project Company pays the Royalty to the State pursuant to this Article 34 the Mine Project Company
must engage a reputable international finn of accountants with demonstrated experience in projects
similar to the Project to conduct an audit of those the Royalty payments made during the Calendar
Year at the sole cost of the Mine Project Company. b The Mine Project Company must provide the
report of the audit described in Article 34.4a to the State in a timely manner. 34.5 Adjustment Where

as a result of the audit referred to in Article 34.4 the amount of the Royalty which has been paid by the Mine Project Company to the State is not correct then a where the amount paid is less than what it should have been then the Mine Project Company must pay the shortfall to the State within fourteen (14) Days of the date of the determination of that amount; or b where the amount paid is greater than what it should have been then the Mine Project Company shall credit that surplus amount against its future obligation to pay the Royalty.

34.6 No Royalty on Certain Iron Ore
Only the Mine Project shall be obligated to pay the Royalty on the iron ore from the Exploitation Area

35 CEMAC 35.1 Approvals If it proves necessary or useful for one or more Project Companies Contractors or Subcontractors to carry out any formality either in accordance with the CEMAC regulation or to obtain any approval from the CEMAC Commission with respect to any legal Tax customs, explosives and exchange control matters provided for under this Convention a b the relevant Project Company Contractor or Subcontractor shall carry out such formalities and provide the documents necessary to assist such a request for approval; and the State shall use its reasonable endeavours to assist the relevant Project Company Contractor or Subcontractor with a view to meeting the requirements of the regulations and the CEMAC authorities within the requisite time limits.

35.2 Restrictions If the CEMAC Commission is considering imposing restrictions or obligations on a Project Company Contractor or Subcontractor in respect of any activities it conducts or proposes to conduct in relation to the Project regardless of whether such restrictions or obligations are imposed by Legislation or are conditions to any approval sought by the State the State shall use its reasonable endeavours to obtain a partial or entire exemption from such restrictions or obligations.

36 FISCAL AND CUSTOMS REGIME 36. 1 Governing law The legal Tax customs and exchanges control regime currently applicable to the activities carried out pursuant to this Convention is contained within a the OHADA Acts; b the Regulation No 2100/CEMAC/UMACCM harmonizing exchanges control regulations in the CEMAC members States; c the Customs Code in force at the Signature Date; d the General Tax Code in force at the Signature Date; e f all the Finance Laws in force at the Signature Date; Law No 634 of 19 July 1963 relating to the

implementation of the regulations of the Franc Area throughout the territory of the Republic of Cameroon; g the Mining Code in force at the Signature Date; h i j the Investment Charter Law N 20044 of 19 April 2002 in force at the Signature Date; Law No 67LF22 of 12 June 1967 relating to the financial relations between the Republic of Cameroon and foreign countries; Decree N 7664 of 19 February 1976 modifying Decree W 75763 of 12 December 1975 which suspend the application of withholding taxes on foreign loans; and k Law No 95 14 of 8 August 1995 establishing the conditions of US Dollars accounts.

36.2 Tax Regime a In addition to the provisions contained in this Convention during the Term of the Project Cam Iron and the Project Companies their Contractors and Subcontractors shall be subject to the provisions of Annex VII in connection with the Project Operations. If a tax fee or similar assessment is not addressed in a Project Agreement including Annex VII then it shall be payable in accordance with the Legislation.

36.3 Bonus Payment a The Parties agree that in order to enjoy Bonus Payment Holiday for the purposes of all assignments and transfers or any restructure or other dealings either directly or indirectly in the shares in Cam Iron or a Project Company including any dealing in any shares in any entity that may directly or indirectly control those companies or any consent the State is required to give to any Finance Document Cam Iron shall pay to the State the sum of eleven million US Dollars on the date that is no more than ten (10) Days following the consummation of the transactions contemplated by the Scheme and these payments will be the only payments required to be made during the Bonus Payment Holiday by or on behalf of Cam Iron or a Project Company for the purposes of section 20 of the Mining Code. The Parties will also provide for the completion of any documents necessary for the Project Companies and their parent companies as the case may be to comply with applicable provisions of Australian legislation regarding such payments. b The Project Companies will be exempt from any Bonus Payment otherwise payable on i transfers of the equity interests of the parent companies of Cam Iron; and ii any security or pledge that the Mine Project Company may create v page 1152 over the Exploitation Permit.

36.4 Offset of Part Payment of Bonus Fee If the Conditions Precedent are not satisfied and as a consequence there is no Date of Entry into Force

then notwithstanding that the balance of the Convention may not have entered into force Cam Iron shall not be entitled to a refund of any of the amounts it has paid to the State pursuant to Article 36.3 however Cam Iron may offset the eleven million 11 000 000 US Dollars it has paid to the State pursuant to Article 36.3 against all amounts it may from time to time owe the State in connection with bonus payments due by Cam Iron for the Project or other mining projects of Cam Iron up to a total sum of eleven million 11 000 000 US Dollars.

36.5 Other requirements a b Cam Iron and each Project Company must comply with any obligations to obtain an importation or exportation license or any other similar permission or authorisation under any CEMAC requirement in respect of which the State has met its obligations pursuant to Article 35.1 but is unable to obtain any partial or total exemption.

spare parts, materials Subject to Article 42 Insurance Cam Iron and each Project Company must comply with any obligations imposed by customs or their representatives to obtain insurance from Cameroonian insurers in relation to any equipment including fixed and movable Mining Exploitation equipment including vehicles used solely within the Exploitation Area and those servicing Mining Operations like cargo trucks buses and light transportation and vehicles processing equipment and materials including handling equipment goods construction materials and materials for intermediate consumption commodities supplies consumables including fuel petroleum products reagents lubricants, gas and power plant including the Beneficiation Facility rolling machines vehicles aircraft including planes and helicopters trains and telecommunication equipment for terrestrial communication, radio communication or satellite communication or any ore minerals or products including iron ore and any subproducts including any requirements to produce an insurance policy or certificate to show that such insurance has been obtained under any CEMAC requirement in respect of which the State has complied with its obligations under Article 35.1 but is unable to obtain a partial or total exemption.

c d Nothing in this Article 36 permits Cam Iron or any Project Company to import into the territory of the State any items which are not permitted to be imported under the Legislation of the territory of the State. The Parties acknowledge that the items listed under Annex V 1 are prohibited imports as of the Signature Date and that such listing may be

amended from time to time. Explosives material required for the Project shall be permitted to be imported into the territory of the State in accordance with the Explosives Agreement. In order to give effect to the exonerations referred to in Article 36 the Parties shall develop appropriate protocols to ensure the operations of Cam Iron and the relevant Project Company are not interrupted or delayed.

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36.6 Third Parties Subject to Article 6.1 nothing in this Convention shall confer any rights or remedies under or by reason of this Convention on any Third Party beneficiary except to the extent that a specific obligation of a Project Company is passed to such Third Party subject to the terms hereof. Nothing in this Convention shall relieve or discharge the obligation or liability of any Third Party to any Party to this Convention.

36.7 Cross Border Movement The State acknowledges that for the efficient operation of the Project Operations and the Nabeba Project that Goods imported for Cam Iron or a Project Company and Nabeba Goods imported for Congo Iron may have to be exchanged either before being used for the intended importer or after initial delivery to the site of operation. The State shall agree a protocol with each of Cam Iron or an appropriate Project Company and Congo Iron by which those Goods or Nabeba Goods can be exchanged or used in a country of operations which is different to that for which they were imported without either Cam Iron or an appropriate Project Company or Congo Iron having to pay any customs duties excise duties Taxes charges taxation, foreign exchange restrictions inspection costs and the like.

36.8 States Equity Interest. Neither Cam Iron nor any Project Company nor any of Cam Irons shareholders or the Shareholders shall be liable for any Tax registration fee or any other charge or stamp duty attached to the States acquisition of the State Interest.

37 ACCOUNTING

37.1 Accounting Provisions a b c The accounts of Cam Iron and of the Project Companies shall be kept in accordance with the IFRS International Financial Reporting Standards and with the OHADA accounting principles. The Project Companies not registered in the territory of the State shall be entitled to use the US Dollar or any other currency deemed appropriate by Cam Iron for keeping their accounts and undertake all ancillary accounting operations and to denominate their share capital in such currency. The applicable exchange rate to be applied to

conversion of transactions carried out in a currency other than the US Dollar shall be the rate published under the rubric exchange cross rates in the London Financial Times in force on the day of the conversion transaction. If the currency is not indicated in the exchange cross rates or if the London Financial Times is not available the exchange rates obtained from another internationally recognised source published in London or New York. shall be used. If it is impossible to obtain a published rate the applicable rate shall be the mathematical average of the exchange rates each business day of the relevant month for which the rate is available from any of the sources referred to in this Article 37. v page 1S4 3 7.2 Extractive Industries Transparency Cam Iron and the Project Companies shall comply with the requirements of the Extractive Industries Transparency Initiative and CEMAC directives on transparency of financial relations with respect to all payments made by them pursuant to this Convention or Specific Agreement. The Parties shall act in good faith at all times in connection with their obligations under this Convention. SECTION VI MISCELLANEOUS PROVISIONS 38 RELIEF EVENTS PROCEDURES AND REMEDIES 38.1 Relief Events. A Project Company shall be relieved for the time described below in Article 38.1.1 c from its obligation to perform the Project Operations to the extent that any failure to perform results from such Relief Event. 38.1 .1 Relief Event Notice a b c in [fa Project Company is affected by a Relief Event it shall give notice Relief Event Notice to the State and the State Project Committee as soon as practicable and in no event later than thirty 30 Days following the date on which it first became aware of such Relief Event provided that in the case of the same Relief Event being a continuing cause of delay only one notice shall be necessary which notice shall include i a Statement of which Relief Event the claim is based upon ii details of the circumstances from which the delay arises and iii an estimate of the this Convention delay attributable to the said Relief Event and information in support thereof if known at that time. The State shall after receipt of the Relief Event Notice be entitled by notice to require the Project Company to provide the State may such further supporting information or details as reasonably consider necessary. If a Relief Event has not yet occurred but a Project Company knows of any event or circumstances which could reasonably be expected to result in a Relief Event

the Project Company will give notice pursuant to Article 47.1.5 but may later give notice pursuant to this Article when an actual Relief Event occurs. the performance of obligations under The affected Project Company shall notify the State as soon as practicable and in no event later than ten (10) Days following the date on which it first became aware that a Relief Event has ceased. Subject to the affected Project Company giving the Relief Event Notice required in Article 38.1.1 a above a Relief Event shall excuse such Project Company from whatever performance is prevented by the Relief Event referred to in such notice for such appropriate number of Days as the State and such Project Company jointly determine. If the State and the Project Company cannot agree upon the period of delay then the Project Company shall be excused for a reasonable period. This Article 38.1.1c shall not excuse Cam Iron or any Project Company from the performance and observance under the applicable Project Agreements of any obligations and covenants not affected by the Relief Event nor prevent the State or its designee from exercising its rights under the Project Agreements. Notwithstanding the occurrence of a Relief Event page 155 ff the affected Project Company shall continue its performance and observance under the applicable Project Agreements of all of its obligations and covenants to the extent that it is reasonably able to do so and shall use its reasonable efforts obligation de moyens to minimize the effect and duration of the Relief Event. Nothing in this Convention shall permit or excuse noncompliance with a change to the Legislation. d If a Relief Event occurs that also qualifies as a Compensation Event, the Project Company may also pursue its remedies under Article 39. 38.1.2 Role of State Project Committee. Upon the receipt of a Relief Event Notice the State Project Committee shall use its reasonable efforts to respond within twenty one (21) Days to the applicable Project Company and indicate whether or not it is granting or denying temporary relief from the circumstances Adverse Circumstances related to the Relief Event Committee Response. Provided however that if the expected Relief Event is of the type subject to Article 40.3 the procedures of that Article shall govern. a b c If the Committee Response indicates that the State Project Committee is granting temporary relief from the Adverse Circumstances the State Project Committee does not send a Committee Response within twenty one (21) Days or the

Committee Response is silent on whether temporary relief has been granted then to the extent the expected Relief Event is the result of a delayed denied or withdrawn permit beginning at the time of the Relief Event Notice the Project Companies shall be automatically temporarily granted any permit described in the Relief Event Notice for which it has complied with all material requirements under applicable Legislation as needed the Adverse Circumstances other than a new research exploration or exploitation permit under the Mining Code. At any time the State Project Committee may send written notice terminating this temporary relief. to avoid The intent of this provision is to allow the Project Companies to mitigate any potential Relief Event and the Project Companies shall use their reasonable efforts to mitigate any potential Relief Event. Granting the temporary relief provided in this Article 38.1.2 is not intended to be the only method of resolving and mitigating an expected Relief Event and the State and the Project Companies may seek other resolutions the States enforcement of any denial or withdrawal of any permit identified in the Relief Event Notice if the State chooses to do so. including 39 CONVENTION COMPENSATION 39.1 Payment of Convention Compensation. a Except as otherwise provided in Article 40.3 but in all other instances in addition to other notice provisions of this Convention if a Compensation Event occurs the applicable Project Company shall give notice First Notice of such occurrence to the State and the State Project Committee promptly but no later than thirty 30 Days following the date on which the Project Company first became aware of the Compensation Event. If a Compensation Event has not yet occurred but a Project Company knows or has reason to believe in of any event or circumstances which could reasonably be expected to result in a Compensation Event the Project Company will give notice pursuant to Article 47.1.5 but may later give notice pursuant to this Article when an actual Compensation Event occurs. Within thirty 30 Days following the date of delivery of such notice the Project Company shall give the State and the State Project Committee another notice the Notice setting forth i details of the Compensation Event including a specific explanation of the reasons that the event constitutes a Compensation Event under the terms of this Convention and ii the amount claimed as Convention Compensation and details of the If the State wishes to dispute the

occurrence of a calculation thereof. Compensation Event or the amount of the Convention Compensation the CENotice each a Convention Compensation claimed Dispute the State shall give notice of Dispute the CEDispute Notice to the Project Company within ninety 90 Days following the date of receipt of the CENotice stating the grounds for such Dispute. If neither the CENotice nor the CEDispute Notice has been withdrawn within sixty 60 Days following the date of receipt of the CEDispute Notice by the Project Company the matter shall be submitted to the Dispute resolution procedure in Article 56. The State shall pay the Convention Compensation to the Project Company within one hundred twenty 120 Days following the date of receipt of the CENotice or if a CEDispute Notice has been given as provided in the immediately following sentence then not later than one hundred and twenty 120 Days the date of determination of the Convention Compensation; provided that in each case the State may defer any such compensation for an additional period not to exceed one 1 year from the date of the CE Notice if there is no Convention Compensation Dispute and if there is a Convention Compensation Dispute three 3 months after the amount of Convention Compensation is determined if the State reasonably determines that such additional period is necessary to obtain financing or required approvals to make such payment. Notwithstanding the foregoing, in the event of a dispute regarding the amount of Convention Compensation the State shall make available to the Project Company any undisputed portion of such Convention Compensation and any portion of such Convention Compensation that is subsequently agreed between the Parties in each case not later than one hundred and eighty 180 Days following the date that the Parties have agreed to such portion even if a dispute regarding a portion of the amount claimed by the Project Company is still pending provided that the State may defer any such compensation for an additional period not to exceed one 1 year from the date of the CE Notice for such agreed portion. following b Convention Compensation shall be an amount sufficient to compensate Cam Iron or the applicable Project Company for all documented Losses with respect to a Compensation Event in excess of the applicable thresholds in the Definition of Compensation Event after taking into account any insurance proceeds actually received by Cam Iron or such

Project Company in connection with the Compensation Event if applicable. If Cam Iron or the applicable Project Company is required to expend its own funds whether from operating cash flows or the proceeds of any debt or equity financing or otherwise with respect to any Compensation Event prior to receipt of the corresponding Convention Compensation then the determination of Convention Compensation page]157 1f shall in addition to the components described above include interest at a rate equal to the Reference Rate plus four hundred 400 basis points. The Project Companies shall use their reasonable efforts to mitigate any Losses and adverse effects of a Compensation Event.

39.2 Role of State Project Committee. a b c d e If the State wishes to remedy the occurrence of a Compensation Event the State shall give notice thereof to the Project Company within thirty 30 Days following the date of receipt of the CENotice. If the State gives such notice it must remedy the Compensation Event within one hundred twenty 120 Days following the date of receipt of the CE Notice or if a CEDispute Notice has been given within one hundred twenty 120 Days following the final decision that a Compensation Event occurred or in either case within such longer period as may be reasonably required proceeding diligently to remedy such Compensation Event. If the State remedies the occurrence of a Compensation Event within the applicable period of time the right of the Project Company shall be limited to a claim for Convention Compensation calculated up to such remedy date only. In addition upon the receipt of the First Notice the State Project Committee shall use its reasonable efforts to respond within twenty one 21 Days to Ute applicable Project Company and indicate whether or not it is granting or denying temporary relief from the circumstances Adverse Circumstances the Compensation Event related Committee Response. Provided however that if the expected Compensation Event is of the type subject to Article 40.3 the procedures of that Article shall govern. to If the Committee Response indicates that the State Project Committee is granting temporary relief from the Adverse Circumstances the State Project Committee does not send a Committee Response within twenty one 21 Days or the Committee Response is silent on whether temporary relief has been granted then to the extent the potential Compensation Event is the result of a delayed denied or withdrawn permit beginning at

the time of the notice of the Compensation Event the Project Companies shall be automatically temporarily granted any permit described in the notice of a Compensation Event for which it has complied with all material requirements under applicable Legislation as needed to avoid the Adverse Circumstances other than a new research exploration or exploitation permit under the Mining Code. At any time the State Project Committee may send written notice terminating this temporary relief. The intent of this provision is to allow the Project Companies to mitigate any potential Compensation Event and the Project Companies shall use their reasonable efforts to mitigate any potential Compensation Event. Granting the temporary relief provided in this Article 38.1.2 is not to be the only method of resolving and mitigating a intended Compensation Event and the State and the Project Companies may seek other resolutions including the States enforcement of any denial or withdrawal of any permit identified in the notice of the Compensation Event Notice if the State chooses to do so.

1 page 158 . . . IJJJ 40 STABILITY OF ECONOMIC CONDITIONS 40.1 Warranty from the State a b Any Change in Law may be deemed a Compensation Event subject to the definition thereof. The Legislation and the obligations assumed by the Project Companies under the applicable Project Agreements together with in each case any amendment thereto shall apply at all times to the Subsidiaries Contractors and Subcontractors directly or indirectly in charge of all or part of the Project Operations. 40.2 Stabilisation clause Throughout the Term of the Project if there occurs a any new provision or any amendment to the Legislation on the Signature Date; b any new Legislation which does not exist as at the Signature Date; or c Legitimate Cause which meet the definition of a Compensation Event then the affected Party may deem such change a Compensation Event subject to the definition thereof in which case such Party shall have recourse to the remedies set forth in Article 39 or the remedies set forth in Article 40.3. 40.3 Petition from a Project Company Where Cam Iron or a Project Company is of the view that an event has or is about to occur which falls within the scope of Article 40.2 then Cam Iron or such Project Company shall promptly file a petition with the State and the State Project Committee which shall constitute a Compensation Event Notice for purposes of the State Project Committee providing aU necessary

documents in support of the petition and within ninety 90 Days following the date of receipt of the petition the State may either a reject the petition providing reasons therefor; or b accept the petition and propose to Cam Iron or the relevant Project Company to meet with it within a maximum period of thirty 30 Days to discuss but shall have no obligation to reach an agreement regarding i ii the possibility to postpone application of the disputed legislative regulatory or administrative measure; or where the State considers that said measure should apply agree with Cam Iron or the relevant Project Company on modifications to this Convention or the Project Agreement to which it is a party in order to preserve the economics thereof whereupon the relevant parties undertake to act reasonably and use their reasonable endeavours to reach a mutually acceptable solution. page159

40.4 Economic Hardship a In case of an event other than those referred to in Article 40.2 unforeseeable on the Signature Date and outside the Parties control results in a substantial disruption of the economic and financial balance of the Project for a period of at least ninety 90 successive Days Cam Iron provided the Project Companies continue to perform their respective obligations may propose to the State the measures in particular in terms of tax and finance strictly necessary to enable the economic and financial balance to be restored and the manner in which this could be achieved. In providing its proposal to the State Cam Iron must be able to demonstrate that without the State adopting appropriate measures the Project looked at as a whole. will not be cashflow positive for at least twelve 12 months longer than reflected in the Project Economic Model . The State shall notify Cam Iron of its decision on said proposals within ninety 90 Days following the date of notification of the request. If the State does not agree to the proposal for assistance then Cam Iron or the relevant Project Companies are entitled to suspend operations in accordance with Article 51 but subject to Article 50. b The relevant Parties undertake to adopt reasonable and good faith behaviour in applying this Article 40.4. 40.5 Emission Scheme Change Notice a b c Cam Iron shall notify the State as soon as possible after it becomes aware of any actual or imminent Change in Emission Scheme. As soon as practicable and in any event not more than one hundred and eighty 180 Days after the issue of the notice under Article 40.5a Cam Iron may give to the State

notice in respect of a Change in Emission Scheme setting out the estimated liability of the Project Companies under the Change in Emission Scheme and the value of the carbon credits or carbon offsets available from the FMU as contemplated in Article 29.5.2b Change Notice. The Project Companies shall have an additional two (2) years to comply with any Change in Emission Scheme and shall be able to use any carbon credits or reductions generated by the FMU to offset carbon limitations introduced by the Change in Emission Scheme.

40.6 Compensation for a Change in Emission Scheme If a Change in Emission Scheme occurs that directly or indirectly discriminates against the Project Companies then such change may be a Compensation Event if it meets the definitional requirements.

41 EXPROPRIATION NATIONALISATION

41.1 States undertakings a Except with respect to the exercise of its Reserved Rights and applicable Stepin Rights or pursuant to a Project Agreement the State undertakes not to take without consent against either Cam Iron or any Project Company any measure of seizure nationalisation or compulsory acquisition a page 160 Confiscation i u iii of the rights of ownership composing Cam Iron or any Project Companies share capital; of the assets needed for the Project Operations held by Cam Iron or any Project Company in the territory of the State; or of the occupation rights Cam Iron or any Project Company hold in the Project Areas; provided however that such a Confiscation which was not capable of being remedied by a modification of delineation of the relevant Project Area prevents Cam Iron or the relevant Project Company from continuing to conduct the Project Operations of which it is in charge within the relevant Project Area. b It is expressly agreed that the provisions of Article 41.1 a i ii concern the occurrence of expropriation events within the meaning of customary international law and do not prejudice the States rights in terms of nondelivery nonrenewal termination modification withdrawal cancellation or suspension of a Project Agreement a Project Lease or any permit authorization or approval in accordance with the terms thereof of the applicable Project Agreement or of the Legislation; but do not concern an Ordinary Force Majeure or Political Force Majeure event which do not result from an act or omission of the State which shall under no circumstances represent a Confiscation to which the provisions of Article 41.2 do not apply.

41.2 Indemnification a b c Without

prejudice to the provisions of Article 56 any breach by the State of its undertakings under Article 41.1 may qualify as a Compensation Event if it meets the definitional requirements and Cam Iron and one or more Project Companies as applicable shall except to the extent any damages result from a Project Company Fault have the right to request Convention Compensation relating thereto as set forth in Article 39. I. The indemnity value referred to in Article 41.2a shall be agreed between the Parties or in case of failure to reach an agreement; shall be determined in accordance with the procedure set forth in Article 56. The indemnification under this Article 41. paid as the case may be will be calculated in accordance with any applicable principle of compensation recognised under customary international law. 41.3 Parties claiming to have been Confiscated Where the State breaches its undertaking under Article 41.1 then unless it can be demonstrated that the breach affects in a material way the operating performance and profitability both before and after tax or freedom to remit dividends to Cam Iron or its shareholders the Project Companies or their Shareholders then for the loss suffered as a result of such Confiscation only Cam Iron or its shareholders or Project Companies or their Shareholders that are the subject of the expropriation shall be included in the calculation of the loss incurred in each case without duplication. 41.4 Dispute Resolution In Respect to a Confiscation Dispute. Any dispute disagreement controversy or claim arising out of connected with or relating to the States undertakings and indemnification under this Article 41 or to the breach termination invalidity existence or interpretation thereof or to any event action or inaction related to any of the foregoing Confiscation Dispute shall be resolved through amicable settlement or arbitration as set forth in Article 56.4. 41.5 Coordination with Treaties. a b The provisions of this Article 41 shall be effective only when there is not an applicable bilateral investment treaty in place that grants applicable rights regarding expropriation and if there is such a bilateral investment treaty then such treaty and not this Article 41 shall govern. This Convention is intended to provide the remedies regarding indirect expropriation and fair and equitable treatment only when there is not an applicable bilateral investment treaty and accordingly to the extent any bilateral investment treaty provides for

applicable remedies regarding indirect expropriation and fair and equitable treatment or other causes of action that could be brought under the applicable bilateral investment treaty on the same facts the applicable bilateral investment treaty shall govern the claims that may be brought and any additional claims created by this Convention shall no longer be applicable. This subsection is intended to only address the rights to bring claims and the forum for hearing and resolving those claims is addressed in Article 56.

42 INSURANCE 42.1 Principle Cam Iron shall comply with InterAfrican Conference on Insurance Markets CIMA and all applicable legislation concerning insurance and the procurement of appropriate coverages. The Parties recognize that international carriers may be necessary for the insurance of certain major risks but the Project Companies shall use Cameroonian insurers where coverage is available at competitive prices and the State shall reasonably cooperate to permit Cam Iron to cover a portion of this type of risk from CIMA to the extent required. In addition the State shall cooperate and assist Cam Iron in obtaining certain policies outside the territory of the State and from internationally recognized carriers.

42.2 risks covered a Other than as provided for in Article 42.4 Cam Iron the Project Companies the Contractors and its Subcontractors shall take out insurance to cover at least the following risks i loss or damage caused to the Project Facilities and other installations equipment and items existing or built within the Project Area occupied pursuant to the applicable Project Agreement; ii the cost for relinquishment of the Project Facilities and other page [162 installations equipment and items existing or built within the Project Area it occupies pursuant to the applicable Project Agreement damaged as a result of a loss and their replacement value as the case maybe; damage caused to the Environment due to the Project Operations of which it is directly or indirectly in charge; injury loss or damage suffered by Third Parties during or as a consequence of the conduct of the Project Operations of which it is directly or indirectly in charge; injury and damages suffered by its personnel during or as a consequence of the conduct of the Project Operations which it is directly or indirectly in charge and by the authorized engineers and agents including Auditors hired in the context of the administrative and technical supervision of said operations; and iii iv v vi such other insurances as

are reasonably stated by an international insurance consultant as being risks usually covered in the particular circumstances. b Cam Iron shall use commercially reasonable efforts to ensure that the insurance policies required under the terms of this Article 42 contain a provision ensuring that the required coverage cannot be terminated without prior written notification to the State at thirty 30 Days in advance.

42.3 Political risk insurance a b Cam Iron and the Project Companies may obtain and maintain for the whole Term of the Project insurance to cover all potential political risks including, inter alia Political Force Majeure events that can be covered by an insurance against political risks obtained on tbc basis of reasonable commercial terms considering the scope and localisation of the Project. The guarantees referred to in Article 42.3a shall be taken out with tl1e Multilateral Investment Guarantee Agency MIGA or China Export Credit Insurance Corporation or any other internationally recognised company that covers the State.

42.4 Self Insurance Cam Iron may propose, prior to the Date of Entry into Force, and upon such proposal the Parties may agree prior to the Date of Entry into Force on a framework for self insurance insuring against risk which may arise from certain Project Operations. The State recognizes that the need for self insurance in the mining industry is normal to cover certain risks.

42.5 Cessation of Self Insurance If Cam Iron or a Project Company a elects to discontinue; or page 163 b is unable to continue the self insurance referred to in Article 42.4 that Party must effect such insurance with an insurer against the insurable risks which are no longer the subject of self insurance.

43 EXCHANGE CONTROL FOREIGN CURRENCY AND BANKING OPERATIONS 43.1 Other Exchange Control Foreign Currency and Banking Operations. a The Foreign Exchange Agreement will address the foreign exchange control foreign currency and banking operational provisions applicable to the Project Operations and the financing thereof and will provide that in connection with the Project Cam Iron the Project respective Shareholders Affiliates and/or Companies and Contractors Subcontractors shall benefit from a the foreign exchange provisions in the Legislation and the following provisions their i ii iii iv v the opening and domiciliation in the State of a convertible foreign currency bank account. The depositing into this bank account of any amount of money that the Project Companies determine is

to be used to finance part of the costs of the Project Operations and the use of this account for activities related to the execution of the present Convention; the cashing in of all funds acquired or borrowed from abroad, including sales revenue from its share of the Sale Products the preserving of these funds offshore and the freedom to use any supplementary funds which are not necessary for their local businesses in Cameroon; the freedom to transfer out of the State dividends and interest payments of all kinds resulting from capital investments as well as earnings from the liquidation or disposal of any of the Project Companies assets; companies Contractors the offshore payment of Subcontractors and nonresident consultants who provide goods and services necessary to the Project Operations; and foreign Contractors and Subcontractors of foreign nationality and expatriate employees shall also benefit from the exemptions from all foreign exchange restrictions granted and; the right for the expatriates working for Cam Iron and for the Project Companies Affiliates and Contractors and Subcontractors residing in the territory of the State to transfer abroad part or all their earnings and their contributions paid to foreign pension funds by or on behalf of these employees for the purpose of retirement funds life insurance health insurance and other similar purposes.

b The Parties agree to provide a level of support to the Cameroonian banking industry with respect to the implementation of the Foreign Exchange Agreement.

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43.2 Support for Cameroonian Financial Institutions

a b c Cam Iron and U1e State shall cooperate to establish mechanisms which may include credit support from the State by which Cameroonian Companies will be able to meet the financial support obligations for companies wishing to be awarded contracts from the Project Companies to participate in the Project. Cam Iron and the State shall cooperate and use their reasonable efforts to negotiate with the Lenders to allow a portion of the debt financing for the Project to be provided or syndicated among banks regulated by the States national monetary authority Cameroonian Banks. All required bank guarantees provided by the Project Companies to the State will be issued by Cameroonian Banks provided they are available on terms and pricing competitive with international banks.

44 CONFIDENTIALITY

44.1 Confidentiality

44.1.1 States obligation of confidentiality

a Except this Convention and the Project Agreements which may be

published reviewed by Parliament and made available to the public through that process the State shall treat the Project Agreements as well as all reports analysis results logging geophysical data or maps provided by Can1 Iron or a Project Company under or pursuant to the performance of this Convention or the relevant Project Agreement as confidential. The State shall also treat as confidential any other document provided by Cam Iron or a Project Company on which the reference Confidential appears the Confidential Information. Confidential Information shall exclude information that i is or becomes generally available to the public or in the industry other than as a result of a disclosure by the recipient in breach of this Convention i.i was within the possession of the recipient or the Party with which he is affiliated prior to its being furnished to the recipient provided that the source of such information was not bound by a confidentiality agreement with or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such information iii is or becomes available to the recipient or the Party with which the recipient is affiliated on a non confidential basis from a source other than the provider. provided that such source is not bound by a confidentiality agreement with. or other contractual legal or fiduciary obligation of confidentiality to the provider with respect to such information or iv was independently developed. b Unless agreed in writing by the Project Company which disclosed the Confidential Information the State undertakes that neither the State nor any of its agents or representatives shall transmit any such Confidential Information to a Third Party which for clarification excludes Governmental Entities for as long as such information remains confidential I. c The Confidential Information shall remain confidential for the State until page 165 ... the rights and obligations arising under this Convention or the Project Agreement concerned by said information are extinguished for whatever reason. 44.1.2 Cam Iron and Project Companies obligation of confidentiality a b Cam Iron and the Project Companies undertake not to disclose to any Third Party the Confidential Information without the prior written agreement of the State. Subject to any applicable stock exchange or other legal disclosure requirements Cam Iron and the Project Companies shall not issue any public statements or press releases regarding the Project and shall cause their direct and indirect equity

holders and lenders to not issue any public statements regarding the Project without the prior written consent of the State which will not be unreasonably withheld. c The Confidential Information shall remain confidential for Cam Iron and the Project Companies until it falls in the public domain pursuant to Article 44. 44.1.3 Exceptions a Notwithstanding the provisions of Articles 44.1.1 and 44.1.2 i ii iii iv v vi the geological surface area maps and their interpretations may be utilised by the State at any time for incorporation into official maps provided data arising from the Project Operations is not disclosed; U1e State may publish annual statistical information provided data arising from the Project Operations is not disclosed; the State may disclose the return on its equity interests in the Project Companies; the State may use the Confidential Information for internal purposes that such and share it with Governmental Entities provided Governmental Entities shall be bound by the provisions of this Article 44; the State may disclose the Royalty tax and fiscal terms of the Project to mining permit applicants; the State Cam Iron or any Project Company may at any time transmit the Confidential Information to any expert appointed pursuant to the provisions of this Convention to professional consultants insurers Lenders Subsidiaries and Governmental Entities; accountants advisers. legal vii Cam Iron the State and the Project Companies may also transmit information to applicants for Expansion Capacity provided however that such communication is necessary for the application for Expansion Capacity; viii that they obtain from the Confidential Information recipient a paragraph 166 confidentiality undertaking similar to that of this Article 44; and ix Cam Iron and the Project Companies may also transmit information to Subsidiaries Lenders Assignees Contractors Subcontractors and Third Parties involved in the performance of this Convention or a Project Agreement provided however A B that such communication is necessary for the conduct of the Project Operations; and that they obtain from the Confidential Information recipient a confidentiality undertaking similar to that of this Article 44 a copy of which shall be provided to the State and which is directly enforceable by the State. b The confidentiality obligations in this Article 44 do not apply to information which must be disclosed i ii iii in accordance with Legislation the States transparency initiatives or enforcement of the Legislation or the States rights

under the Project Agreements; pursuant to a judicial decision by a competent court; to subsequent operators of the Railway or Mineral Terminal or mining operators in the Exploitation Area to users of the Mineral Terminal and Railway and to the Government of Republic of Congo provided such disclosure is limited to the agreements to which such users or the Government of the Republic of Congo are a party and the information addressed by those agreements; or iv for the purposes of assignments of interests in the Project in accordance with the provisions of this Convention. c The Parties are not entitled to confidential treatment of information relating to the timing and amount of payments or other benefits specifically due to the State under the terms of this Convention or of Taxes payable by Cam Iron and the Project Companies or the rates at which such Taxes become due or are assessed or information that is necessary to compute the amount of such payments or benefits becoming due.

45 SHARE OWNERSHIP AND OPERATION OF THE PROJECT COMPANIES

45.1 State warranties a Except as expressly provided in a Project Agreement the States role as a shareholder of the Project Companies does not modify their rights under the Legislation which allow the Project Companies to freely organise their internal operations subject to the terms of the Shareholders Agreements and notably to freely implement their articles of association in compliance with the provisions of the Legislation and in particular those of the Uniform Act on Commercial Companies. b Except as expressly provided in a Project Agreement the States role as a shareholder of the Project Companies does not modify their rights under the Legislation which allow the Project Companies the right to appoint their directors and management subject to the terms of the Shareholders Agreements in particular their president board members general manager financial managers commercial administrative and technical managers and statutory auditors in compliance with the provisions of the Legislation and in particular those of the Uniform Act on Commercial Companies. 45.2 State ownership of the Project Companies a As of the Date of Entry into Force the State i ii shall have an automatic unconditional and irrevocable right to hold directly or indirectly a non-dilutable equity interest equal to ten percent 10 of the share capital and voting rights of each Project Company other than Cam Iron and other Project Companies as

mutually agreed from time to time under the conditions set forth in Article 45.3 the State Interest; and shall acquire for one I CPA Franc an additional five percent 5 of the share capital and voting rights of each Project Company other than Cam Iron and other Project Companies as mutually agreed from time to time under the conditions set forth in Article 45.4 the Additional State Interest such that together with the State Interest the State shall own fifteen percent 15 of share capital and voting rights of each Project Company and this shall be in full discharge of its rights under Section II 2 of the Mining Code as of the Date of Entry into Force. Each of the Shareholders Agreements shall set forth the rights and obligations of the Additional State Interest regarding dilution. According to the terms of the applicable Shareholders Agreement if a Project Company issues any additional equity as part of its financing for the construction necessary to reach Project Commissioning after the time the State acquires the Additional State Interest and before Project Commissioning the State shall be issued or receive as a transferee additional equity to maintain its five percent 5 interest. b The State acknowledges that its right under Article 45.2a to a State Interest shall cease on the sale or disposal by the State of that State Interest other than in connection with a Change in Control of a Project Company as defined in Annex IX or transfer of the Exploitation Permit 8J1d for the avoidance of doubt this means that the State has no right to have its ten percent 10 nondilutable equity interest restored on the sale or disposal of all or any part of the State Interest. In the event of a sale or disposal of the State Interest in connection with Change in Control of a Project Company or transfer of the Exploitation Permit the 10 nondilutable equity interest shall be restored in the entity that direct or indirectly holds the Exploitation Permit. c The relationship between the Project Companies Shareholders shall be governed by the provisions of the applicable Shareholders Agreement which shall provide in addition to other items agreed to by the parties thereto that page 1168 i ii iii iv v each Project Company shall be managed by a board of directors within which the State shall have at least one permanent representative at all times; the State shall have a right to purchase equity in an affiliated company that will build own or operate the Beneficiation Power Station on the same terms as other investors implement the States antidilution protection regarding

new issuances in Article 45.2 aii; the items set forth on Annex IX shall be incorporated based on the language therein; the following decisions and any other items specified Shareholders Agreement shall require the consent of the State in a A B C D E to act as guarantor of indebtedness of a Third Party other than the Lender; other than as expressly contemplated in the Convention or in the ordinary course of such Project Companys business to transfer sell assign mortgage pledge lease or otherwise dispose of the assets in an amount in excess of one hundred and fifty ISO miJJion US Dollars adjusted by the Inflation in another Adjustment or currency in any Calendar Year; the corresponding amount to create or authorize the creation of or issue any other security convertible into or exercisable for any equity security having rights preferences or privileges senior to those held by the State; to issue any equity to employees service providers and consultants of the Project Companies; except to the extent included in the Finance Documents to incur i any iJJdebtdebtdebtdebt other than A indebtedness in an aggregate outstanding amount of less than ten percent I 0 of the value of the assets of the Project Companies and B unsecured intercompany indebtedness among the Project Companies to finance the cures of defaults under the Project Agreements and ii grant a security interest in connection with any indebtedness; F to enter into any business other than the Project; G H to amend alter or repeal any provision of the charter documents of a Project Company; and to purchase or redeem any equity which for avoidance of doubt will not restrict the anticipated restructuring described in the Bonus Payment Holiday. page 11eg 45.3 State Interest a b c Subject to the occurrence of the Date of Entry into Force by signing the respective Share Transfer Agreements and the associated Project Agreement with the Project Company in which the State is to acquire the State Interest the State will acquire that State Interest in that Project Company for one I CF A Franc. The State shall not be bound to participate in the calls for funds on account of the State Interest for any contribution required for the purposes of the Project Operations of which the Project Company is responsible in accordance with the provisions of the applicable Shareholders Agreement. The State may designate any public entity to bold the State Interest on its behalf in which case such public entity shall be bound with the State to the provisions of this Convention and

of the Specific Agreements to the extent that such provisions relate to the State Interest including the provisions required to apply and implement the provisions relating to the State Interest. 45.4 Additional State Interest a b Subject to the necurrence of the Date of Entry into Force by signing the the associated Project respective Share Transfer Agreements and Agreement with the Project Company in which the State is to acquire the Additional State Interest the State will acquire such Additional Siate Interest in hat Project Company for one I CFA Franc. The State shall be required to participate in all calls for equity contributions on accow1t of the Additional State Interest in a Project Company including for capital necessary to fund i subject to the Loan Carty Cap the required equity contribution as of the Date of Entry into Force necessaty for the initial funding of he Project in connection with the construction and development of the Mining Facilities the Railway and he Mineral Terminal; ii the Expansion Capacity; and iii to the extent required after compliance with Article I 0.8 the Beneficiation Facility; provided that until such time as the aggregate capital required to be contributed by the State equals the result of A sixtythree million 63000000 US Dollars; and B the States Development Costs which such amounts are equal to fifteen million 15000000 US Dollars such amow11 the Loan Carry Cap the State may in its sole discretion elect to fund any or all of its capital obligations not to exceed the Loan Carry Cap only wilh respect to the initial equity requirements of the Project in connection with the construction and development of the Mining Facilities the Railway and the Mineral Terminal lthrough a loan from Cam Iron and not other shareholders of a Project Company or from the Project Company pursuant to a mutually agreeable structure which such loan shall be repaid from the dividends issued and otherwise payable to the State on account of the Additional State Interest but no more han fLfty percent 50 of any particular dividend in the manner contemplated in the applicable Shareholders Agreement and such loan shall be evidenced by a note limited in recourse to the dividends payable on the Additional State Interest which shall accrue interest at a rate per annum equal to lesser of i the Reference Rate plus four hundred 400 v pagoJ170 basis points or ii the interest rate payable by the Project Companies under the Finance Documents. c After such lime as the State bas contributed capital in an amount equal to

the Loan Carry Cap. the State shall no longer be required to participate in the calls for funds on account of the Additional State Interest for any contribution required for the purposes of the initial funding requirements of the Project in connection with the construction and development of the Mining facilities the Railway and the Mineral Terminal and will not be diluted by any additional equity issued for such purpose. d The provisions of Article 45.3c apply to the Additional State Interest

IIIIIfIfiS 1111111111dis. 45.5 Equity funding of the State Interest and Additional State Interest If any equity calls are made by a Project Company on its Shareholders for the purposes of funding the Project in respect of the Project Operations the equity shares associated with the States Interest shall be contributed by the other Shareholders in proportion to their interests in the Project Company requiring the equity call and the equity associated with the States Additional Interest above the Loan Carry Cap with respect to the initial equity requirements of the Project in connection with the construction and development of the Mining Facilities the Railway and the Mineral Terminal shall be contributed by the other Shareholders in proportion to their interest in the Project Company requiring the equity call .. 45.6 Sale of State Interest and Additional State Interest a The State shall not sell all or any part of the State Interest other than to a Subsidiary or Government Entity at any time prior to the BF Commissioning Date and shall not sell all or any part of the Additional State Interest at any time prior to the third 3 anniversary of the Date of Entry into Force. b If the State should sell all or part of the State Interest or Additional State Interest other than to a Subsidiary or Governmental Entity then i ii any such sale is to be subject to the State complying with the terms of both the articles of association of the relevant Project Company and the terms of the relevant Shareholders Agreement; and that portion of the State Interest or Additional State Interest that is sold will lose the right to be free carried and to be non-dilutory and loan carried as applicable. c Where the State sells all of the State Interest and the Additional State Interest it shall cease to have the rights referred to in Article 45.2cv of this Convention. 45 .7 Third Party Equity a Subject to Article 45.3 the share ownership in each of the Project Companies may differ from time to time and without limitation may reflect Third Parties taking equity in a Project Company to assist in the funding or underwriting the

Mining Operations or the construction or page 1171 operation of the Railway or Mineral Terminal. b

If a Third Party that is intending to participate in the construction or operation of the Railway or Mineral Terminal takes equity in the applicable Project Company then its access to the Railway or Mineral Terminal is still subject to the operation of Article 18. 45.8 Role as State. Nothing in any Project Agreement or the States status as an equity holder of any Project Company shall limit the States ability to enforce Ote Legislation. and seek levy and enforce penalties for violations of the Legislation. The State may use Confidential Information and any other information available to it. 46

PROJECT FINANCE 46.1 Terms of Project Finance Cam Iron will be seeking to secure Project Financing which will be a b secured over the assets of Cam Iron the Project Companies the shares in Cam Iron and all the shares in the Project Companies; and to the extent possible limited in recourse to the assets referred to in Article 46.1 a such that the Parties are not required to support such financing by guarantees or other financial support other than as provided for in this Convention. 46.2 Assistance with obtaining Financing Each of the Project Companies and the State as a future shareholder shall use its reasonable endeavours to facilitate the conclusion of the Finance Documents to which it is a party. The State must approve any Finance Documents. 46.3 DebtEquity Ratio The State agrees that for the Term of the Project any introduction of Legislation which will have the effect of imposing upon Cam Iron any Project Company or its shareholders or their Shareholders any requirements to meet a minimum debt to equity ratio shall be deemed a Change in Law Event. 46.4 Shareholder Guarantees Where the conditions of the Project financing refinancing or working capital needs require the provision of guarantees by Sundance Cam Iron or one or more of their shareholders or the Affiliates such guarantees shall be provided without payment of any fees or subordination rights. 47 STATE PROJECT COMMITTEE 47.1 Composition and Purpose. a The State undertakes the administrative formalities relating to the implementation of all phases of the Project. Accordingly within a reasonable time following the Date of to establish conditions facilitate to page172 Entry into Force. the State shall establish a committee the State Project Committee to coordinate with Cam Iron and the Project Companies with respect to

performance of the States responsibilities under the Project Agreements and specifically as set forth in this Article 47. The State Project Committee shall be composed of a number of representatives of the State to be determined by the State collectively with appropriate expertise with respect to the Project. Unless the State determines otherwise the State Representative shall be a member of the State Project Committee. The State shall be entitled to replace its representatives or alternates at any time in its sole discretion by giving written notice to the other Party of such replacement. b c d

47. 1.2 Competence of the State Project Committee a The State Project Committee shall cooperate with Cam Iron and the Project Companies and offer reasonable administrative assistance with performance of the States obligations under this Convention and the Project Agreements where such obligations require the involvement of the State including i issuing Governmental Approvals including any required permits approvals for workers establishment and registration of Project Companies and other similar obligations under or related to Cam Iron the Project or Agreements; the Project Companies performance under ii ensuring that Cam Iron and the Project Companies or their Contractors and Subcontractors enjoy the Tax and other economic advantages set forth in this Convention; and iii generally assisting to minimize any delays associated with State consent and approval where required under the Project Agreements. b Notwithstanding anything to the contrary in the Project Agreements neither the State nor the State Project Committee or the representatives sitting thereon shall be liable for any failure to cooperate with respect to the items set forth in this Article 47 nor for any failure of Cam Iron or the State to obtain the Governmental Approval consent or other approval referenced in this Article 47.

47.1.3 Meetings of the State Project Committee The State Project Committee shall convene at such times as it deems necessary or appropriate in its sole discretion provided that Cam Iron or a Project Company may request that the State Project Committee convene to make a determination with respect to a particular matter for which the State Project Committee has authority. 47.1.4 Funding of State Project Committee v page 1173 I The State shall be responsible for funding the activities of the State Project Committee with respect to meetings and internal interaction among Government Entities. 47.1.5 State Project Committee

Process a b c d c The Project Companies shall promptly give notice Compensation Event Notice to the State Project Committee of any event or circumstances known to any of them which could reasonably be expected to result in a Compensation Event or Relief Event the Adverse Circumstances describing the Adverse Circumstances expected Compensation Event or Relief Event and impact on the Project Companies and the Project For clarification notices of Compensation Events and Relief Events that have already occurred should be given pursuant to Articles 38 and 39. Upon the receipt of a Compensation Event Notice the State Project Committee shall use its reasonable efforts to respond within twenty one 21 Days to the applicable Project Company and indicate whether or not the Adverse temporary it Circumstances Committee Response. Provided however that if the expected Compensation Event or Relief Event is of the type subject to Article 40.3 the procedures of that article shall govern. is granting or denying relief from If the Committee Response indicates that the State Project Committee is granting temporary relief from the Adverse Circumstances the State Project Committee does not send a Committee Response within twenty one 21 Days or the Committee Response is silent on whether temporary relief has been granted then to the extent the expected Compensation Event or Relief Event is the result of a delayed denied or withdrawn permit beginning at the time of the Compensation Event Notice the Project Companies shall be automatically temporarily granted any permit described in the Compensation Event Notice for which it has complied with all material requirements under applicable Legislation as needed to avoid the Adverse Circumstances other than a new research exploration or exploitation permit under the Mining Code. At any time the State Project Committee may send written notice terminating this temporary relief. The intent of this provision is to allow the Project Companies to mitigate any potential Compensation Event and Relief Event and the Project Companies shall use their reasonable efforts to mitigate any potential Compensation Event and Relief Event. Granting the temporary relief provided in this Article 47.1.5 is not intended to be the only method of resolving and mitigating an expected Compensation Event and Relief Event and the State and the Project Companies may seek other resolutions including the States enforcement of any denial or withdrawal

of any pennit identified in the Compensation Event Notice if the State chooses to do so. page 1174

48 OTHER PROVISIONS. 48.1 Security. The Project Companies shall provide reasonable security for the assets of the Project Companies and Project Facil ities. 48.2 Identification of Required Permits. T he Project Companies are responsible for identifying all approvals authorisations consents licences and permits necessary to fulfil their obligations under this Convention including for both the Construction Phase and the Exploitation Phase and the Project Agreemcms in accordance with the requirements contained in this Convention and the Project Agreements provided that the State shall reasonably cooperate upon request with respect to such identification. 48.3 Renewal of Permits. The State shall review in good faith all requests from the Project Companies that comply with the Legislation for required approvals authorisations consents licenses or pennits necessary to enable Cam Iron and lhe Project Companies to fulfil their obligations under this Convention and the Project Agreements. 49 ASSIGNMENTS IND STOCK TRANSFERS 49.1 No Assignments by Project Companies. Neither Cam Iron nor Project Company may assign including for security purposes. pledge or transfer any of its rights and obligations under a Project Agreement without the prior written consent of lhe State except where an Exempt Assignment and where such consent is required the State shall consider the request in a timely manner and shall not unreasonably withhold such consent. 49.2 Assignments by State. The State may assign all or any of its rights and obligations under a Project Agreement to a Govcnunent Entity; provided the State shall remain responsible and Hable for the discharge of all of the obligations assigned by the State to its Government Entity. 50 FAILURE 50.1 Breach Event. The breach events exhaustively listed below may lead to termination of the Contemplated Rights each a Breach or Breach Event; 50.1 .1 Permit Withdrawal Breach Event The events comprise a any material part of the Project Operations arc suspended for more than thirty six 36 months which shall be extended for an additional twelve 12 months at the cud of such thirty six 36 month period if price of High Grade Ore or Beneficiated Ore is less than seventy percent 70 of pago J175 the price of such ore in the Project Economic Model in accordance with Article 51 or otherwise without full scale resumption of work for a continuous period

of at least four weeks or in aggregate for more than seven hundred and twenty 720 Days over the prior ten JO years which shall not be subject to extensions based on price which suspension is not cured within thirty 30 Days of the States notification to Cam [ron or the relevant Project Company thereof; b a Bank Guarantee or Environmental Guarantee is not reestablished in its initial amount as provided for under this Convention within a time frame of ninety 90 Days as from the date of any claim relative to this guarantee filed by the State; c one of the following events affecting any Project Company occurs i the liquidation or windingup of a Project Company is initiated; ii iii a competent jurisdiction has issued a liquidation decision concerning one Project Company which has become definitive and may not be subject to appeal or opposition or a competent jurisdiction has issued a judicial settlement decision concerning one Project Company which became final and is not followed by a composition between the Project Company and the general body of creditors within ninety 90 Days following the said decision subject to the fulfilment by the entity concerned of its obligations under the Project Agreement to which it is a party in particular during the course of the appeal proceedings where required. d c a Delay Breach Liability Threshold was reached; or any item identified as a Permit Withdrawal Breach in any Project Agreement occurs each a Permit Withdrawal Breach or a Permit Withdrawal Breach Event. 50.1.2 Delay Breach Events The events comprise a b c the Project Commissioning has not occurred by the deadline specified in Article 3.6; the Beneficiation Feasibility Study or Beneficiation Power Station Feasibility Study is not prepared and sent to the State by the deadline specified in Article 10.1 d; there was a Positive Beneficiation Determination and the Project the Beneficiation Facility Companies began construction but Commissioning and the commissioning of the Beneficiation Power Station if the State does not elect its option to construct the Beneficiation Power Station does not occur prior to the BF Commissioning Deadline; d the Beneficiation Capacity Expansion Works are not completed in a page176 ;OJ manner enabling the Mine Project Company to reach ninety percent 90 of the Targeted Annual Production Capacity; e f a Report is not prepared and sent to the State by the deadline specified in Article 30.3; a Project Company fails to meet any material obligation to complete any significant

action by the deadline imposed under the Project Agreement to which it is a party or under applicable Legislation or any item identified as a Delay Breach Event in any Project Agreement occurs each a Delay Breach or a Delay Breach Event.

50.2 Notification of Breach a the State to implement Subject to the provisions of the Project Agreements all Breach Events the termination procedure for the entitled Contemplated Rights through a formal notice sent to the Project Company to which the Breach Event is attributable which indicates precisely i the Breaches invoked to which the formal notice pertains and ii the States intention to terminate the Contemplated Rights if within the time limit prescribed by the said formal notice Remedial Period the Notification of Breach.

b The Remedial Period shall not be less than i ii one hundred and twenty 120 Days for any Partial Withdrawal Breach Event in accordance with the provisions of article 352 of the Mining Code Implementing Decree and forty five 45 Days for any Delay Breach Event or where the relevant Project Company pays the daily penalties until the Delay Breach Liability Threshold is reached.

c During the whole Remedial Period activities undertaken pursuant to this Convention Project Agreements and the Project Contracts shall be continued in accordance with the terms of this Convention the other Specific Agreements and the Project Contracts.

50.3 Penalties for Delay Breach Events a In the event of a Delay Breach the State may require from the Project Company concerned and Cam Iron by formal notice sent to the Project Company to which the Delay Breach Event is attributable and to Cam Iron. to pay a per diem delay penalty in an amount equal to i seventy thousand 70000 US Dollars adjusted by the Inflation Adjustment per Day for Delay Breach Events referred to in Article page 1177 1 50.1.2 a b c or d; ii iii live thousand 5000 US Dollars adjusted by the Inflation Adjustment per Day for Delay Breach Events referred to in Articles 50.1.2e and 50.1 .21; or the amount specified in the Project Agreement adjusted by the Inflation Adjustment per Day for Delay Breach Events referred to in Article 50.1.2g.

b The aggregate amount of the penalties that may be received pursuant to Article 50.3a shall not exceed i individually with respect to a particular Breach or group of related Breaches fifty million 50000000 US Dollars adjusted by the Inflation Adjustment; and ii cumulatively adjusted by the Inflation Adjustment] two hundred million

200000000 US Dollars each a Delay Breach Liability Threshold. 50.4 State StepIn Rights If the State reasonably considers that a breach by any Project Company of any obligation under any of the Project Agreements or an event i is likely to create an immediate and serious threat to the health or safety of the public any material property or the Environment or ii is prejudicial to the ability to carry on the States Reserved Rights or other customary rights to a material degree then the State acting reasonably may if it considers that there is sufficient time and that it is likely that the Project Company or the Lenders through a substituted entity shall be willing and able to provide assistance require the applicable Project Company by notice to take such steps as are necessary or expedient to mitigate or rectify such state of affairs including if applicable due to breach of any Project Agreement to suspend a Contractor or Subcontractor and the applicable Project Company shall use all reasonable efforts obligation de moyens to comply with the States requirements as soon as reasonably practicable; a [f the State gives notice to the applicable Project Company under Article 50.4 and the Project Company either i ii does not confirm within five 5 Business Days of such notice or such shorter period as is appropriate in the case of an emergency that it is willing to take such steps as are required in such notice or does not present an alternative plan to the State to mitigate rectify and protect against such circumstances then the State may within a further five 5 Business Days accept or reject such plan acting reasonably; or fails to take the steps as are referred to or required in such notice or accepted alternate plan within such time as set forth in such notice or accepted alternate plan or within such time as the State acting reasonably will stipulate page 178 then the State may take such steps as it considers necessary or expedient to mitigate rectify or protect against such circumstances either itself or by engaging others to take any such steps. Such steps may include the partial or total suspension of the right and obligation of Cam Iron or the applicable Project Company to provide the relevant Project Operations but only for so long as the circumstances referred to in Article 50.4a persist. b c d The applicable Project Company shall ensure that all Finance Documents Project Contracts and contracts with the Contractors and Subcontractors permit the State to exercise its rights w1der this Article 50.4. The exercise by the

State of any of its rights under this Article 50.4 shall not reduce or affect in any way Cam Irons or the applicable Project Company's responsibilities under the applicable Project Agreement to perform the Project Operations. To the extent that any of the circumstances set forth in this Article 50.4 arise as a result of any actual or anticipated breach by any Project Company of its obligations under any Project Agreement then Cam Iron or the applicable Project Company shall pay the State the amount of all costs and expenses reasonably incurred by the State in exercising its rights under this Article 50.4 and an additional markup of twelve per cent 12 of such costs and expenses in respect of indirect costs and overhead not otherwise directly attributable to the exercise of such rights.

50.5 Termination for Breach a If a Project Company or Cam Iron i ii has not within the applicable Remedial Period cured any applicable Breach; or has committed a Permit Withdrawal Breach Event or a Permit Withdrawal Breach Event has occurred upon two 2 Days notice or such shorter period if reasonably warranted by the circumstances the State shall be entitled to exercise its rights the Contemplated Rights to A terminate all or any part of the Project Agreements and revoke all permits authorisations and approvals of Cam Iron and the Project Companies and shall be entitled to draw upon any Bank Guarantee surety or other security provided under any Project Agreement or otherwise collect compensation from Cam Iron or the applicable Project Company to indemnify the State for any actual or reasonably expected Losses resulting from such Permit Withdrawal Breach; and B terminate the Exploitation Permit and upon an election to exercise such rights to terminate such permits authorizations and approvals the Project Companies shall be deemed to have renewed such permits authorizations and approvals in each case pursuant to the provisions of this Article 50.5. b Any Notification of Breach issued pursuant to Article 50.2a shall be immediately deemed null and void if the Breach Events referred to in the Notification of a Breach have been cured prior to the conclusion of the applicable Remedial Period. page 1179 c Notwithstanding the foregoing the State shall not be entitled to terminate the Contemplated Rights if i the alleged Breaches constitute a direct and exclusive consequence of the occurrence of A a Confiscation; B a Force Majeure Event; or C a Legitimate Cause and the Breach results from the failure to comply

with a deadline or the completion of any action by such deadline as a result of the occurrence of such a Legitimate Cause or such a Force Majeure Event the Project Company concerned shall benefit from the automatic extension of this term¹ for a duration equal to the period during which the Force Majeure Event or the Legitimate Cause has lasted and the State shall be automatically reinstated in its rights pursuant to Article 50 if it identifies a Breach after the end of the extended term. ii iii if the Breaches are the result of a Delay Breach Liability Threshold being reached and the underlying breach is that the Project Commissioning has not occurred by the applicable deadline and the Project Companies have expended at least half of the capital expenditures required to reach Project Commissioning the Project Companies are diligently implementing a plan reasonably expected to achieve Project Commissioning within a reasonable time and the Project Companies continue to pay the penalties in Article 50.3 beyond the applicable limits; or if the Breaches are the result of a Delay Breach Liability Threshold being reached and the underlying breach is the Beneficiation Facility Commissioning or commissioning of the Beneficiation Power Station if the State has not elected to construct the Beneficiation Power Station has not occurred by the applicable deadline and the Project Companies have expended at least half of the capital expenditures required to reach the Beneficiation Facility Commissioning and the entity other than the State constructing the Beneficiation Power Station has expended at least half of the capital expenditures required to reach the Beneficiation Facility Commissioning the Project Companies and the entity constructing the Beneficiation Power Station other than the State are diligently implementing a plan reasonably Facility Commissioning and the commissioning of the Beneficiation Power Station within a reasonable time and the Project Companies continue to pay the penalties in Article 50.3 beyond the applicable limits. achieve Beneficiation expected to d If the Permit Withdrawal Breach Event is related to the failure to achieve Beneficiation Facility Commissioning or the commissioning of the Beneficiation Power Station by the required deadline as provided in Article 50.1 .2c termination of Project Agreements related to the Project Companies right to conduct the Railway Operations and Mineral Terminal Operations and termination and deemed renouncing of

the Exploitation Jennit and any other permits and authorizations of the pag.180 .;JJ Project Companies shall be delayed until the tenth I 0111Project Commissioning if such date has not already passed. anniversary of 50.6 Payment of the financial penalties a b Any financial penalties due pursuant to this Article must be paid within the maximum period referred to in the applicable Article or failing a specified date for the financial penalties imposed under Article 50.3 thirty 30 Days following the receipt by the Project Company concerned of a Notification of a Breach. In case of failure by the Project Company concerned to fully pay the financial penalties within the time frames specified in Article 50.6a the State may enforce the provisions of Article 31.1 a. 50.7 Sanctions a b The defaulting Project Company is also liable to the civil and criminal sanctions provided by the Legislation in the event of breach of the Legislation in particular those relating to protection of the Environment. h may not escape any such liability by reason of the participation of the State as shareholder of said Project Company. Infringements sanctioned in accordance with the provisions of the Legislation and those of this Article 50.7 shall be recorded in accordance with the Legislation. 51 DAMAGES Notwithstanding any provision to the contrary in this Convention or another Project Agreement no Party shall be liable for any indirect special punitive or consequential damages including lost opportunities lost profits and similar measures of damages. 52 SUSPENSION OF OPERATIONS 52.1 Suspension Notwithstanding any other provisions in this Convention but subject to Article 50 Cameroon has the right to suspend all or any part of the Project Operations by giving the State thirty 30 Days prior written notice or such lesser period where the circumstances dictate that it is not possible to give such a period of notice specifying a the whole or part of the relevant Project Operations to be suspended; and b the period for which that whole or part of the relevant Project Operations will be suspended and the detailed reasons for the suspension which are to be one of the following causes c Economic Hardship; d Force Majeure; e Legitimate Cause; or v page 181 f Confiscation. provided that in each case such cause must have had a Material Adverse Effect on the Project Company's ability to conduct the Project Operations provided however in the case of Economic Hardship the effect set forth in Article 40.3bii must also have occurred. Such suspensions

shall constitute a formal suspension by a Project Company for the purposes of this Convention and any applicable Project Agreement.

52.2 State Right to Dispute Notice a If within the thirty 30 Day notice period or such other notice period referred to in Article 52.1 the State does not agree that Cam Iron and the relevant Project Company has the bona fide reasons to seek suspension under this Convention and the relevant Project Agreement then it shall put its case to Cam Iron and the relevant Project Company and if those companies do not accept the States position then the matter becomes a Dispute and is then subject to the operation of Article 56. b Where there is a Dispute Cam Iron and the relevant Project Company must not suspend Project Operations until the Dispute is determined unless it is not possible or is impractical to continue Project Operations until the Dispute is resolved or determined.

52.3 Consequences of Suspension As soon as practicable after the commencement of suspension of the whole or any part of the relevant Projection Operations in accordance with Article 52.1. Cam Iron and the relevant Project Companies must use their best endeavours to minimise the costs and expenses associated with the suspension on that part of the Project Operations. For the avoidance of doubt Project Companies shall not be liable for any costs and expenses incurred as a result of the suspension. A suspension may be deemed a Permitted Withdrawal Breach even pursuant to Article 50.1.1 a.

52.4 Resumption Cam Iron shall as soon as they become aware that the reason for any suspension no longer exists promptly recommence the whole or the part of the relevant Project Operations suspended.

52.5 Continuing Obligations In the event of suspension of the whole or any part of the relevant Project Operations under this Article 51 Cam Iron and the relevant Project Companies shall be relieved during the suspension of any continuing obligations to conduct Project Operations under the provisions of this Convention and an applicable Project Agreement but not other obligations that by their terms or nature should continue.

52.6 Extension of delay If, due to suspension under this Article 51 and if applicable confirmation of the necessity of such suspension if Disputed performance of any of the obligations under this Convention or a Project Agreement is delayed the duration of the delay to the extent undisputed or confirmed in accordance with the Dispute Resolution procedures set forth in Article 56 shall be

added to any period provided under this Convention and/or such Project Agreement for the performance of the obligations. page 1182 53 RENUNCIATION OF PROJECT LEASES OR MINING TITLES 53.1 Renunciation of the Project Lease a b c d e f g The Project Company may before the expiry of the term of any Project Lease it holds renounce the operation of all or part of that Project Lease. In the event of a renunciation before Project Commissioning the Project Company concerned shall inform the State of such renunciation without any prior notice being required. In the event of a renunciation of a Project Lease after the Project Commissioning other than for that part of the Project Lease on which the Project Road Agreement to the Railway becomes a Public Road the Project Company shall specify the effective date of the renunciation which shall not be less than three hundred and sixty five 365 Days from the date of notice as to a portion of a Project Lease and seven hundred and thirty 730 Days for the entire Project Lease from the date of notice. In addition for information purposes only the Project Company shall give the State the reasons for such renunciation and the conditions of renunciation. Within sixty 60 Days of the notice the State shall officially notify the Project Company of whether or not it is prepared to accept such a rescission. Where the Project Companies apply to renounce all of the Project Leases as a consequence of the completion of Mining Operations the State must accept the renunciation subject to the memorandum referred to in Article 53.1e. Any renunciation shall not become effective until after the State and the Project Company or Project Companies as the case may be have jointly signed a memorandum in which the State and the Project Company or Project Companies as the case may be shall acknowledge that the terms of withdrawal referred to in this Convention have been complied with. The renunciation shall be confined by decree to the extent required by Legislation. Notwithstanding the foregoing the Project Lease relating to the Railway Area shall be renounced without further action by the Parties and solely with respect to the portions of the Project Road Adjacent to the Railway which will become Public Road pursuant to the Road Plan at such time as the applicable portions of the Project Road Adjacent to the Railway become Public Roads.

53.2 Renunciation of the Exploitation Permit a The Mine Project Company may before expiry of the

term of the Exploitation Permit renounce the operation of all or part of the Exploitation Permit in accordance with Article 32 of the Mining Code Implementing Decree by giving notice of such renunciation to the State at least two 2 years before the proposed date of such renunciation the that said renunciation will not be effective until provided requirements of Articles 53.2c and 53.2d have been completed. v pagt 1183 b The Mine Project Company may not renounce all of the Exploitation Permit in circumstances where both it and the other Project Companies do not renounce all the Project Leases as contemplated in Article 53.1 c The application must provide or indicate i the information required to identify the Exploitation Permit; ii iii iv v the results of the Mining Operations carried out as of the date of filing of the application; the status of Mine Project Companys undertakings and obligations already satisfied and those that remain to be satisfied; the reasons in particular technical and financial on which the application for renunciation is based the undertaking to fulfil all the outstanding obligations with respect to the Mining Operations pursuant to the Mining Legislation and this Convention and in particular the obligations contained in the Environmental and Social Assessment and Management Plan minimum programme of works relinquishment works in terms of protection of the Environment and safety of persons and Goods; and vi in case of partial renunciation A B a geographical map on a scale of 1:200000 of the area that the Mine Project Company wishes to retain specifying the surface area peaks and boundaries of the said delimited area; and a detailed report setting out the works already carried out and their results specifying to what extent the objectives indicated in the initial application have been achieved or altered and justifying the choice of the surface areas the Mine Project Company wishes to retain. d e The Minister may cause the application for renunciation to be supplemented or rectified if need be provided that he sends to the Mine Project Company a request within thirty 30 Days. As from approval of the application for renunciation the Mine Project Company shall cease the mining works and unless the State requires otherwise shall undertake rehabilitation works of the mining site concerned by the renunciation in accordance with the requirements of d1e Environmental and Social Assessment and Managen1ent Plan. Normal closure requirements consistent with the

environmental and safety standards set forth in this Convention and the Legislation shall apply but backfilling of the mine pits will however not be required. f The renounced Exploitation Permit will vest in the State on the date that all rehabilitation works of the mining site under the Environmental and Social Assessment and Management Plan have been completed. page 1184 53.3 Rights of the State Upon Renunciation. Upon renunciation of a Project Lease and Project Agreement with respect to the Railway or Mineral Terminal or the Exploitation Permit the State may terminate all or any part of the Project Agreements and Exploitation Permit and the applicable Handback Requirements set forth in Article 54.2 shall apply. 54 RIGHTS AND OBLIGATIONS AT THE END OF A PROJECT AGREEMENT 54.1 Condition of Project. As at the end of one or more Project Agreements for any reason whatsoever including its expiry or termination under the conditions set forth in this Convention or any renunciation pursuant to Article 53; and unless the rights and obligations resulting from said Project Agreement are taken over by an Assignee in accordance with the provisions of this Convention a the relevant Project Company or Cam Iron shall have or caused a Third Party to have i ii iii iv implemented and fulfilled all its obligations to rehabilitate the Project Area to which it is bound under the Environmental and Social Assessment and Management Plan Project Agreements and Legislation; designed and constructed each of the applicable elements of the Project to have been in accordance with the applicable design life requirements set forth in the Specifications; designed and maintained the condition of the applicable portion of the Project in a manner consistent with the applicable Project Company having performed its obligations under the Project Agreements and in accordance with the Operating Standards; designed and maintained the condition of the applicable portion of the Project in a manner consistent with the useful life standards established by the Specifications compliance with which shall be determined using the methodology and criteria set forth therein. So long as the useful life standards so established for all of the systems and equipment comprising the applicable portion of the Project are complied with on a weighted average useful life basis for all such systems and equipment in the aggregate it shall not be necessary to comply with the standard for each individual system or piece of equipment; and v

complied generally with all other obligations with respect to design construction and maintenance of the applicable portion of the Project under the applicable Project Agreement in each case which shall be controlled, verified and recorded in accordance with Article 54.2.1; and h the relevant Project Company shall release as of the expiration, termination or revocation of any Project Agreement to which it is a party all facilities, equipment and materials located within the relevant Project Area as directed in this Convention and the relevant Project Agreement and as required by Legislation.

54.2 Handback Requirements The requirements of this Article 54.2 constitute the Handback Requirements with respect to the Mineral Terminal Operations, Railway Operations and any other additional Project Operations that are set forth in the Project Agreements as a BOOT.

54.2.1 Handback Survey and Work Plan. In conjunction with the preparation of the maintenance plans for the Assets comprising the Mineral Terminal Facilities and the Railway Facilities commencing at least two (2) years prior to the applicable expiration date, the applicable Project Company shall provide the State an independent report prepared by an independent expert approved by the State, such approval not to be unreasonably withheld, and the State shall conduct a joint inspection and survey of the assets comprising the Mineral Terminal Facilities and Railway Facilities. If such survey provided indicates that any element of the Assets comprising the Mineral Terminal Facilities and the Railway Facilities on such expiration date or over the remainder of the term of the applicable Project Agreement is not in the reasonable discretion of the State reasonably likely to be in a condition consistent with the standards set forth in the applicable Project Agreement, then within sixty (60) Days of completion of the survey, the Project Company shall deliver to the State the Project Company's plan to perform the additional work necessary to meet the Handback Requirements together with a cost estimate for the work.

54.2.2 Determination of Hand back Security. Upon completion of the condition survey and work plan required by Article 54.2.1, the State a b may review and comment on the Project Company's performance plan; and shall after giving due consideration to the Project Company's cost estimate, determine in good faith the amount the Handback Security it reasonably believes necessary to complete the additional work required to

meet the Handback Requirements. 54.2.3 Establishment and Use of Handback Security Account. From time to time together the applicable Project Company shall cause to be deposited a Bank Guarantee letter of credit or mutually acceptable security in an amount equal to the Handback Security from a bank with an Acceptable Bank Rating. The Project Company shall have the right upon the submittal of certified requisitions to the State with full supporting receipts or other evidence of payment to reduce the undrawn amount of the Bank Guarantee letter of credit or other security by the amount of the cost of work performed. 54.2.4 Performance of the Handback Work and Further Inspection. The Project Company shall implement the handback plan proposed under Article 54.2.1 and take all other steps necessary to assure compliance with the Handback Requirements notwithstanding the States participation in the handback survey or the review of the Project Companys work plan or the fact that the actual cost of compliance may be higher than the amount of the Handback Security. At least one hundred and eighty (180) Days prior to the expiration or termination date the Project Company and the State shall conduct a further joint inspection and survey of the condition of the Assets comprising the Mineral Terminal Facilities and the Railway Terminal Facilities and the progress of the handback work. 54.2.5 Final State Condition Assessment. On or within five (5) Business Days after the expiration or termination date the State shall either (a) issue to the Project Company a Project Agreement Termination Certificate confirming compliance with the Handback Requirements and return any remaining Handback Security to the Project Company; or (b) notify the Project Company of its decision not to issue the Project Agreement Termination Certificate setting out each condition with respect to which the Assets comprising the Mineral Terminal Facilities and the Railway Terminal Facilities do not comply with the Handback Requirements and stating the States estimate of the cost of completing all work required for the Assets comprising the Mineral Terminal to comply with the Facilities and the Railway Terminal Facilities Handback Requirements. 54.2.6 Final Project Company Condition Assessment. The Project Company may within thirty (30) Days after receipt of the notice given in accordance with Article 54.2.5b object to any matter set forth in the notice giving details of the grounds of each such objection and setting out the Project

Company's proposals in respect of such matters. 54.2. 7 Final Compliance. If the Project Company did not as of the applicable expiration or termination date comply in all respects with the Handback Requirements the Project Company shall complete any work necessary to cause such compliance within sixty 60 Days of such expiration or termination date or pay to the State no later than sixty 60 Days after the expiration date an amount equal to the cost of completing any outstanding handback work so that the Assets comprising the Mineral Terminal Facilities and the Railway Terminal Facilities are in a condition which complies with the Handback Requirements. 54.2.8 Rehabilitation. All rehabilitation and remediation required by the applicable environmental Legislation and the Environmental and Social Assessment and Management Plan shall be performed regardless of whether the State elects to receive assets of the Project Companies pursuant to its rights under Articles 9.4 10.15. 12.2.1 and 13.4 unless the State gives written notice to the respective Project Company that the Project Company is excused from such rehabilitation and remediation and rehabilitation and remediation in other areas will only be performed if expressly required by another Project Agreement. page 187 55 FORCE MAJEURE AND LEGITIMATE CAUSE 55.1 Principle a If it becomes impossible for i Cam Iron to perform its obligations under this Convention; or ii a Project Company to perform its obligations under a Project Agreement to which it is a party or they can only be performed with delay such nonperformance or delay is not considered a breach of this Convention or other applicable Project Agreement if it results from an Ordinary Force Majeure Event Political Force Majeure Event or Legitimate Cause provided that Cam Iron or the Project Company as the case may be invoking the same duly proves a causal link between the nonperformance or delay and the alleged Ordinary Force Majeure Event Political Force Majeure Event or Legitimate Cause. b c d If it becomes impossible for the State to perform its obligations under this Convention or a Project Agreement to which it is a party or they can only be performed with delay such nonperformance or delay is not considered a breach of said agreement if it results from an Ordinary Force Majeure Event provided that the State duly proves a causal link between the nonperformance or delay and the alleged Ordinary Force Majeure Event. The Ordinary Force

Majeure can under no circumstances be invoked by either Cam Iron or a Project Company in order to avoid any of its payment obligations arising from this Convention or the Project Agreement to which it is a party. The Political Force Majeure and the Legitimate Cause may not in any case be invoked by the State to avoid any of its obligations under the provisions of this Convention or the Project Agreements.

55.2 Procedure a b Where one Party considers that it has been prevented from performing its obligations due to a Force Majeure Event or Legitimate Cause it shall promptly notify the other Parties setting out the cause of such event. If a Party or a Project Company asserts Force Majeure as an excuse for failure to perform one or more of its contractual obligations it must prove that it took reasonable steps to minimize delay or damages caused by foreseeable events that it has substantially performed its obligations not affected by the Force Majeure Event and that the other Party was timely notified of the likelihood or actual occurrence of the Force Majeure Event.

55.3 Extension of delay Termination of Project Agreement a If due to a Force Majeure Event performance of any of the obligations under this Convention or a Project Agreement is delayed the duration of the delay shall be added to any period provided under this Convention f; page 188 tJJ and or such Project Agreement for performance of this obligation. b If the force Majeure Event has lasted more than thirty six 36 months any Party may decide to terminate the relevant Project Agreement subject to the relevant Project Company's compliance with its obligations in terms of termination of the Project Agreement to which it is a party in accordance with the provisions of Article 54.

56 DISPUTE RESOLUTION 56.1 Amicable Settlement and Continued Performance a b c The Parties undertake to seek an amicable settlement of any Dispute Technical Dispute Expropriation Dispute or Convention Compensation Dispute by providing notification as provided under this Convention and by attempting to negotiate an amicable resolution. Nonetheless the parties to the dispute agree that they have no obligation to agree on a settlement. If a Dispute Technical Dispute Expropriation Dispute or Convention Compensation Dispute has not been resolved for any reason within sixty 60 Days following notification or such other period as the parties may agree to in writing any Party may initiate an applicable dispute resolution procedure as provided

in this Article 56. Notwithstanding anything in this Article 56 to the contrary during the pendency of any Dispute Technical Dispute Expropriation Dispute or Compensation Dispute the Project Companies and the Government shall be obliged to continue performance of the Project Operations and their obligations under the Project Agreements except to the extent that actual performance of a specific operation or obligation cannot be undertaken or completed without resolution of a Dispute or a Technical Dispute under the dispute resolution procedures in this Article 56.

56.2 Expert Procedure

a In the event of any Technical Dispute the parties agree to submit the matter to administered expertise proceedings in accordance with the Rules for Expertise of the International Chamber of Commerce the Expert Procedure; provided that the provisions of this Article 56.2 shall govern to the extent they conflict with the ICC Expertise Rules. The Technical Dispute shall be heard by an impartial and independent expert with expertise and other qualifications set forth in this Article 56.2 unless the parties otherwise agree in writing including regarding the language. The party submitting a request Request to the ICC for resolution of a Technical Dispute shall include the name contact details and qualifications of a proposed expert who satisfies the qualifications of this Article 56.2. The responding party or parties shall have ninety 90 Days after receipt of the Request either to agree to the appointment of the proposed expert or to nominate another expert who satisfies the qualifications of this Article 56.2. If within ninety 90 Days after receipt of the response or such other time frame as is otherwise agreed in writing by the parties the parties have not reached agreement on the nomination of an expert for confirmation by the ICC International Centre for Expertise the Centre the Centre shall make the appointment.

b Unless otherwise agreed in writing by the parties the expert shall to the greatest extent possible satisfy the following qualifications:

- i recognized expertise and professional experience in the field of the Project Operations concerned by the Technical Dispute; and fluency in both French and English sufficient to be capable of conducting the Expert Proceeding in French and English.
- c d c f g h i G The expert appointed or confirmed in accordance with the ICC Expertise Rules shall deliver the draft report of its findings to the Parties within ninety 90 Days following appointment or confirmation unless the parties otherwise

agree in writing to extend this deadline. The parties will then have a period of ten 10 Days to comment on the draft report and findings. The expert shall deliver its decision report and findings Decision within ten 10 Days after expiration of the comment period whether or not the expert has received comments from any or all of the parties. Any party that is dissatisfied with a Decision may within thirty 30 Days of receiving it send a written notice expressing its dissatisfaction to the other party or parties. If the expert fails to deliver its Decision within the time periods set out above then any party may within thirty 30 Days after this period has expired send a written notice to the other party or In either event the notice of dissatisfaction parties of its dissatisfaction. shall set out the matter in dispute and the reasons for dissatisfaction. A Decision shall be binding on all parties who shall promptly give effect to it unless and until it is revised in an amicable settlement or in any arbitral award issued pursuant to the arbitration procedure set forth in Article 56.3. If no Party has sent a written notice to the other party or parties expressing its dissatisfaction with the Decision within thirty 30 Days of receiving it the Decision shall become final and binding upon all Parties. If any party fails to comply with a Decision when required to do so the other party or parties may refer the failure itself to arbitration under Article 56.3. If any party submits such a written notice expressing its dissatisfaction with a Decision or if the expert does not issue its Decision within the time limits prescribed in this Article 56.2 the Technical Dispute in question shall be finally settled by arbitration in accordance with Article 56.3. Until the Technical Dispute is finally settled by arbitration or amicable settlement or unless the arbitral tribunal decides otherwise the Parties remain bound to comply with the Decision. An arbitral tribunal established under Article 56.3 in respect to a Technical Dispute that had been submitted to an expert under this Article 56.2 shall have full power to open up review revise or replace the expert's Decision and findings. The parties to any expert procedure under this Article 56.2 and their respective Affiliates shall keep the expert procedure confidential and shall not disclose to any person other than those necessary to the proceedings the existence of the expert proceedings any information submitted during paragraph 1190 k l m n the proceedings any documents submitted in connection with it. any oral submissions or testimony transcripts or any

Decision all of which shall be treated as confidential business information unless disclosure is required by law is part of an arbitration commenced under this Article 56 or is otherwise necessary for permissible court proceedings. The costs of the ICC Centre and the expert shall be borne equally by the parties. Unless the parties otherwise agree the expert procedure shall be conducted in English and French. All written submissions shall be made in both languages. Oral testimony shall be in English or French and shall be simultaneously translated in the other language. Each party shall bear its own translation costs. Notwithstanding anything to the contrary in this Article 56.2 the Parties may refer any technical matter to an expert under this Expert Procedure by mutual agreement. The Parties may adopt one or more separate agreements each a Technical Dispute Resolution Agreement that provides for resolution of one or more technical disputes under the Project Agreements. To the extent adopted such an agreement is anticipated to contain provisions establishing a permanent dispute adjudication board or boards with the authority to make binding decisions to speed the resolution of technical disputes. If a Technical Dispute Resolution Agreement is adopted and by its terms it supersedes this Article 56.2 and such Technical Dispute Resolution Agreement shall govern the Technical Disputes provided for therein. 56.3 Arbitration Procedure a b Any Dispute not amicably resolved under Article 56.1 any Technical Dispute not resolved under Article 56.2 and any Expropriation Dispute or Compensation Dispute or other Dispute not excluded by Article 56.4 shall be finally settled under the Rules of Arbitration Arbitration Rules of the ICC the Arbitration Procedure provided that in the event of conflict between the Arbitration Rules and this Article 56 the provisions of this Article 56 shall control. Any dispute to be resolved under this Arbitration Procedure shall be heard by three 3 impartial and independent arbitrators each of which must be capable of conducting the proceeding in both English and French. The Claimants and Respondents shall nominate one arbitrator each in the Request for Arbitration and the answer to the Request respectively. Where there are multiple claimants or multiple respondents the multiple claimants jointly or the multiple respondents jointly shall nominate their respective arbitrator. To the maximum extent permitted by law the State on the one hand and the Project Companies and all

other parties Project Parties on the other hand. shall retain their respective abilities to nominate one arbitrator each even if additional parties are included or added to the arbitration. If within ninety 90 Days of commencement of the arbitration the claimants have not nominated an arbitrator then the appointment shall be made by the ICC. If within ninety 90 Days after receipt of the answer to the Request the respondents have not nominated an arbitrator then the appointment shall be made by the ICC. The two arbitrators nominated or appointed in accordance with the above process shall then nominate the third arbitrator who shall act as the president of the arbitral tribunal. If within thirty 30 Days after the appointment of the second arbitrator the two arbitrators have not agreed upon the choice for the president then he or she shall be appointed by the ICC. Should any of the arbitrators die resign refuse not be confirmed or become unable to act before an award is issued the vacancy shall be filled by the method set forth in this clause for such arbitrators original nomination and appointment. c No Party shall be required before initiating or taking part in arbitration proceedings under this Article 56 to have first initiated or exhausted any administrative or judicial remedy before the Cameroonian jurisdictions unless the Parties to the Dispute under these particular arbitration proceedings had first specifically so agreed in writing or unless required under any applicable international treaty or customary international law principle. d The seat of the arbitration shall be Paris France. e l g h i The arbitration shall be conducted in English and French. All written submissions shall be made in both languages. Oral testimony shall be in English or French and shall be simultaneously translated in the other Language. Each party shall bear its own translation costs. The arbitration panel shall have authority to resolve its own jurisdiction. Any arbitration award shall be final and binding. Judgment on the award may be entered by any court having jurisdiction thereof. The Parties to any arbitration under this Article 56.3 and their respective Attorneys shall keep the arbitration confidential and shall not disclose to any person other than those necessary to the proceedings the existence of the arbitration any information submitted during the arbitration any documents submitted in connection with it any oral submissions or testimony transcripts or any award all of which shall be treated as confidential business information unless

disclosure is required by law or is otherwise necessary for permissible court proceedings including any recognition or enforcement proceedings. The parties to the arbitration shall pay their own costs related to the arbitration and shall share in equal portions the costs of the arbitrators and the panel. The State within the context of an arbitration commenced under this Article 56.3 waives its right to invoke immunity from jurisdiction of the arbitral tribunal.

56.4 Resolution of An Expropriation Dispute.

a An Expropriation Dispute defined in Article 41.4 shall be subject to amicable settlement under Article 56.1 or arbitration under Article 56.3 unless the dispute or any related expropriation claim could be or has been or could have been submitted for consultation or arbitration under the Convention on the Settlement of Investment Disputes between States and paragraph 192 Nationals of other States ICSID Convention or any applicable bilateral investment treaty and in each of those instances if not resolved by amicable settlement under Article 56.1 a Party may only raise the claim pursuant to the dispute resolution provisions of the ICSID Convention. The Project Parties on their own behalf and on behalf of their successors assigns and investors claiming pursuant to an applicable treaty hereby expressly acknowledge that the State does not consent to parallel successive or duplicative actions under Article 56.3 and before ICSID with regard to any claim or any related claim arising from the same alleged act of expropriation even if the claim or any related claim could be plead under a different body of law or legal theory.

56.5 Stipulations Concerning Dispute Resolution

a The State and Project Parties on their own behalf and on behalf of their successors assigns and investors stipulate that i ii iii the operations contemplated by this Convention constitute an investment within the meaning of article 251 of the ICSID Convention; Cam Iron is a national of a Member State of the ICSID Convention because it is Controlled by an Australian national for the purposes of article 252b of the ICSID Convention; and notwithstanding any applicable bilateral investment treaty any claim properly brought against the State by or on behalf of Cam Iron and the Project Companies or the Project Parties or their successors assigns or investors shall be submitted for resolution to ICSID and not to any domestic tribunal.

b The State and Project Parties stipulate that the operations contemplated by this Convention constitute an investment within the meaning of article 251 of the

ICSID Convention and that Cam Iron is a national of a Member State of the ICSID Convention because it is Controlled by an Australian national for the purposes of article 252b of the JCSID Convention.

56.6 Resolution of A Convention Compensation Dispute A Convention Compensation Dispute and any other Dispute shall be subject to amicable settlement under Article 56.1 or arbitration under Article 56.3 unless the dispute or any related claim could be has been or could have been submitted for consultation or arbitration under the Convention on the Settlement of Investment Disputes between States and Nationals of other States I CSID Convention or any applicable bilateral investment treaty and in each of those instances if not resolved by amicable settlement under Article 56.1 a Party may only raise the claim pursuant to the dispute resolution provisions of the ICSID Convention. The Project Parties on their own behalf and on behalf of their successors assigns and investors hereby expressly acknowledge that the State does not consent to parallel successive or duplicative actions under Article 56.3 and before ICSJD with regard to any claim or any related claim arising from the same alleged acts even if the claim or any related claim could be plead under a different body of law or legal hoory.

1 page]193 57 FUTURE AMENDMENTS

The Parties acknowledge that this Convention evidences a complex long term agreement between the Parties and that there may be circumstances which arise in the future that the Parties have not contemplated or fully or accurately discussed. Each Party agrees to consider a proposal from another Party to amend prior t.o the Date of Entry Into Force but shall have no obligation to enter into such amendment.

58 FURTHER DOCUMENTS AND ACTS The State Cam Iron and each of the Project Companies must in a timely manner execute such contractual documents and perform such acts as shall be reasonably requested by another Party necessary to give full effect to d1is Convention and the Specific Agreements including where an amendment to or modification of. the Project Agreements is required under the terms of this Convention.

59 LEGISLATION IN FORCE Tl1is Convention is govemed and construed in accordance with Legislation and the principles of internationallaw and shall be interpreted according to them.

60 ENTIRE AGREEMENT This Convention and the agreements contemplated in it represent the entire agreement between the

Parties with respect to the transactions contemplated hereby and thereby. This Convention and the contemplated agreements supersede any previous agreements including the Framework Agreement arrangements and understandings and agreements among the parties with respect to such transactions.

61 **NOWAIVER** No failure by either Party in requesting the strict performance by the other Party of the terms and conditions of this Convention or in taking the necessary measures available to it to guarantee such performance shall be deemed to be a waiver of any of the rights granted to it under this Convention. Each Party shall be bound to comply with the undertakings, liabilities and duties imposed on it by this Convention. Each Party shall be bound to perform the terms of this Convention in strict compliance despite any other Party's potential failure to act.

62 **SEVERABILITY** Each and every guarantee, undertaking and agreement contained in this Convention is and shall be construed to be a separate and independent guarantee, undertaking and agreement. If any term or provision of this Convention or the application of this Convention to any Party or in any circumstance shall to any extent be declared invalid or unenforceable by an arbitrator or by a court of competent jurisdiction, the remainder of this Convention or the application of such term or provision to Parties or circumstances other than those as to which it is invalid or unenforceable shall not be affected by it.

63 **PUBLIC ANNOUNCEMENTS** The State Project Companies and Cam Iron shall use their reasonable efforts to coordinate and agree on the language contained in any public announcement regarding this Convention; provided that nothing herein shall be deemed to limit any obligation of Cam Iron if it becomes listed or any controlling Shareholder that is listed on a recognized stock exchange on the one hand or the State on the other may comply with any applicable legislation.

64 **NOTICES**

64.1 **Method of delivery** All communications or notices to the Parties set forth in this Convention shall be drawn up in French and English and if delivered in Cameroon delivered personally with acknowledgement of receipt. Delivery to parties outside of Cameroon shall be delivered personally or sent by reputable internationally delivery company charges prepaid with acknowledgment of receipt. Delivery to parties designated to receive copies of notices shall not constitute delivery to the specified Party.

64.2 **Address**

esses a Notices to the State shall be served at the following address or any replacement addressees given in accordance with this Convention

REPUBLIC OF CAMEROON General Secretary Office of Prime Minister Yaounde Republic of Cameroon and Ministry of Industry Mines and Technological Development Yaounde Republic of Cameroon With a copy to The State Project Committee at the address provided by such committee; and Patton Boggs LLP Attn Joseph L. Brand 2550 M Street N.W. Washington DC 20037 and Patton Boggs LLP Attn Douglas C. Boggs 2550 M Street N.W. Washington DC 20037

b Notices to Cam Iron shall be served at the following address or any replacement addressees given in accordance with this Convention

page195 CAM IRONS.A Attention The General Manager 2eme etage Immeuble Hibiscus. Avenue Charles De Gaulle Hippodrome Yaounde Republic of Cameroon and With a copy to Attention The Managing Director SUNDANCE RESOURCES LTD Level35 Exchange Plaza 2 The Esplanade Penh Western Australia Australia 65

MODIFICATION This Convention shall only be modified by written agreement of the Parties duly signed by both Parties or their duly authorised representatives. 66

SIGNATURES This Convention is signed in four 4 original copies in English and four 4 original copies in French. and inconsistencies between the versions is governed by Article 2.11. Made in Yaounde Republic of Cameroon. on the first date indicated above. The Republic of Cameroon Represented by Cam Iron SA presented by Emmanuel BONDE Minister of Technological Development

page196 0 Directeur General CAMIRONS.A 1 MODEL PETROLEUM CONCESSION AGREEMENT FOR ONSHORE AREA 2009

ARTICLE 2 DEFINITIONS RIGHTS AND LIABILITIES EXPLORATION WORK PROGRAMME RELINQUISHMENT WORKING INTEREST OWNERSHIP DISCOVERY AND DEVELOPMENT ASSIGNMENT SURRENDER OF AREAS AND TERMINATION OF AGREEMENT VALUE FOR ROYALTY PURPOSES ROYALTY RIGHT OF ACQUISITION OF PETROLEUM DISPOSAL OF PETROLEUM FOREIGN EXCHANGE IMPORTS AND EXPORTS TAXATION MANAGEMENT AND OPERATIONS REPORTS AND INFORMATION TRAINING AND EMPLOYMENT CONTRIBUTION TO JOINT OPERATIONS DEVELOPMENT FINANCING PIPELINES REFINERY LPG AND NATURAL GAS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

16 17 18 19 20 PAGE NO. 4 510 11 1214 15 16 1721 2223 24 25 2631 32 3334 3536 37 38 39 40
41 42 43 3 PROCESSING PLANTS OTHER MINERALS AUDIT PRODUCTION BONUSES
INSURANCE AND INDEMNIFICATION PARENT COMPANYBANK GUARANTEE
EFFECTIVENESS AND DURATION FORCE MAJEURE ARBITRATION PROTECTION OF THE
ENVIRONMENT MISCELLANEOUS AND APPLICABLE LAW NOTICES 21 22 23 24 25 26 27 28
29 30 31 44 45 46 47 4849 50 51 52 5356 5758 5960 Annexure I II APPENDIX A III IV V VI VII VIII
IX X XI MAP OF THE AREA AND GEOGRAPHICAL DESCRIPTION JOINT OPERATING
AGREEMENT ACCOUNTING PROCEDURE STANDARD FORM OF DEVELOPMENT AND
PRODUCTION LEASE S.R.O. 678 1 DATED 2004 LIST OF MACHINERY AND EQUIPMENT
REQUIRED FOR JOINT OPERATIONS C.No.101493ICMCON. DATED 13 JUNE 1994 LIST OF
COMMISSARY STORES BANK GUARANTEE PARENT COMPANY GUARANTEE GIVEN
PURSUANT TO ARTICLE XXV OF THE PETROLEUM CONCESSION AGREEMENT WORK
UNITS WELL HEAD GAS PRICE ILLUSTRATION AS PER PRICING PROVISIONS OF POLICY
2009 61 62101 102118 119120 121126 127129 130131 132 133134 135 136139 140141 4 MODEL
PETROLEUM CONCESSION AGREEMENT THIS PETROLEUM CONCESSION AGREEMENT this
Agreement is made and entered into between THE PRESIDENT OF THE ISLAMIC REPUBLIC OF
PAKISTAN which term shall include his successors and assigns of the first part hereinafter referred
to as THE PRESIDENT through the Ministry of Petroleum Natural Resources Government of the
Islamic Republic of Pakistan and existing under laws of having its principal office at which term shall
include its successors and assigns hereinafter referred to as XYZ of the second part. And Local
Company a company existing under Laws of Pakistan having its registered office at Pakistan which
term shall include its successors and assigns hereinafter referred to as ABC of the third part and
GOVERNMENT HOLDINGS PRIVATE LIMITED if applicable a company existing under Laws of
Pakistan having its office at Pakistan which term shall include its successors and assigns hereinafter
referred to as GHPL of the fourth part. WITNESSETH WHEREAS THE PRESIDENT is desirous that
exploration be undertaken for the discovery and production of Petroleum in Pakistan; and

WHEREAS XYZ and ABC represents that they are financially sound and have adequate technical expertise and experience in exploring for developing and producing Petroleum and recognizes the importance to Pakistan of the development of its Petroleum resources; and WHEREAS XYZ and ABC are desirous of undertaking Petroleum exploration development and production operations; in Pakistan in conjunction with GHPL if applicable and WHEREAS THE PRESIDENT is willing in the lawful exercise of the authorities vested in him and in particular by virtue of his powers under the Regulation of Mines and Oilfield and Mineral Development Government Control Act 1948 XXIV of 1948 as amended and the Rules as hereinafter defined to grant to XYZABC and GHPL if applicable the Concessions and rights hereinafter more particularly set forth; NOW THEREFORE THE PRESIDENT XYZ ABC and GHPL if applicable hereinafter individually referred to as the Party and collectively as the Parties agree as follows Model Petroleum Concession Agreement 2009 5

ARTICLE1 DEFINITIONS Whenever used in this Agreement the following terms shall have the meanings set forth below

1.1 1.2 Accounting Procedure means the procedure as outlined in Appendix A of Annex II. Affiliate means a company or other entity directly or indirectly effectively controlling or effectively controlled by or under direct or indirect effective common control with a specified entity. For the purposes of this definition control when used with respect to any specified entity means the power to direct administer and dictate policies of such entity it being understood and agreed that it is not necessary to own directly or indirectly fifty percent 50 or more of such entitys voting securities to have effective control over such entity but ownership direct or indirect of fifty percent 50 or more of such entitys voting securities shall automatically indicate effective control and the terms controlling and controlled have meanings corresponding to the foregoing.

1.3 Agreement means this Petroleum Concession Agreement and its annexes.

1.4 1.5 Allowed Transportation Cost means the reasonable actual cost as defined in the Rules. Appraisal or Appraisal Programme means an activity or programme carried out to evaluate and appraise a Discovery in the Area pursuant to the Rules and this Agreement.

1.6 Appraisal Well means a well drilled pursuant to an approved Appraisal Programme.

1.7 Arms Length Sales means the sales as

defined in the Rules. 1.8 1.9 Area means the entirety of the area or areas outlined and more particularly described in Annex I less any portion thereof which may be relinquished or surrendered under the terms of this Agreement. Barrel or BBL means a quantity equivalent in volume to fortytwo 42 United States Gallons adjusted to sixty degrees Fahrenheit 60oF and pressure of 14.65 pounds per square inch PSI after correction for basic sediments and water BSW. 1.10 Calendar Month or Month means any of the twelve months of the Calendar Year. 1.11 Calendar Year means the period from January 1 to December 31 both inclusive according to the Gregorian Calendar. Model Petroleum Concession Agreement 2009 1.12 Coal Bed Methane or CBM as defined in the Rules. 6 1.13 Commercial Discovery means a commercial discovery of petroleum as defined in the Rules. 1.14 Commercial Production means commercial production of Petroleum as defined in the Rules. 1.15 Condensate means the liquid Petroleum excluding Crude Oil and LPG produced at surface by processing or separation of Natural Gas from a Gaseous Gas Condensate Reservoir. 1.16 Crude Oil means the liquid Petroleum other than Condensate and LPG produced by separation at the surface from a Liquid Reservoir in its natural state before the same has been refined but after extraction of water and foreign substances. 1.17 Commencement of Commercial Production means the first occurrence of Commercial Production in an Area. 1.18 Contract Year means a period of one Year from the Effective Date or any anniversary thereof 1.19 Date of Commercial Discovery means the date when the Government approves a Commercial Discovery pursuant to Article 1.13. 1.20 Date of Significant Gas Discovery means the date when Operator formally notifies the Director General Petroleum Concessions in accordance with Article 6.4 hereof that a Significant Gas Discovery has been made. 1.21 Day means a continuous period of twentyfour 24 hours beginning at 8 A..M. Pakistan Standard Time or such other time as may be mutually agreed by the Parties. 1.22 Director General Petroleum Concessions DGPC means any officer or authority appointed by the Government to exercise the powers and perform the functions of the Director General Petroleum Concessions under the Rules. 1.23 Designated Area means the area pertaining to a Discovery that does not merit Appraisal or is not a Commercial Discovery or a Significant Gas Discovery as

provided for in Article 6 .2. 1.24 Development or Development Operations means any activity carried out under an approved Development Plan in accordance with the Rules. 1.25 Development Plan means the plan submitted by the Operator for the development of a Commercial Discovery which has been approved by the Government pursuant to the Rules. Model Petroleum Concession Agreement 2009 7 1.26 Development Well means a well drilled in accordance with the approved Development Plan for the purpose of producing Petroleum. 1.27 Discovery means discovery of Petroleum as defined in the Rules. 1.28 Discovery Area means the area as defined in the Rules. 1.29 Dollar or means the lawful currency of the United States of America. 1.30 Effective Date means the later of the date on which the Licence has been granted or this Agreement has been executed. 1.31 Expenditure for purposes other than assessment of Income Tax means expenditure incurred in connection with or inental to the conduct of Joint Operations whether chargeable to the capital or the revenue account including operating costs whether or not with respect to producing wells. Such expenditures are more particularly classified and identified and set forth in the Accounting Procedure. 1.32 Exploration or Exploration Operations means the search for Petroleum in the Area previously not known to have existed using geological geophysical and other methods and the drilling of Exploration Wells as more particularly defined in the Rules. 1.33 Exploration Well means an exploration well as defined in the Rules. 1.34 Field Gate means a point as defined in the Rules. 1.35 GaseousGas Condensate Reservoir means a Petroleum reservoir which under reservoir conditions of original temperature and pressure is predominantly in the gaseous phase. 1.36 Government means the Federal Government of the Islamic Republic of Pakistan. 1.37 Good International Oilfield Practices means as defined in the Rules. 1.38 Joint Account means the set of accounts maintained by the Operator in accordance with the Accounting Procedure and normal accounting practices in which the Operator shall record all charges Expenditures and credit made by it in carrying out the Joint Operations hereunder which are chargeable or creditable to the Working Interest Owners as provided herein. 1.39 Joint Operations means all marine and land activities including but not limited to Petroleum exploration prospection development and production activities

conducted by Working Interest Owners under and pursuant to the terms and provisions of this Agreement and the Joint Operating Agreement. It includes any platform subsea facilities gasoil separation pressure maintenance pipeline and Model Petroleum Concession Agreement 2009 8 other transportation storage or other ancillary activities necessary to facilitate the production processing storage transportation and disposal of Petroleum. 1.40 Joint Operating Agreement JOA means the Joint Operating Agreement attached hereto as AnnexII. 1.41 Lease means any and all Petroleum Development and Production Leases which may be granted by the Government in accordance with the Rules. 1.42 Licence means a licence for Petroleum Exploration granted in accordance with the Rules. 1.43 Liquid Reservoir means a Petroleum reservoir which under reservoir conditions of original temperature and pressure contains hydrocarbons predominantly in the liquid phase. 1.44 Liquefied Petroleum Gas or LPG means a mixture of Propane and Butane separated from Natural Gas by compression extraction or other processes and marketed in conformity with the quality and specifications established by Pakistan Standard Specification No. 17051976 for Commercial Butane Propane Mixture as amended from time to time. 1.45 Minimum Expenditure means the minimum Expenditure referred to in Article 3 in respect of the initial term of the Licence or any renewal thereof. 1.46 Minimum Work or Minimum Work Programme means the minimum work programme referred to in Article 3 in respect of the initial term of the Licence or any renewal thereof. 1.47 Ministry means the Ministry for the time being in charge of Petroleum affairs. 1.48 Natural Gas means all petroleum which at standard atmospheric conditions of pressure and temperature are in a gaseous phase including nonhydrocarbon gases which are in association with and produced together with such gaseous hydrocarbons. 1.49 Operating Committee means the Committee constituted pursuant to this Agreement and the Joint Operating Agreement. 1.50 Operator means the entity designated by the Working Interest Owners to carry out the Joint Operations pursuant to this Agreement and the Joint Operating Agreement and approved by the Government pursuant to the Rules. 1.51 Pakistani Incorporated Petroleum Company means a company incorporated for the purpose of petroleum exploration development and production and

existing under the laws of Pakistan. Model Petroleum Concession Agreement 2009 9 1.52 Petroleum means all liquid and gaseous hydrocarbons as defined in the Rules. 1.53 . Policy means the Petroleum Exploration and Production Policy 2009 1.54 Price Notification Period means six monthly period starting at eight 8 A.M. Pakistan Standard Time on 1st January and 1st July each year except that the first period may commence from the start of Commercial Production till 30th June or 31st December as the case may be. 1.55 Production or Production Operations means activities not being Development Operations undertaken in order to extract save treat measure handle store and transport Petroleum to storage or loading points or both and to carry out any type of primary and secondary operations recompression maintenance of pressure and water flooding and all related activities such as planning and administrative work and shall also include maintenance repair and replacement of facilities and well workovers conducted after the commencement of Commercial Production. recycling including 1.56 Reference Crude means the crude oil or a basket of crude oils imported into Pakistan during the first six months periods of the seventh months immediately preceding the relevant price Notification Period for the purpose of gas price calculation. 1.57 Reference Crude Price or RCP means the weighted average CF price FOB price plus freight on AFRA basis of the Reference Crude. 1.58 Rules means the Pakistan Petroleum Exploration and Production Rules 2009 including all Schedules. Rule means a rule contained within said Rules. 1.59 Significant Gas Discovery means a Discovery of Natural Gas from an Exploration Well in an Area as defined in the Rules. 1.60 Significant Gas Discovery Area means the portion of the Area defined by Working Interest Owners with the approval of the Government pursuant to Article 6.6 covering a Significant Gas Discovery 1.61 Surrender means the termination or expiry or surrender of rights with respect to the whole or any part of the Area including the expiration of rights according to the terms of the Licence the Leases this Agreement and the Rules. 1.62 Surrendered Area means whole or part of the Area with respect to which the rights of a party have terminated by Surrender or by assignment or by termination of the business pursuant to this Agreement. 1.63 Well head Value or Value means the value of the Petroleum as defined in the Rules. 1.64 Work Unit has

the same meaning as specified in Annex X. Model Petroleum Concession Agreement 2009 10 1.65 Working Interest means all or any undivided interest in the entirety of the Petroleum Concessions rights and obligations and liabilities imposed by the Rules this Agreement the Licence and any Leases granted pursuant to the Rules and this Agreement including the enjoyment of the exclusive right to explore and prospect for develop produce sell and otherwise dispose of Petroleum from the Area proportionate to which all working interest owners are obligated to bear and pay its share of all costs and Expenditures including royalties on production and rentals in exploring and prospecting for drilling developing producing selling and otherwise disposing of Petroleum from the Area. 1.66 Working Interest Owner means an owner of a Working Interest. 1.67 Year means a period of twelve consecutive Months according to the Gregorian calendar. Model Petroleum Concession Agreement 2009 11 ARTICLE2 RIGHTS AND LIABILITIES 2.1 THE PRESIDENT hereby grants to XYZ ABC and GHPL if applicable the Petroleum Concessions and other rights more particularly described in this Agreement including but not limited to conducting or causing to be conducted Petroleum exploration prospecting development and Production Operations hereunder including the transportation whether by pipeline or otherwise storage terminalling export and sale of Petroleum subject to the provisions of this Agreement. 2.2 In respect of Joint Operations conducted under the authority of this Agreement the Licence or any Leases granted over any part of the Area a b c XYZ ABC shall be the Operator subject to the provisions of the Joint Operating Agreement and no change in operatorship will take place without the consent of the Government. The Joint Operations shall be conducted diligently with due regard to Good International Oilfield Practices and in conformity with the requirements of the Rules and all applicable laws and regulations. Every important agreement and contract relating to Joint Operations shall be consistent with the provisions of this Agreement and the Rules. 2.3 This Agreement contemplates Joint Operations which may require the construction and operation of temporary or permanent exploration and production facilities including pipelines both within and outside the Area. THE PRESIDENT subject to relevant rules laws and policies agrees to assist the Working Interest Owners in the carrying out of all Joint

Operations contemplated hereunder including the construction and operation of such facilities and in obtaining for the Operator and its contractors and subcontractors such communication permits radio telex telefax telephone PABX etc. or other clearances permits and authorizations as shall be necessary or convenient in this regard including the approval required for opening a branch office in Pakistan. 2.4 This Agreement does not create a partnership or any taxable entity but is solely a joint operating arrangement among the Parties. Model Petroleum Concession Agreement 2009 12

ARTICLE 3 EXPLORATION WORK PROGRAMME 3.1 THE PRESIDENT has prior to or simultaneously herewith granted to XYZ ABC and GHPL if applicable a Licence in accordance with the Rules. 3.2 a The Licence shall be for an initial term of five 5 years. divided into two phases each referred to as a Phase I and Phase II the first having a duration of three Contract Years and the second having a duration of two Contract Years. The Licence shall expire at the end of Phase I if the Licencee does not fulfil its Minimum Work Commitment of Phase I and it does not commit at least one firm exploration well for entering into Phase II. Subject to Working Interest Owners meeting the requirements relating to renewal set forth in the Rules the Licence may be renewed for two 2 further renewal periods not exceeding two years each if the Working Interest Owners request for such a renewal in writing to THE PRESIDENT in accordance with the Rules. Subject to the Working Interest Owners meeting the requirements of the Rules the Licence may be renewed for the purpose of Appraisal of a Discovery and shall be extended for drilling an Exploration Well in progress in accordance with the Rules. The Licence will also remain valid and automatically extended until a decision is made on a pending application for the grant of a Lease in accordance with the Rules. b The Operator shall commence Joint Operations within ninety 90 Days after the Effective Date. 3.3 Subject to the provision of this Article 3 the Minimum Work Programme and Minimum Expenditure to discharge the obligations during the initial term provided for in the Rules shall be as follows a INITIAL TERM i Phase One Contract Years 1 2 and 3 100 Work Units or a bench mark as indicated by the Government at the time of Invitation to bid plus Work Units per Grid Area in the original Area for each of Contract Years and Work Unit offered as bid obligation at the time of bidding ii Phase

Two Contract Year 4 and 5 At least one exploration well to be agreed by the Government before entering into Phase II along with corresponding work units. The above Work Units shall be accomplished at any time prior to the end of respective Phase of the Initial Term. Model Petroleum Concession Agreement 2009 13 3.4 The Working Interest Owners hereby agree to pay to DGPC as compensation for nonperformance an amount equal to the value of total unaccomplished Work Units the value of 1 Work Unit shall be specified at the time of Invitation to Bid during relevant Phase of the Initial Term or during the First Renewal or Second Renewal. In addition if Working Interest Owners do not carry out the Minimum Work during any Phase of the Initial Term or the First Renewal or Second Renewal and do not pay the above compensation as per Rules this Agreement shall automatically terminate upon the termination of the respective Phase or Renewal in which the Minimum Work was not carried out and Working Interest Owners shall not have any right to further extensions or Renewals provided however this Agreement will continue to be valid for any Commercial Discoveries. 3.5 Working Interest Owners shall keep DGPC informed of the progress of each well and shall promptly or forthwith inform DGPC of their proposals for testing; b c test as per Good International Oilfield Practices potentially productive horizons indicated by wireline recording or otherwise; and promptly undertake the technical evaluation of the test results and of all other relevant subsurface data and submit the same to DGPC as soon as possible. 3.6 Where the number of Work Units accomplished during any Period a Period being any Phase of the Initial Term and/or any Renewal exceeds the Minimum Work for that Period the amount of such excess work shall be carried forward and credited against the Minimum Work obligation of the next succeeding Period. 3.7 3.8 Neither Appraisal Wells nor seismic surveys carried out as part of an Appraisal Programme drawn up pursuant to Article 6 shall discharge the Minimum Work set out in Article 3.3. a On the Effective Date and prior to the first Day of commencement of each Phase and where this Agreement has been renewed pursuant to Article 3.2a prior to the first Day of commencement of each Renewal each Working Interest Owners shall provide an irrevocable and unconditional bank guarantee or a parent company guarantee substantially in the form specified in Annex VIII IX hereto

or any other guarantee as required and notified by the DGPC. If DGPC elects to require a bank guarantee the aggregate amount of the unconditional bank guarantees shall be equal to twenty five percent 25 of the product of value of one Work Unit as specified in Article 3.4 above and Total Work Units committed as under i ii for the Phase I of the Initial Term the total number of Work Units as specified in Article 3.3ai and for the Phase II First Renewal or Second Renewal the total number of Work Units as agreed with the Government before entering into the subsequent Phase or renewal.

Model Petroleum Concession Agreement 2009 14 3.9 b The amount of the bank guarantees submitted pursuant to Article 3.8a shall be reduced on prorata basis at the end of each Contract Year on the request of the Working Interest Owners concerned provided that the requirements set forth in Article 25.2 are fulfilled. c As long as the Government holds a majority shareholding in any Working Interest Owners such WIOs will not be required to provide a parent company or a bank guarantee. If the Operating Committee is of the opinion that it is impossible to satisfactorily complete an Exploration Well to the objective depth or formation the Working Interest Owners shall drill a substitute well within 6 months after the abandonment of the Exploration Well in order to discharge the Minimum Work obligation in respect of Phase I II and subsequent Renewals as the case may be. The Phase II of Initial Term or the Renewal Period as the case may be shall be extended in accordance with the Rules for a period of time equal in length to the time needed for drilling and testing the substitute well. In the case of failure to drill the substitute well the obligation to drill a particular well shall be deemed to have been satisfied provided the Working Interest Owners Surrender the area covering such geological structure and pay THE PRESIDENT the amount corresponding to the undischarged work units. 3.10 For the purpose of establishment of a Discovery Area if there is difference of opinion between Working Interest Owners and THE PRESIDENT and the Parties are unable to reach a decision within thirty 30 Days the boundaries of such Discovery Area shall be determined by a recognized Petroleum consultant to be appointed by THE PRESIDENT in consultation with the Working Interest Owners within twenty 20 Days of the expiry of the aforesaid period to provide an independent opinion for the purpose whose opinion shall be

binding on the Parties. The cost of such a consultant will be charged to the Joint Account. Model Petroleum Concession Agreement 2009 15 ARTICLE4 RELINQUISHMENT 4.1 On or before the end of Phase I of the Licence the Working Interest Owners shall relinquish not less than 30 of the original Area. 4.2 4.3 4.4 4.5 The Working Interest Owners shall relinquish an additional area equal to 20 of the remaining Area on or before the end of the Phase II. The Working Interest Owners shall relinquish an additional area equal to 10 of the remaining Area on or before the end of the first renewal. Except as otherwise provided herein or in the Rules the Working Interest Owners shall relinquish the remainder of the original Area at the expiration of the Licence or final renewal thereof. The shape of the Area to be relinquished shall be determined by the Working Interest Owners provided however that a the Working Interest Owners shall inform the Government of the description and the portion or portions of the Area to be relinquished at least ninety 90 Days in advance of the date of relinquishment or such lesser period as DGPC may allow b the Working Interest Owners shall consult with the Director General Petroleum Concessions regarding the shape and size of each individual portion of the Area being relinquished and c the area being relinquished shall be of sufficient size and convenient shape conforming to the grid system in force to enable Petroleum operations to be conducted thereon. 4.6 Working Interest Owners shall not be obligated to relinquish pursuant to Articles 4.1 4.2 and 4.3 any part of the Area which has been made subject to a Lease and for which an application for grant of a Lease has been submitted in accordance with the Rules. 4.7 Upon at least ninety 90 Days written notice to the Government the Working Interest Owners shall have the right to relinquish any portion of the Area subject to Article 4 and Article 7 and such portion can be credited against the mandatory relinquishments pursuant to Articles 4.1 4.2 and 4.3. 4.8 Relinquishment made in accordance with this Article 4 shall not relieve the Working Interest Owners of a b the obligations to make payments to the Government under the Rules and this Agreement prior to such relinquishment; and or the Minimum Work and Minimum Expenditure obligations set out in Article 3. Model Petroleum Concession Agreement 2009 16 ARTICLE5 WORKING INTEREST OWNERSHIP 5.1 As of the Effective Date and during the validity of this

Agreement the Working Interests throughout the Area will be as under Local Company ABC and or GHPL if applicable XYZ 15 ZoneI 20 ZoneII 25 ZoneIII 85 ZoneI 80 ZoneII 75 ZoneIII For the purpose of this Article 5 the Local Company means a company existing under the laws of Pakistan with more than 50 shares held by Pakistanis. 5.2 At all times ABC will maintain the Working Interest which is specified in Article 5.1 Required Minimum Local Working Interest provided however in the event any local EP company other than GHPL subsequently intends to reduce its working interest in a joint venture whereby the collective working interests of local EP companies including that of GHPL becomes lower than the above threshold specified for required minimum local Working Interest GHPL shall have the first right to make up the balance required minimum Pakistani working interest on point forward basis without reimbursement or payment of any past cost GHPL will remain nonoperator in such joint ventures. 5.3 Consortia of companies not meeting the minimum required local working interest can still be granted an exploration licence provided such companies advertise in the press within 15 days of the grant inviting Pakistani incorporated companies and GHPL to participate in the joint venture on the full participation basis under standard Joint Operating Agreement. The Pakistani incorporated companies and GHPL shall have the option to participate in the joint venture within 30 days. 5.4 The foreign EP companies shall be deemed to have fulfilled their obligation with respect to the minimum local participation if Pakistani incorporated companies and/or GHPL do not take any interest. 5.5 Notwithstanding anything contained herein the GHPL may elect to contribute its share of Expenditure out of funds allocated to it from IBRD Loan or any other loan in which event the Operator shall be required to adopt the procedures for procurement of goods and services of such loan funds in accordance with procurement procedures guidelines laid down by loan giving agency provided such terms and conditions are in accordance with the prudent Good International Oilfield Practices and do not hinder or delay the Joint Operations hereunder. 5.6 The Working Interest Owners may produce Petroleum from the Area as test or early production as may be permitted by the Government pursuant to the Rules prior to the grant of a Lease. Model Petroleum Concession Agreement 2009 17 ARTICLE 6 DISCOVERY AND DEVELOPMENT 6.1 6.2

In the event of a Discovery of Petroleum in the Area Operator shall promptly notify the DGPC in accordance with the Rules and by further notice in writing within three 3 Months from the date of termination of drilling and testing of the respective Exploration Well inform the DGPC whether or not the Discovery in the opinion of Operator merits Appraisal. If Operator notifies the DGPC that the Discovery does not merit Appraisal DGPC shall have the option on three 3 Months written notice to require Operator to immediately relinquish the Designated Area unless the Operator has provided valid justification to retain the area covering the Discovery. The Designated Area shall a b not comprise more than the vertical projection to the surface of the geological structure on which the Exploration Well resulting in the Discovery was drilled; and be determined based on geophysical and other technical information obtained from the Discovery. 6.3 If Operator notifies DGPC that the Discovery merits Appraisal Operator shall submit to the DGPC for approval within six 6 Months from the date of completion of the Exploration Well resulting in the Discovery an Appraisal Programme which highlights the Appraisal area and provides for the Appraisal of the Discovery in the most efficient and timely manner. 6.4 Not later than three 3 Months from the date on which the Appraisal Programme has been completed or within such further period as the DGPC may reasonably allow taking into account the relevant technical and economic conditions Operator shall by notice in writing inform the DGPC whether or not in the opinion of Operator the Discovery is a Commercial Discovery or a Significant Gas Discovery. 6.5 Where Operator has not informed the DGPC that the Discovery is a Commercial Discovery or Significant Gas Discovery the DGPC may by notice in writing require Operator to immediately relinquish the Designated Area unless the Operator has provided valid justification to retain the area covering the Discovery. The Designated Area shall be determined as specified in Article 6.2. 6.6 In the event the Operator considers that the Discovery is a Commercial Discovery or a Significant Gas Discovery Operator will select the Discovery Area or Significant Gas Discovery Area which should not exceed the geological entity covering the Commercial Discovery or a Significant Gas Discovery subject to the limitations of the Area. The Operator will request DGPC for retention of Significant Gas Discovery for period as allowed in accordance with the Rules

together with the justification. If the Operator does not declare a Significant Gas Discovery as a Commercial Discovery during the allowed retention period the Operator shall relinquish the Significant Gas Discovery Area and the Licence shall terminate Model Petroleum Concession Agreement 2009 18 automatically upon the termination of the allowed retention period. If Operator declares a Commercial Discovery during the allowed retention period Operator will select the Discovery Area out of the Significant Gas Discovery Area and the provisions of the Agreement and the Rules for grant of approval of Development Plan and the grant of Lease shall apply mutatis mutandis. 6.7 Where the Operator has by written notice notified the DGPC that the Discovery is a Commercial Discovery such notice shall accompany a detailed report on each Commercial Discovery as provided for in the Rules for approval by DGPC. Within a period not later than six 6 Months from the Date of Commercial Discovery or within such time period as may be allowed by DGPC the Operator will submit an application for grant of Lease together with Development Plan for the each Commercial Discovery for approval by DGPC. 6.8 The report on each Commercial Discovery shall cover all the relevant factors as required under the Rules including but not be limited to a b c d e f g the chemical composition physical properties and quality of Petroleum discovered; the thickness and extent of the production strata; petrophysical properties of the reservoirs; the productivity indices for wells tested at various rates of flow; permeability and porosity of the reservoirs; the estimated Production capacity of the reservoirs; and all relevant economic and commercial information which is necessary for the determination of a Discovery as a Commercial Discovery. 6.9 Each Development Plan shall contain detailed proposals by Operator for the construction and establishment of all facilities and services for and inental to the recovery storage and transportation of Petroleum from the Area as required under the Rules including but not limited to a b c description of the nature and characterization of reserves data statistics interpretation and conclusion of all aspects of the geology reservoir evaluation Petroleum engineering factors reservoir models estimates of reserves in place possible Production estimates nature and ratio of Petroleum fluids and analysis of producible Petroleum; proposals for the Development and Production of the

Commercial Discovery including possible alternatives work programmes and budgets and proposals relating to the disposition of Natural Gas. Operator should make specific recommendations as the particular Development proposal that it would prefer. This should include information regarding projections of the economics and profitability of the Joint Operations related to such Development proposals. proposals relating to the spacing drilling and completion of wells the Production and storage installations and transport and delivery facilities required for the Production storage and transport of Petroleum. Such proposals will include but not be limited to to Model Petroleum Concession Agreement 2009 19 for the transportation of i ii iii iv the estimated number size and Production capacity of Production facilitiesplatforms if any; estimated number of Production wells; particulars of Production equipment and storage facilities; particulars of Petroleum including pipelines; particulars of equipment required for the Joint Operations; feasible alternatives v estimate of the rates of Production to be established and projection of the in accordance with Good possible sustained rate of Production International Oilfield Practices under proposed Development proposal andor alternative Development proposals; cost estimates under such Development proposal and alternative Development proposals if any; proposals related to the establishment of processing facilities if any; safety measures to be adopted in the course of the Joint Operations including a contingency plan and measures to deal with emergencies; anticipated adverse impact on environment and measures proposed to be taken for prevention thereof and for general protection of the environment; a description of the organizational set up of Operator in Pakistan; an estimate of the time required to complete each phase of the proposed Development; a description of the measures to be taken regarding the employment and training of Pakistani personnel in accordance with the Rules; a description of the abandonment plan to be implemented whenever a piece of equipment or facility or installation needs to be abandoned prior to or on termination of this Agreement; a map or maps of the outline of the discovered reservoirs together with technical or other back up justification; and a plan for utilization of local goods and services. d e f g h i j k l m n

6.10 When the Government has approved the Development Plan in accordance with the Rules it

shall grant to the Working Interest Owners a Lease covering the Discovery Area in accordance with the Rules promptly provided the Working Interest Owners have furnished all requisite information to DGPC. The said Lease shall on the basis of the available seismic and well data comprise the Discovery Area to enable each Commercial Discovery to be developed and produced efficiently. The duration of the Lease shall not exceed the time limit as indicated in the Rules.

6.11 After approval of a Development Plan Operator shall carry out the Joint Operations substantially to such in accordance with modifications which may be necessary from time to time which are approved by the DGPC in accordance with the Rules.

6.12 Not less than ninety 90 Days prior to the beginning of each Calendar Year following the commencement of regular shipments of Crude Oil Condensate LPG or Natural Gas Operator shall prepare and furnish to DGPC a forecast statement and the basis thereof setting forth by quarters the total quantity of Crude Oil Condensate LPG and Natural Gas by quality grade and gravity that Model Petroleum Concession Agreement 2009 20 Operator estimates can be produced saved and transported hereunder during such Calendar Year.

6.13 Operator shall with respect to each Lease a b c annually update and submit to DGPC maps required under Article 6.10m on the basis of the then most recent well geological and geophysical information indicating on such maps which reservoirs are in Commercial Production including such parts of reservoirs which are required for water injection; within ten 10 Years of the commencement of Commercial Production from each Commercial Discovery relinquish such part of Development Area which does not cover wholly or partially the vertical projections to the surface of reservoirs from which Commercial Production is being obtained or which are not required for water injection as per approved Development Plan; and provide DGPC with a map with description of the relinquished areas and map referred to in Article 6.13a and b upon such relinquishment.

6.14 DGPC shall within ninety 90 Days of receipt of the maps specified in Article 6.13c inform Operator in writing of a b DGPC approval of the relinquished areas or the need for Operator to relinquish further areas which are not vertical projections to the surface of reservoirs from which Commercial Production is being obtained or which are not required for water injection. Operator shall within sixty 60 Days of DGPC

notification under Article 6.14b relinquish such area unless Operator disputes such notification in writing to DGPC in which case dispute resolution proceedings may be initiated by Operator through a sole expert unless mutually agreed otherwise the cost of which will be charged to Joint Account.

6.15 The Operator shall have an organisation in Pakistan with sufficient competence and capacity to conduct the Joint Operations as required under the Rules. 6.16 If following the Discovery of Petroleum a Working Interest Owner considers the Discovery to be a Commercial Discovery it may give notice in writing to the other Working Interest Owners stating in the said notice all the reasons for the evidence supporting its opinion and inviting the other Working Interest Owners to participate in the preparation of a Development Plan. If within ninety 90 Days of receipt of the notice other Working Interest Owners inform the Operator that they agree to participate in the Development of the Commercial Discovery the Operating Committee shall define the Discovery Area and instruct the Operator to proceed with the preparation of the Development Plan. If any Working Interest Owner elects not to join in the Development of the Commercial Discovery it shall assign its Working Interest in the Commercial Discovery on a pro rata basis to the remaining Working Interest Owners as may be mutually agreed. The remaining Working Interest Owners have the right to define the Discovery Area and develop the Commercial Discovery at their own cost and THE PRESIDENT shall in accordance Model Petroleum Concession Agreement 2009 21 with the Rules grant a Lease to the remaining Working Interest Owners. If a Working Interest Owner proceeds to develop the Commercial Discovery at its own cost it shall own all of the production from such discovery and shall bear all the cost of developing and operating such Commercial Discovery and the other Working Interest Owners shall assign to it all their rights title and interest in and to the Petroleum in the Discovery Area in accordance with the Rules provided always that such assignment shall be and remain contingent upon the Working Interest Owners carrying out such development expeditiously. Model Petroleum Concession Agreement 2009 22 ARTICLE7 ASSIGNMENT SURRENDER OF AREAS AND TERMINATION OF AGREEMENT 7.1 In accordance with the Rules neither XYZ ABC nor GHPL if applicable shall sell assign transfer convey or otherwise dispose of all or any part of its

rights or Working Interest under this Agreement the Licence and any Lease without the prior consent in writing of the Government. 7.2 a In the event XYZ or ABC or GHPL if applicable wishes to sell transfer convey or otherwise dispose of or assign all or any part of its rights or Working Interest to a third party or an Affiliate the request for such assignment shall be processed in accordance with the Rules provided however the provisions of this Agreement regarding Required Minimum Local Working Interest will be fully observed before such application for assignment is made to the Government. The terms and conditions of any assignment shall be subject to the approval of the Government. b c d The rights and privileges granted to and obligations assumed by the assignor under and pursuant to this Agreement the Licence and any Lease to the extent of such assignment shall inure to the benefit of and be binding upon the assignee. As a condition to any assignment the assigning Working Interest Owners shall provide to THE PRESIDENT an unconditional undertaking by the assignee to assume all obligations of this Agreement the Licence and any Lease. In the case of a partial assignment notwithstanding such undertaking the assigning Working Interest Owner remains jointly and severally liable with the assignee for performance of its obligations. Any assignment covering less than a five percent 5 Working Interest shall not entitle an increase the number of representatives on the Operating Committee and assignor and assignee shall agree upon a single representative to represent their combined Working Interest. 7.3 If any Working Interest Owner deems it advisable to Surrender his rights in any Licence such Working Interest Owner shall notify THE PRESIDENT and other Working Interest Owners in writing of the proposed Surrender provided that such Surrender shall not take place during the Phase I of the initial three years term of the Licence before due fulfilment of Minimum Work and other obligations. If within thirty 30 Days thereafter the other Working Interest Owners notify such surrendering Working Interest Owner in writing that they wish to retain their Working Interest with respect to such Licence any such Working Interest Owner shall to the extent that it legally may assign all its rights and obligations therein to the other Working Interest Owners prorata to their respective Working Interests or as they may agree otherwise. 7.4 If no Commercial Discovery is made within a period of five 5

years from the Effective Date THE PRESIDENT shall have the right to terminate this Agreement

Model Petroleum Concession Agreement 2009 23 7.5 7.6 7.7 7.8 7.9 provided Working Interest Owners have not applied for extension or renewal pursuant to the Rules. If all Joint Operations are terminated a Working Interest Owner subject to the Rules shall be entitled to its share of non committed remaining funds and other assets of the Joint Account. If the circumstance or circumstances that result in termination under the Rules are remedied by the Working Interest Owners within a period of sixty 60 Days following the notice of termination as aforesaid or where the breach is incapable of remedy and the Working Interest Owners have offered a reasonable compensation in respect thereof such termination shall not be effective. Except as provided for in Article 27.3 if the circumstance or circumstances that would otherwise result in termination under the Rules are the result of Force Majeure then termination shall not take place so long as such Force Majeure continues and for such period thereafter as THE PRESIDENT may determine to be reasonable. The termination of this Agreement for whatever reason shall be without prejudice to the obligations incurred and not discharged by the Working Interest Owners prior to the date of termination. In the event of termination pursuant to the Rules THE PRESIDENT may require the Working Interest Owners for a period not exceeding one hundred eighty 180 Days to continue Petroleum production activities at the cost of the Government until the right to continue such production has been transferred to another entity. 7.10 Within ninety 90 Days after the termination of this Agreement pursuant to Article 7.6 unless THE PRESIDENT has granted an extension of this period the Working Interest Owner shall complete all reasonable and necessary action as directed by THE PRESIDENT to avoid environmental damage or hazard to human life or third party property.

Model Petroleum Concession Agreement 2009 24 ARTICLE8 VALUE FOR ROYALTY PURPOSES

8.1 8.2 Value for all Petroleum produced and saved under a Licence or a Lease will be determined in accordance with the Rules. To facilitate computations the Value of Petroleum shall be determined at the end of each Month as the weighted average value of all such transactions that took place during the Month.

Model Petroleum Concession Agreement 2009 25 ARTICLE9 ROYALTY 9.1 The

Working Interest Owners shall pay to the Government a royalty equal to 12.5 of the Value of Petroleum produced and saved in accordance with the Rules. Model Petroleum Concession Agreement 2009 26 ARTICLE10 RIGHT OF ACQUISITION OF PETROLEUM 10.1 Should THE PRESIDENT require the Working Interest Owners to meet the internal requirements of Pakistan according to the Rules the following shall apply i If in any year there is Projected Domestic Demand as determined by an entity designated by the Government in excess of production from indigenous source THE PRESIDENT may require Working Interest Owners to sell Crude Oil in Pakistan on a prorata basis with other producers in Pakistan according to the Crude Oil production of each producer in a year. The President shall give the Working Interest Owners at least three Months notice in advance of such requirements and term of the supply will be on an annual basis. Whenever a Working Interest Owner is selling Crude Oil to THE ii PRESIDENT or his designee such Working Interest Owner shall be entitled to receive a price in US per barrel for such Crude Oil delivered at its cost to the nearest operating refinery which shall be calculated as under a 1 The arithmetic average of the FOB spot prices during the Month of delivery of a basket of Arabian Persian Gulf Crude Oils or a Crude Oil comparable in quality to Crude Oil produced under this Agreement as mutually agreed; or 2 In the event no agreement is reached as to the basket or a comparable Crude Oil or on related matters then the basis shall be FOB market price of a Crude Oil as may be mutually agreed which can be demonstrated to be applicable to contracts negotiated with unrelated parties for Arms Length Sales under which the consideration is wholly cash payable on normal commercial terms. Plus freight on Average Freight Rate Assessment AFRA basis from Ras Tanura to Karachi as notified from time to time which is deemed chartered rate. Plus or minus a quality yield differential between Crude Oil produced under this Agreement and the Crude Oil referred to in Article 10.1 ii a above. For this purpose the differential shall be determined on yield value based on refinery operating conditions where the Crude Oil will be processed and at mutually agreeable reference prices of Petroleum products prevailing in the ArabianPersian Gulf and published in an internationally recognized publication acceptable to the Parties. b c 10.2 a Working

Interest Owners will be allowed to contract with Natural Gas transmission and distribution companies and third parties other than residential and commercial consumers for the sale of their share of Model Petroleum Concession Agreement 2009 b c d 27 Natural Gas in Pakistan at negotiated prices in accordance with applicable laws rules and regulations. Subject to the considerations of internal requirements and national emergencies Working Interest Owners will be allowed to export their share of Crude oil and Condensate as well as their share of Natural Gas based on export licences to be granted by the concerned regulator. The Windfall levy shall be applicable on such export licences. For the purpose of the grant of such export licenses for Natural Gas the export volumes will be determined in accordance with L15 concept provided a fair market value for such gas is realized at the export point. Under the L15 concept the Natural gas reserves that exceed the net proven Natural Gas reserves in Pakistan including the firm import commitments visvis Natural Gas Projected Domestic Demand for next fifteen years can be considered for export. Once Natural Gas has been dedicated for exports licenses for such export volumes shall not be subsequently revoked. If the foreign Working Interest Owners sell Natural Gas to third parties in Pakistan and want to remit sale proceeds in foreign currency abroad Government shall allow such Working Interest Owners to freely remit a guaranteed percentage of their sale proceeds. The guaranteed percentage shall be 75 of the total gross revenues from any Lease in Zone I 70 in Zone II and 65 in Zone III. The remaining gross income in Rupees can be used to pay royalties taxes and any other payments to the Government as well as to meet local currency expenditures. Subject to overall market demand the Working Interest Owner may request and the Government will purchase their share of pipeline specification gas through a nominated buyer which is effectively controlled by it in acceptable daily monthly and yearly volumes to meet the internal demand in an economical manner provided there are no infrastructure constraints. The delivery point shall be at the Field Gate. The Governmentgas buyer nominated by GOP shall pay the price for gas at the Field Gate as set out hereof. In addition the guaranteed percentage for foreign exchange remittance as contained in Article 10.2c above will apply to such sales. e Where a Nominated Buyer agrees in principle to

purchase Natural Gas pursuant to Article 10.2.d above i. The Working Interest Owners shall construct operate and maintain the gas pipeline connecting the field to the Field Gate in accordance with the Policy applicable law Rules and regulations. All costs associated with such pipeline will be borne by the Working Interest Owners and no transportation tariff will be paid by the Government gas buyer nominated by the Government for this purpose. ii. The gas producer can arrange for the construction and operation of the connecting gas pipeline outlined in i above through an independent Model Petroleum Concession Agreement 2009 28 third party provided the title of such pipeline is transferable to the Government on expiry or early termination of relevant petroleum rights No tariff will be payable by the Government gas buyer nominated by the Government for this pipeline. iii. At the request of the Working Interest Owners the buyer nominated by the Government for purchase of the gas can consider the laying of a pipeline if required from the Field Gate to the nearest transmission system at its own cost. iv. If an interconnecting pipeline is proposed to be constructed by a third party or the buyer the producer will be required to confirm the requisite gas supply volumes pressures technical parameters on standard supply term contract basis for a period to be agreed between the parties and its tariff shall be determined and notified by the regulator in accordance with the Policy applicable law rules and regulations. reserves and other f Whenever a Working Interest Owners is selling pipeline quality Natural Gas of acceptable specification to the Government nominated buyers it shall receive a price per Million British Thermal Unit MMBTU. The price to be paid to a Working Interest Owners shall be determined for a six 6 Monthly period hereinafter referred to as the Price Notification Period starting at eight 8 a.m. P.S.T. on 1st January and 1st July each year except the first period which may commence from the start of Commercial Production till 30th of June or 31st of December as the case may be. a The price of acceptable pipeline quality Natural Gas shall be computed and notified in United States Dollars per MMBTU according to the following formula $P_g - P_m \times D_z \times C_f$ Where P_g is the Gas Price in USD per MMBTU P_m is the Applicable Marker Price in USD per barrel determined as follows When RCP is upto USD 20barrel P_m equals RCP; When RCP is higher than USD 20barrel and not over USD 30barrel P_m

equals 20 plus 50 of the incremental RCP above USD 20barrel; When RCP is higher than USD30barrel and not over USD 40barrel Pm equals 25 plus 30 of the incremental RCP above USD 30barrel; When RCP is higher than USD 40barrel and not over USD 70barrel Pm equals 28 plus 20 of the incremental RCP above USD 40barrel; Model Petroleum Concession Agreement 2009 29 When RCP is higher than USD 70barrel and not over USD 100barrel Pm equals 34 plus 10 of the incremental RCP above USD 70barrel The RCP ceiling of USD 100barrel would be reviewed after every five years or as and when the pricing dynamics significantly change in the international market. Dz is the zonal index which shall have the value of 67.5 for Zone III; 72.5 for Zone II 77.5 for Zone I Cf is the Applicable Conversion Factor the weighted average of the heating values expressed in MMBTU per barrel for the basket of ArabianPersian Gulf Crude Oils imported in Pakistan Illustration of the gas price working under 2009 Policy at CF price of US 35barrel US 140barrel is attached as Annexure XI XII wherein floor price is reflected as US 10 per barrel. b. c. d. e. f. g. Not later than twenty 20 Days prior to the commencement of the Price Notification Period during which the Operator expects first Natural gas production to commence the Operator shall submit to the Authority concerned a calculation of the Reference Crude Price in US Dollars and the Corresponding natural gas price to be fixed on the first Day of such Notification Period. Thereafter Operator shall submit to the Authority concerned the relevant Reference Crude Price and the corresponding natural gas price calculation in US Dollars applicable to each six 6 Month Price Notification Period prior to each preceding 10th December and 10th June respectively. The prices so notified would be after rounding the quotient to four 4 decimal places. THE PRESIDENT shall ensure that details of the quantities and CF prices of the Crude Oils imported into Pakistan as referred to in Article 10.2g hereof are supplied to Operator not later than twenty five 25 Days prior to the commencement of the relevant Price Notification Period for the purpose of calculations to be made pursuant to Article 10.2 fg. Operator shall submit to the Authority concerned a draft pricing notification setting out the US Dollar prices resulting from Article 10.2 fa above for the relevant Price Notification Period at the same time as submitting the calculation pursuant to Article 10.2 fg below

as the case may be Such pricing notification shall be published in US Dollars in the official Gazette for the purposes of the Gas Sales Agreement within forty five 45 Days of the date of receipt of the aforesaid draft pricing notification. Model Petroleum Concession Agreement 2009 30 Price of Natural Gas for Consumers will be adjusted biannually to synchronize with the changes in the producer prices. Where the specification and quality of the gas from an approved EWT is acceptable to the buyer the gas price shall entail a 10 discount from the applicable gas price for that Zone. h For the purpose of notification of gas prices under Article 10.2 above the authority concerned means Oil and Gas Regulatory Authority established under the Oil and Gas Regulatory Authority Ordinance No. XVII of 2002 or any other authority which may lawfully substitute OGRA. 10.3 For purchases of Condensate and LPG to meet internal requirements of Pakistan the price payable to Working Interest Owners subject to Article 10.4 shall be calculated as under a The price in U.S. per Barrel allowed for Condensate shall be equal to the FOB price of internationally quoted comparable condensate delivered at the nearest refinery gate plus or minus a quality yield differential based on the value in the Arabian Gulf spot products market of the crude oilcondensate. No other adjustment or discount will apply other than windfall. The price allowed for Liquefied Petroleum Gas produced from new projects will be determined by the regulator as per Government Policy in vogue. b 10.4 A windfall levy on Crude OilCondensate will be as follows. Windfall Levy WLO on crude oil and condensate using the following formula $WLO = 0.5 \times MR \times PB$ Where WLO Windfall Levy on crude oil and condensate; M Net production produced and saved; R Royalty; P Market Price of crude oil and condensateas stated in Article 10.1 ii 10.3 respectively above; B Base Price of crude oil and condensate. The base price for crude oil and condensate will be USD 30 per bbl. This base price will escalate each calendar year by USD 0.25 per barrel starting from the date of first commercial production in the Area. Notwithstanding above in the event Market Price of Crude OilCondensate exceeds US 100barrel the 100 benefit of Windfall Levy over and above US 100barrel will pass on to the Government. The ceiling would be reviewed as and when pricing dynamics significantly change in the international market. For sale of natural gas to parties other than Government a Windfall Levy

WLG will be applicable on the difference between the applicable Zone price as outlined in Article 10.1 above and the 3rd party sale price using the following formula Model Petroleum Concession Agreement 2009 31 $WLG = 0.5 \times PGBR \times V$ Where WLG Windfall Levy on share of natural gas; PG Third Party Sale Price of natural gas; BR Base Price; V Volume of gas sold to third party excluding Royalty. The base price will be the applicable Zone price as outlined in Article 10.2 above. Where the Third Party Sale Price of gas is less or equal to the base price the windfall price share shall be zero. The windfall price shall not apply on sales of Natural Gas made to the Government. Windfall levy shall be allowable as a tax deductible expense.

10.5 THE PRESIDENT or his designee shall purchase Crude Oil Condensate and Natural Gas at the Field Gate. Title to and risk of loss of the Petroleum purchased by THE PRESIDENT or his designee shall pass at the Field Gate.

10.6 THE PRESIDENT or his designee shall pay to a Pakistani Working Interest Owner up to 30 of their sale proceeds in foreign exchange for all Petroleum purchases in accordance with the provisions of this Article 10 to meet their Day to Day operational requirements. For project financing after Commercial Discovery Pakistani Working Interest Owners will be required to make their own foreign exchange arrangements. The rate of exchange prevailing on the date of transaction except as specifically provided herein will apply. Payments for any Petroleum purchased from the foreign Working Interest Owners by THE PRESIDENT or his designee shall be by remittance in United States Dollars to a bank designated by the foreign Working Interest Owners of an equivalent amount to within 30 Days of receipt of invoice subject to the condition that in the case of sale of Natural Gas such guaranteed percentage as referred to in Article 10.2 c will be applicable. If not so paid the unpaid balance shall bear interest after the due date at the rate of 1.5 percent per annum above LIBOR for one Month deposits of US Dollars as reported in an agreed publication.

10.7 In the event that THE PRESIDENT or his designee is unwilling to purchase all or a portion of any Working Interest Owners share of Petroleum such Working Interest Owner shall have the right to export or otherwise dispose of such Petroleum at competitive prices.

10.8 THE PRESIDENT shall have the right to purchase all or a portion of any Working Interest Owners share of Petroleum in case of a national emergency or war.

The Working Interest Owners shall subject to Article 10 and the Rules be permitted to export their share of Petroleum or to dispose it of otherwise at any time or from time to time the foreign Working Interest Owners shall use their good offices to assist GHPL in disposing of its share of Petroleum produced hereunder at the best available prices; provided that in no event shall foreign Working Interest Owners be required to purchase or otherwise provide a market for the GHPL share of Petroleum produced hereunder. GHPL shall reimburse the foreign Working Interest Owners for all expenses incurred in rendering to GHPL any such assistance on a nonprofit no loss basis. 11.2 The Working Interest Owners shall refrain from exporting Petroleum from Pakistan to countries prohibited by the Pakistani laws regulations and administrative requirements. 11.3 Subject to the Rules the Natural Gas which is not used in Joint Operations and the processing and utilization of which in the opinion of the Working Interest Owners is not economical shall be returned to the subsurface structure or may be flared with the approval of THE PRESIDENT in accordance with the Rules. In the event the Working Interest Owners choose not to process and sell Natural Gas THE PRESIDENT may elect to offtake such Natural Gas at the outlet flange of the gasoil separator and use either itself or through its designee such Natural Gas if it is not required for Joint Operations. There shall be no charge to THE PRESIDENT or his designee for such Natural Gas. Model

The Working Interest Owners shall contribute their share of all Expenditure of exploring developing and producing Petroleum in foreign exchange and in Rupees as required giving due consideration to currency aspect of Expenditure in proportion to their respective Working Interests provided however that local Working Interest Owners shall pay their share of Expenditure in Pak Rupees if their Working Interest is less than or equal to 15 in Zone I 20 in Zone II and 25 in Zone III. However to the extent a foreign Working Interest Owner does not have available sufficient amount in Pakistani Rupees to meet its share of Rupee requirements the Pakistani Working Interest Owners shall pay such amount in Rupees and the foreign Working Interest Owner shall make payments to the same extent in foreign

exchange to the Pakistani Working Interest Owners. 12.2 If a Foreign Working Interest Owner assigns its Working Interest to a foreign entity with the consent of THE PRESIDENT under Article 7 such Working Interest Owner shall be allowed to retain abroad all proceeds resulting from such assignment. 12.3 The Operator shall keep the foreign exchange contributions of the Working Interest Owners in a foreign currency bank account in a scheduled bank in Pakistan and shall be free to utilize the amount thereof for incurring foreign exchange Expenditures in accordance with the relevant foreign exchange rules and Joint Operating Agreement subject to subsequent documentation of the amounts utilized. 12.4 Subject to the domestic supply obligations and export duties each foreign Working Interest Owner shall be entitled to export the Petroleum acquired by them under this Agreement in accordance with the relevant foreign exchange rules and as provided for herein. 12.5 Each foreign Operator and its registered branch in Pakistan shall have the right to retain abroad and to freely make use of sales proceeds from the export of their share of Petroleum produced from any Licence or Lease granted under this Agreement provided the total amount retained abroad and repatriated from Pakistan will not exceed a b c net profits as per its profit and loss account for that Year as subsequently audited by a firm of Chartered Accountants in Pakistan after providing for any and all of its operating expenses for that Year including the sum of payments and taxes on income under this Agreement and the depreciation of its depreciable assets plus the funds representing such depreciation depletion and amortization as charged to its profit and loss account for that Year. all other expenses incurred abroad by the Working Interest Owners in connection with the Joint Operations under the Agreement and charged to its profit and loss and capital account for the Calendar Year. Model Petroleum Concession Agreement 2009 34 12.6 The Operator and the other foreign Working Interest Owners shall remit funds to Pakistan through normal banking channels sufficient to meet all Pakistani Rupee obligations under the Agreement to the extent Pakistani Rupees are not available to them in Pakistan. 12.7 The foreign Working Interest Owners shall not avail of any Rupee borrowing facilities. 12.8 The rate of exchange to be applied to all currency conversion transactions and calculations under this Agreement shall be the official rate

of exchange as established by of the State Bank of Pakistan SBP prevailing on the date of the transaction. [In case SBP ceases to publish this rate the arithmetic average of the average interbank selling rate quoted by the Royal Bank of Scotland National Bank of Pakistan Bank Alfalah Standard Chartered Bank and United Bank Limited may be used]. 12.9 All remittances of funds under this Article shall be permitted by the State Bank of Pakistan to be made without any delay or additional cost to the Operator or the Working Interest Owners. 12.10 Local EP companies will on a case to case basis be entitled during the exploration phase to receive foreign exchange against payment in Pakistani currency to meet their day to day obligations under this agreement. After commercial discovery local EP companies would be paid up to 30 of their sale proceeds in foreign currency to meet their day to day operational requirements. For project financing after commercial discovery local EP companies will be required to make their own foreign exchange arrangements except for companies in which GOP holds majority shareholding. 12.11 The Government will allow foreign Working Interest Owners to remit a guaranteed percentage of their share of sale proceeds provided such guaranteed percentage shall be 75 of the total gross revenues from any Lease Area in Zone I 70 in Zone II and 65 in Zone III. The remaining gross income in Rupees can be used by foreign Working Interest Owners to pay royalties taxes and any other payment to the Government as well as to meet other local currency Expenditures. 12.12 EP company shall have full right of control over movement of funds out of bank accounts established for the purpose of Joint Operations but may be required to provide the SBP or any Government designated office bank statements with an explanation of each deposit or payment from such account and shall supply on quarterly basis in a form acceptable to the SBP or such designated office full particulars of foreign exchange transactions related to an agreement.

Model Petroleum Concession Agreement 2009 35 ARTICLE 13 IMPORTS AND EXPORTS 13.1 a The Operator Petroleum Exploration Production Company its contractors and subcontractors engaged in Joint Operations under this Agreement shall be permitted to import export transfer and dispose the machinery equipment materials specialized vehicles accessories spares chemicals and consumables etc. in accordance with SRO 678 I2004

dated 7th August 2004 AnnexIV along with applicable CGOs and the provisions of this Agreement. No licence or importcum.export authorization fee shall be levied on such imports exports in accordance with Import Policy Order 2004. b The initial list of machinery equipment materials specialized vehicles accessories spares chemicals and consumables etc. required for Joint Operations approved by the relevant Regulatory Authority under Article 13.1 a above is attached as AnnexV hereto. The Operator shall however as provided in the Rules give preference to goods which are produced or are available in Pakistan and services which are rendered by Pakistani nationals and companies provided such goods and services are offered on competitive terms. National firms which appear capable of supplying goods and services of the type demanded shall always be included in invitations to bid. For classification of items imported by the Operator its contractors or subcontractors the harmonized system of classification will be followed. c Foreign employees and consultants of the Operator and its contractors and subcontractors will be entitled to importexport used and bonafide personal and household effects excluding passenger vehicles in accordance with instructions contained in Central Board of Revenues Now Federal Board of Revenues letter C. No. 10 14 93ICMCON dated 13th June 1994 AnnexVI. 13.2 The Operator its contractors or their subcontractors shall be entitled to export such of their items as have been imported into Pakistan and are not required for the Joint Operations without restriction and without the payment of any fee tax or export duty. Drawbacks if admissible will be available as per relevant rules. The Operator shall ensure its contractors or subcontractors under this Article against its importcumexport authorization are exported if all the Joint Operations under this Agreement are terminated unless otherwise permitted in accordance with this Agreement. that equipmentsmaterial imported by it 13.3 The permission required under this Article 13.3a shall not be necessary with respect to the transfer of title to any property made pursuant to or inental to any assignment by the Working Interest Owners of all or any part of its Working Interest under the provision of Article 7 of this Agreement. a The Operator and its contractors and their subcontractors shall maintain proper accounts statements and records of all consumable stores received and expended and send copies

thereof in duplicate to the customs Model Petroleum Concession Agreement 2009 36 authorities concerned by the 15th of January each year and finally within fifteen 15 Days of the closing of operations in Pakistan. b i Commissary stores can be imported after the first arrival of an expatriate employee of the Operator its contractors and their subcontractors in accordance with instructions contained in the Central Board of Revenues Now FBR letter C.No. 101493ICMCON dated 13th June 1994 AnnexVI. Such imports shall be confined to the items shown in AnnexIX excepting such items as are locally available of proper standard. Such items shall be specified annually by the Ministry of Commerce. ii iii As soon as an expatriate employee arrives in Pakistan an application will be made for grant of authorization for the commissary stores required for him indicating the duration of his proposed stay in Pakistan. Account for the sale of tobacco and liquor if imported and medicines will be maintained for each individual while those of the other items will be maintained on an overall basis. iv Items of food and other commissary goods will be stamped clearly to avoid resale in the Pakistani market. v FBR booklets will be maintained by individuals. c Import of any other items such as arms ammunition etc. and pets will not be permitted unless the conditions for their import such as arms licences from district authorities quarantine requirements etc. are complied with. 13.4 Subject to the rights granted under the provisions of this Agreement and particularly those granted under this Article 13 any items which are banned for import into Pakistan under the Import Trade Policy in force from time to time shall not be permitted without specific permission to be obtained before shipment of goods from abroad. 13.5 The Operator and its contractors and subcontractors shall not be liable to pay any tax assessment levy octroi or charge imposed or levied on the transportation or movement of the scheduled machinery and equipment to and from the Area or on any item imported under this Article 13. 13.6 ImportsExports except as provided in this Article 13 shall be affected in accordance with the ImportExport Trade Policy in force on the Effective Date. 13.7 Contracts for at least ten percent 10 of the computer software requested shall be awarded by the Operator to Local Companies to use the local software capabilities subject to such software capabilities being available at competitive prices. Model Petroleum Concession Agreement 2009 37 ARTICLE14

TAXATION 14.1 Income tax on profits or gains derived from the Joint Operations hereunder shall be at the rate of 40 of profit and gains as determined and assessed in accordance with the provisions of the IncomeTax Ordinance 2001 No. XLIX of 2001 hereinafter referred to as the Ordinance and the rules contained in Part I of the Fifth Schedule to the Ordinance hereinafter referred to as the Fifth Schedule as in force on the Effective Date. 14.2 Where any Expenditure allocable to a Surrendered Area or to the drilling of a dry hole is deemed to be lost under rule 22 of the Fifth Schedule such Expenditure shall be allowable as provided in rule 23 of the Fifth Schedule in relation to the Expenditure in question and in accordance with the respective Working Interest at the time such Expenditure was incurred in the Area in the relevant operation; provided that in accordance with clause 3 of Schedule to the Regulation of Mines and Oilfields and Mineral Development Government Control Act 1948 hereinafter referred to as the Schedule to Regulations all Expenditures deemed to have been lost in terms of rule 22 of the said Schedule to Regulations shall be allowed to be set off against all the other income of the Working Interest Owners other than dividend income accruing or arising from or under any separate business or undertaking or this Agreement or from any other past present or future agreement of the Working Interest Owners with THE PRESIDENT for Petroleum exploration and production or from any other activity on a fully consolidated basis in accordance with rule 23 of the Fifth Schedule. 14.3 Depreciation shall be allowed to the Working Interest Owners in accordance with the provisions of the Ordinance and in particular the Third Schedule thereof. 14.4 In case of any disagreement in respect of taxation matters arising from any of the provisions of this Agreement including its Annexes and the provisions now in effect of the Ordinance and the Fifth Schedule thereof read in conjunction with the Regulation of Mines and Oilfields and Mineral Development Government Control Act 1948 as amended that are in force on the Effective Date then the provisions of the Ordinance the Fifth Schedule thereof and the said Regulations in force on the Effective Date shall prevail. Model Petroleum Concession Agreement 2009 38 ARTICLE15 MANAGEMENT AND OPERATIONS 15.1 The Operator shall prepare an annual work programme and budget for each Calendar Year during

the term of this Agreement. Each such work programme and budget shall set out in reasonable details the work to be carried out facilities to be purchased or created training and employment programme establishment salaries and wages social welfare schemes to be undertaken and an estimate of the Expenditure to be incurred. The Operator shall present such work programme and budget to the Government and the Working Interest Owners before the start of each Calendar Year and the implementation of such work programme and budget. thereafter provide a quarterly update on

15.2 The first work programme and budget shall cover one complete Calendar Year as well as the remaining part of the Calendar Year from the Effective Date. Thereafter such annual work programmes and budgets shall be prepared and submitted to the Government and the Working Interest Owners at least ninety 90 Days prior to the first Day of each Calendar Year.

15.3 All important matters concerning Joint Operations hereunder shall be submitted for the approval to the Operating Committee composed of at least one representative of each Working Interest Owner and the Chairman nominated by the Operator. The representative of each Working Interest Owner shall have a vote equal to the percentage Working Interest owned by each Working Interest Owner. All decisions of the Operating Committee shall require a combined voting interest of more than seventy percent 70 for all operations except as stipulated in this Agreement.

15.4 The Operator shall conduct all Joint Operations in accordance with the Rules. In case the Rules do not provide for a specific operation the normal Good International Oilfield Practices shall be followed. The Operator shall set up an organization in Pakistan with sufficient competence and capacity to conduct and perform the Joint Operations in accordance with the provisions of the Rules and this Agreement.

15.5 All pipelines constructed by for the Working Interest Owners shall be operated under open access regime and to the extent that the throughput capacity of any pipeline that may be constructed for the purposes of Joint Operations is not required to be utilized by the Working Interest Owners for the transportation of Petroleum produced for their account such pipeline capacity may be used by the Government for any Petroleum purchased by the Government hereunder from the Working Interest Owners and by any other Petroleum company in Pakistan in

accordance with applicable regulations notified from time to time and each of them shall pay the Working Interest Owners for such use a tariffs as approved by the concerned regulator. Income so derived by a Working Interest Owner shall be assessed for income tax purposes on the same basis as its income from Petroleum produced for its account. Model Petroleum Concession Agreement 2009 39 ARTICLE16 REPORTS AND INFORMATION 16.1 THE PRESIDENT shall allow the Operator access at all reasonable times to all geological geophysical well and other technical data which is in public domain on the Effective Date pertaining to the Area and any free adjoining areas. If and when requested by the Operator THE PRESIDENT shall provide or supply to the Operator copies of such data on payment of actual reproduction and other costs of the data and on such terms and conditions as it may determine. Such data shall not be disclosed to any third party except to Operators employees and consultants including banks and financial institutions for the purpose of financing who shall be similarly bound to treat it as strictly confidential. 16.2 The Operator shall furnish to the Director General Petroleum Concessions all data information record and reports as required in accordance with the Rules. 16.3 Unless otherwise agreed to by THE PRESIDENT in the case of export of any rock or Petroleum samples from Pakistan for the purpose of testing and analysis samples equivalent in size and quantity shall before such exportation be delivered to THE PRESIDENT. 16.4 Originals of records and other data can be exported only with the permission of THE PRESIDENT provided however that magnetic tapes and any other data which must be processed or analyzed outside Pakistan may be exported with the prior approval of the DGPC if a comparable record is maintained in Pakistan and provided that such exported records and data shall be repatriated to Pakistan. 16.5 Any person or persons authorized by the Director General Petroleum Concessions shall subject to reasonable notice be entitled to be present at the cost of the Working Interest Owners during any or all of the Joint Operations provided that such persons abide by the applicable safety rules. 16.6 The Operator shall as far as reasonably practicable correctly label and preserve for a period of twelve 12 Months or such longer period as required by DGPC for reference characteristic samples of strata or water encountered in any borehole or well and samples

of any Petroleum discovered in the Area. The characteristic samples of said strata shall include but not be limited to cuts of all cores and cuts of all ditch samples. All characteristic samples including ditch and core samples shall be supplied by the Operator to THE PRESIDENT.

Model Petroleum Concession Agreement 2009 40 ARTICLE 17 TRAINING AND EMPLOYMENT

17.1 The Operator agrees to employ qualified nationals of Pakistan in its Joint Operations and to undertake their schooling and training for staff positions including administrative and executive management positions. Preference will be given to employment of nationals and unskilled workers from the Area. The operator including its contractors shall ensure the employment of unskilled workers of the area at local district level to the extent of at least 50 of their unskilled workers category. The Operator undertakes to gradually replace its expatriate staff with qualified nationals as they become available. An annual programme for employment and training of nationals of Pakistan shall be established by the Operator and submitted for approval to the Director General Petroleum Concessions at least 90 Days in advance. Such programme shall be included in the annual work programme and budget of the companies. Within thirty 30 Days of the end of each Calendar Year the Operator shall submit a written report to DGPC describing the number of personnel employed their nationality and positions and the status of training programme for nationals of Pakistan.

17.2 The Operator shall also be required to establish a programme satisfactory to THE PRESIDENT the Directorate General of Petroleum Concessions and the Government locally and abroad to develop the capability of such personnel to effectively perform their duties related to the supervision of the Petroleum industry. Such training programme shall cover both technical and e.g. geology geophysics engineering project management disciplines management accounting training and legal and shall training will cover inhouse seminars. The scope of participation internships scholarships and training of the local inhabitants in different institutions. include on the job

17.3 From the Effective Date and up to the date of Commercial Discovery the Working Interest Owners other than GHPL shall subject to the guidelines issued by the Government from time to time spend a minimum of twenty five thousand United States Dollars U.S. 25000 per year during exploration phase and during

development and production phase a minimum of fifty thousand United States Dollars US 50000 per year on training. This Expenditure will be subject to upward review from time to time. The unspent training amount during a year unless agreed otherwise shall be deposited into a special account maintained for the purpose by the Directorate General of Petroleum Concessions. All such expenditure shall be treated for Pakistani income tax purposes as wholly and exclusively incurred for the purpose of the income under rule 23 24 or 25 of the Fifth Schedule as may be appropriate.

Model Petroleum Concession Agreement 2009 41 ARTICLE18 CONTRIBUTION TO JOINT

OPERATIONS 18.1 Except as otherwise provided for in this Agreement all Expenditures on Joint Operations shall be shared and borne by the Working Interest Owners in proportion to their Working Interests provided however that the local Working Interest Owners shall pay their share of Expenditure in Pak Rupee if their Working Interest is less than or equal to 15 in Zone I 20 in Zone II and 25 in Zone III. 18.2 At least thirty 30 Days prior to the first Day of each calendar quarter the

Operator shall submit an itemized estimate of such Expenditures for each Month of the quarter and each Working Interest Owner shall pay to the Operator its proportionate share of such estimated Expenditures in Monthly instalments. Each Monthly installment shall be paid as provided for in the Joint Operating Agreement. Model Petroleum Concession Agreement 2009 42 ARTICLE19

DEVELOPMENT FINANCING 19.1 Any of the Working Interest Owners shall have the right to obtain project financing for the development of a Commercial Discovery. THE PRESIDENT may where possible upon request of a Working Interest Owner use his good offices to assist in all things necessary to facilitate project financing by a consortium of banks for any portion of the development Expenditure. 19.2 Any Working Interest Owner may upon informing the other Working Interest Owners and with the prior approval of THE PRESIDENT create an equitable charge on its Working Interest to any reputable financial institution acceptable to THE PRESIDENT on any or all of its rights hereunder to secure the prompt payment of sums of money principal and interest so borrowed and the full faithful discharge of any and all obligations which it may undertake to obtain financing from such financial institution for the purpose of this Agreement. Model Petroleum Concession

Agreement 2009 43 ARTICLE20 REFINERY LPG AND NATURAL GAS PROCESSING PLANTS

20.1 The Working Interest Owners can setup a refinery in accordance with the relevant Rules and the policy in force. 20.2 The Working Interest Owners renounce any claim to participate on grounds

of production of Crude Oil in Pakistan in a refinery which may be set up by THE PRESIDENT. 20.3

The Working Interest Owners shall have the sole and exclusive right to establish install and operate LPG or Natural Gas processing plants in the Area in accordance with the relevant law rules or regulations provided that if they fail to commence the installation of an LPG or Natural Gas processing plant in the Area within four 4 Years of the grant of the Lease unless otherwise agreed between THE PRESIDENT and the Working Interest Owners their exclusive right to establish such plants within the Area will cease. Thereafter THE PRESIDENT or his designee will have the option

to establish install and operate LPG and Natural Gas processing plants in the Area provided that the Working Interest Owners are given an opportunity to participate in such plants. The public sector companies would however be governed under relevant Policy in vogue. Model Petroleum

Concession Agreement 2009 44 ARTICLE21 OTHER MINERALS 21.1 When any mineral other than

Petroleum and minerals necessary for the generation of nuclear energy is discovered by Operator and THE PRESIDENT does not have a preexisting policy for development and exploitation of such mineral by a nonPakistani company the Operator can elect within six 6 Months after the date on which Operator notifies the Director General Petroleum Concessions of such discovery to develop and exploit such mineral subject to reaching an accord with the appropriate licensing authority as to the terms and conditions of an agreement governing the development and exploitation of such

mineral. 21.2 Discovery of all minerals necessary for the generation of nuclear energy including inter alia Uranium Thorium Zirconium Niobium Hafnium Lithium and Vanadium shall be reported by Operator to the Pakistan Atomic Energy Commission and the Director General Petroleum Concessions. The Working Interest Owners shall have no right to develop and exploit such nuclear minerals unless specific approval concurrence is given by the Pakistan Atomic Energy Commission for the development and exploitation of these nuclear minerals. 21.3 Minerals other than those

necessary for the generation of nuclear energy produced in suspension or combination with Petroleum shall belong to the Working Interest Owners subject to payment of royalty if marketed. Royalty shall be at the rate specified by the appropriate authority. 21.4 The income derived from the minerals produced in suspension or combination with Petroleum shall be governed by Part II of the Fifth Schedule of the Income Tax Ordinance 2001 No. XLIX of 2001 as amended from time to time. 21.5 The rights granted to the holder of a Petroleum right shall not in any way prejudice or affect any of the powers of THE PRESIDENT as provided for in the Rules. Model Petroleum Concession Agreement 2009 45 ARTICLE22 AUDIT 22.1 The Operator shall maintain correct and accurate records and accounts of all Expenditures made for Joint Operations of all production obtained from the Area and of all property acquired for the Joint Account or disposed of in accordance with normal industry practices and the Accounting Procedure. The accounts shall be audited for the period from the Effective Date to the end of the Calendar Year and thereafter annually by an independent firm of chartered accountants selected by the Operator and approved by the Operating Committee. Copies of the audit reports shall be delivered to THE PRESIDENT and to each of the Working Interest Owners within six Months of the end of each Calendar year. If neither THE PRESIDENT nor the Working Interest Owners or any of them shall take exception to any such audited accounts within six Months after their receipt of copies of the report relating thereto the same shall be final and binding on the Working Interest Owners and THE PRESIDENT; provided however that the accounts and support vouchers and documents together with such reasonable facilities as may be required for the audit of the Joint Operations shall be made available to auditor nominated by THE PRESIDENT who may take such action as he deems fit within two years from the date of receipt of the said report by THE PRESIDENT and notwithstanding the above provision regarding finality after six Months THE PRESIDENT and the Working Interest Owners shall where necessary take appropriate action with regard to any matter arising out of the auditor report. 22.2 THE PRESIDENT and/or a nonOperator Working Interest Owners shall have the right at its sole expense to audit the Joint Account and related records for any Calendar Year or portion thereof at any time provided thirty 30 Days advance

notice is given to the Operator. 22.3 The Operator shall retain the records and accounts with this Article for a period as may be provided for in the Rules or for such longer work as may be appropriate under the relevant laws. Model Petroleum Concession Agreement 2009 46

ARTICLE 23 PRODUCTION BONUSES

23.1 The Working Interest Owners other than the GHPL if applicable shall pay THE PRESIDENT on an Area basis the following production bonuses CUMULATIVE PRODUCTION MMBOE At the start of Commercial Production 30 60 80 100 AMOUNT US 600000 1200000 2000000 5000000 7000000 For avoidance of doubt the production obtained during EWT period will be treated as a part of cumulative production for the purpose of determining production bonuses as stipulated in the rules. 23.2 Pakistani Working Interest Owners other than GHPL if applicable will pay their share of Production Bonuses in Rupees equivalent of United States Dollar converted at the prevailing exchange rate on the day of transaction. GHPL will not pay the production bonuses as long as GOP is the majority shareholder of this company. 23.3 Payments due under this Article shall be made within thirty 30 Days from the date on which the respective production bonus becomes payable. Production bonuses will be expensed on social welfare development projects in and around the Area as per Guidelines issued by the Government from time to time. 23.4 Payments made under this Article are not to be amortized expensed or credited for Pakistani Income Tax purposes. 23.5 In the event a Working Interest Owner elects not to join in the development of a Commercial Discovery such a Working Interest Owner shall have no obligation to pay the bonuses provided for in this Article 23. In that case the total amount of production bonus shall be paid by the remaining Working Interest Owners prorata to their Working Interest. Model Petroleum Concession Agreement 2009 47

ARTICLE 24 INSURANCE AND INDEMNIFICATION

24.1 The Operator shall comply with all applicable workmens compensation and employers liability laws and insurance laws of Pakistan. 24.2 To ensure that the Working Interest Owners meet their obligations to third parties and or to Government agencies that might arise in the event of damage and injury including environmental damage or injury removal of wrecks and cleaning up as a result of aents caused by Joint Operations notwithstanding that the damage is acental the Working

Interest Owners through the Operator shall maintain in force a third party liability insurance policy covering their activities and those of their contractors and subcontractors and the employees of all such parties. Such insurance policy shall include THE PRESIDENT as an additional insured shall waive subrogation against THE PRESIDENT and shall provide that it may not be canceled except upon thirty 30 Days prior written notice to THE PRESIDENT. A certificate evidencing such insurance policy shall be furnished to THE PRESIDENT within ninety 90 Days of the Effective Date. The limits coverage deductible and other terms thereof shall be furnished to THE PRESIDENT. To the extent that such third party liability insurance is not available or is not obtained or does not cover part or all of any claims or damage caused by or resulting from Joint Operations the Working Interest Owners shall remain fully responsible and shall defend indemnify and hold THE PRESIDENT harmless against all such claims losses and damages of any nature whatsoever. 24.3 The Working Interest Owners shall under the Rules take out and maintain such insurance through the Operator as THE PRESIDENT may approve against any liability which the Working Interest Owners may incur. 24.4 The Working Interest Owners shall in accordance with the Rules effectively indemnify defend and hold harmless THE PRESIDENT at all times against all proceedings costs charges claims losses damages and demands whatsoever including without limitation claims for loss or damage to property or injury or death to persons caused by or resulting from any Joint Operations conducted by or on behalf of the Working Interest Owners by any third party or any thing done or purporting to be done in pursuance thereof provided that the Working Interest Owners shall not be held responsible to THE PRESIDENT under this Article 24 for any loss claim damage or injury caused by or resulting from any negligent action of any concerned personnel of THE PRESIDENT. Model Petroleum Concession Agreement 2009 48 ARTICLE25 PARENT COMPANYBANK GUARANTEE 25.1 Subject to Article 3.8a each Working Interest Owner excluding the GHPL if applicable shall procure and deliver to the Government on or prior to the Effective Date of this Agreement and hereafter before the first day of any subsequent Phase or Renewal a either an irrevocable unconditional bank guarantee from a reputable bank of good standing in Pakistan acceptable to the Government for

such Working Interest Owners share of nonperformance compensation as specified in Article 3.4 in a form and substance acceptable to the Government as set out in AnnexVIII ; or a guarantee in favour of the Government from its Parent Guarantor acceptable to the Government in form and substance set out in AnnexIX as required and notified by Government; or. the President may also consider accepting a proposal of a local Working Interest Owners as to the provision of guarantee as is allowed under the applicable policy which may be in the form of first preferred lien on Petroleum Production and or assets etc. in Pakistan; the President may also consider accepting a proposal of opening joint escrow account against minimum financial obligation of minimum work programme. b c a legal opinion from its legal advisors in a form satisfactory to the Government to the effect that the Parent Company Guarantee has been duly signed and delivered on behalf of the guarantors with due authority and are legally valid and enforceable and binding upon them. an undertaking on judicial paper shall be provided as per AnnexIXA regarding fulfilment of its obligationliabilities under the Rules Licence and the Agreement. 25.2 All bank guarantees shall provide a b that the amount referred to in Article 25.1a shall be reduced on prorata basis at the end of each Contract Year in an amount equal to 25 of the share of Work Units completed in the Area upon presentation to the bank of a certificate signed by DGPC on behalf of the Government that the said guarantee may be reduced in accordance with its terms; and that at the end of the each Phase the guarantee will be released in favour of Working Interest Owner on presentation to the bank a certificate from the Government that the Minimum Work obligation of Working Interest Owner for that Phase has been fulfilled and the guarantee may be released. Model Petroleum Concession Agreement 2009 49 25.3 If Working Interest Owner elects to proceed to the next Phase or to the Renewals of the Exploration Period outlined in Article 3.2 hereof a bank guarantee for the succeeding Phase or Renewal as the case may be shall be delivered to the Government prior to entering into subsequent phase or renewal as per Article 3.8 a and 25.1 with the notice of such election. 25.4 If the documents referred to in Article 25.1 are not delivered within the period specified this Agreement may be terminated by the Government in accordance with the Rules. .. Model

Petroleum Concession Agreement 2009 50 ARTICLE26 EFFECTIVENESS AND DURATION 26.1

This Agreement shall unless mutually agreed otherwise be and remain in full force application and effect from the Effective Date and so long thereafter as the Working Interest Owners continue to own interest in the Licence or any Leases or till a final settlement has been made after the expiration Surrender or termination of Petroleum rights under the Rules. 26.2 Any termination or expiration of this Agreement shall be without prejudice to any accrued liabilities obligations and rights of the Parties and the provisions of this Agreement with respect to confidentiality indemnification arbitration and applicable law shall continue to have effect notwithstanding such termination or expiration.

Model Petroleum Concession Agreement 2009 51 ARTICLE27 FORCE MAJEURE 27.1

Failure of any Party to this Agreement to fulfil any of the terms and conditions of this Agreement or of a Licence or Lease shall not be deemed as a breach or default insofar as such failure arises from Force Majeure provided that the affected Party has taken all appropriate precautions and reasonable measures to the satisfaction of the Government to fulfil its obligations. 27.2 27.3 In this Article the expression Force Majeure includes an act of God war insurrection riot civil commotion flood lightening explosion fire earthquake and any other happening which the affected party could not reasonably prevent or control. If the ability to fulfil its obligations is affected by Force Majeure the affected Party shall without delay give notice to the other Parties in writing supported by necessary justification and documentary evidence stating the cause of such inability and its efforts to remove such cause and remedy its consequences. 27.4 The term of this Agreement and the Licence or Lease as the case may be shall be extended for the duration of the Force Majeure situation and such further period as determined by the Government to resume operations. 27.5 In the event Force Majeure exceeds a period of three 3 years continuously during the initial term or any renewal thereof any of the Parties to the Agreement may terminate this Agreement on three 3 Months notice without any further obligation provided the Force Majeure is declared in good faith and acceptable to DGPC.

Model Petroleum Concession Agreement 2009 52 ARTICLE28 ARBITRATION 28.1

Any question or dispute arising out of or in connection with the terms of this Agreement or the Licence or any Lease

regardless of the nature of the question or dispute shall as far as possible be settled amicably through mutual negotiations between the parties in good faith within thirty 30 days after the date the disputing Parties delivers return notice of the dispute to the other Parties. Failing an amicable settlement within a reasonable period such dispute shall be submitted to the International Centre for Settlement of Investment Disputes ICSID established by the Convention on the Settlement of Investment Disputes Between States and Nationals of Other States of 1965 and THE PRESIDENT and the Working Interest Owners to the extent required by said Convention hereby consent to arbitration thereunder. The venue of the arbitration shall be in Pakistan or elsewhere as mutually agreed between THE PRESIDENT and the Foreign Working Interest Owners. If such mutual agreement cannot be reached the venue shall be decided by the ICSID. The award rendered shall be final and conclusive. The judgment on the award rendered may be entered in court having jurisdiction or application may be made in such court for a judicial acceptance of the award and an order of enforcement as the case may be. The official language of arbitration will be English. 28.2 If for any reason the request for arbitration proceedings is not registered by ICSID or if the ICSID fails or refuses to take jurisdiction over such dispute such difference or dispute shall be finally settled by arbitrators under the Rules of Arbitration of the International Chamber of Commerce the Chamber Rules and by three 3 arbitrators appointed in accordance with the Chamber Rules. The arbitrators shall not be nationals of Pakistan or of the country of the other party to the dispute nor shall any of such arbitrators be employees or agents or former employees or agents of any of the parties to the proceedings. 28.3 This Article is only applicable in case of a dispute between foreign Working Interest Owners inter se or between foreign Working Interest Owners and THE PRESIDENT provided that in the event of a dispute between the Pakistani Working Interest Owners inter se or between the Pakistani Working Interest Owners and THE PRESIDENT the arbitration shall be conducted in accordance with the Arbitration Act 1940. Model Petroleum Concession Agreement 2009 53 ARTICLE 29 PROTECTION OF THE ENVIRONMENT 29.1 The Parties recognise that Petroleum Operations will cause some impact on the environment in the Area. Accordingly in

performance of this Agreement Working Interest Owners shall conduct Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation of natural resources. Towards this end and in furtherance of any laws promulgated or as the Government may require from time to time Working Interest Owners shall 29.2 29.3 a.employ advanced techniques practices and methods of operation for the prevention of environmental damage in conducting Petroleum Operations; and b.take necessary and adequate steps to prevent environmental damage and where some adverse impact on the environment is unavoidable to minimize such damage and the consequential effects thereof to persons property or otherwise. If the Working Interest Owners fails to comply with the provisions of Article 29.1b or contravenes the provisions of the relevant laws and such failure or contravention results in any environmental damage the Working Interest Owners shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof. If the Government has on reasonable grounds good reason to believe that any works or installations erected by the Working Interest Owners or any Petroleum Operations conducted by the Working Interest Owners are endangering or may endanger persons or the property of any person or are causing or may cause pollution or are harming or may harm wildlife or the environment to a degree which the Government deems unacceptable the Government may require the Working Interest Owners to take remedial measures within such reasonable period as may be determined by the Government and to rectify any damage to the environment. If the Government deems it necessary it may also require the Working Interest Owners to discontinue Petroleum Operations in whole or in part until the Working Interest Owners has taken such remedial measures or has repaired any damage caused. 29.4 The measures and methods to be used by the Working Interest Owners for the purpose of compliance with the terms of Article 29.1b shall be determined in consultation with the Government upon the commencement of Petroleum Operations and whenever there is a significant change in the scope or method of conducting Petroleum Operations and shall take into account the good international Petroleum industry practices as applicable in similar circumstances and the relevant environmental impact study carried out in accordance with the

relevant laws as provided for in Article 29.5 below. The Working Interest Owners shall notify the Government in writing of the measures and methods finally Model Petroleum Concession Agreement 2009 54 determined by the Working Interest Owners and shall cause such measures and methods to be reviewed from time to time in the light of prevailing circumstances. 29.5 In addition to any requirements under the laws of Pakistan the Working Interest Owners shall cause a person or persons with special expertise and knowledge on environmental matters approved by the Government to carry out two environmental impact studies in order a.to determine at the time of the studies the prevailing situation relating to the environment human beings and local communities the wildlife and marine life in the Area and in the adjoining or neighbouring areas; and b.to establish the likely effect on the environment human beings and local communities the wildlife and marine life in the Area and in adjoining or neighbouring areas in consequence of the relevant Petroleum Operations to be conducted under this Agreement and to submit for consideration of the Parties methods and measures contemplated in Article 29.4 for minimising environmental damage and carrying out site restoration activities. The first of the aforementioned studies shall be carried out in two parts namely a preliminary part which must be concluded before commencement of any drilling in the Exploration Period. The part of the study relating to drilling operations in the Exploration Period shall be approved by the Government before the commencement of such drilling operations. The second of the aforesaid studies shall be completed before commencement of Petroleum Operations under an approved Development Plan and shall be submitted by the Working Interest Owners as part of the Development Plan with specific approval of Government being obtained before commencement of Petroleum Operations under the Development Plan. The studies mentioned in this Article 29.5 shall contain the details of the measures which are required to be taken in order to minimise environmental damage and shall include but not be limited to the following to the extent appropriate to the respective study a.proposed access cutting; b.clearing and timber salvage; c. wildlife and habitat protection; d.fuel storage and handling; e.use of explosives; f. camps and staging; g.liquid and solid waste disposal; h.cultural and archaeological sites; i. selection

of drilling sites; j. terrain stabilization; Model Petroleum Concession Agreement 2009 55 k. protection of freshwater horizons; l. blowout prevention plan; m. flaring during completion and testing of wells; n.abandonment of wells; o.rig dismantling and site completion; p.reclamation for abandonment; q.noise control; and r. mud and debris disposal. 29.6 The Working Interest Owners shall ensure that a.Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with good international Petroleum industry practices and are properly monitored; b.the pertinent completed environmental impact studies are made available to its employees and to its Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and c. the contracts entered into between the Working Interest Owners and Subcontractors relating to its Petroleum Operations shall include the provisions stipulated herein and any established measures and methods for the implementation of the Working Interest Owners obligations in relation to the environment under this Agreement. 29.7 The Working Interest Owners shall a.Prior to conducting any drilling activities prepare and submit contingency plans for dealing with oil spills fires acents and emergencies designed to the achieve rapid and effective emergency response Government. The plans referred to above shall be discussed with the Government and concerns expressed shall be taken into account. for review by b.In the event of an emergency acent oil spill or fire arising from Petroleum Operations affecting the environment the Working Interest Owners shall forthwith notify the Government and shall promptly implement the relevant contingency plan and perform such site restoration and damage control activities as may be necessary in accordance with good international Petroleum industry practices. c. In the event of any other emergency or acent arising from the Petroleum Operations affecting the environment the Working Interest Owners shall take such action as may be prudent and necessary in accordance with good international Petroleum industry practices in such circumstances. Model Petroleum Concession Agreement 2009 56 29.8 In the event that the Working Interest Owners fails to comply with any of the terms contained in Article 29.7 within a period specified by the Government the Government after giving the Working Interest

Owners reasonable notice in the circumstances may take any action which may be necessary to ensure compliance with such terms to recover from the Working Interest Owners immediately after having taken such action all costs and Expenditure incurred in connection with such action together with such interest as may be determined in accordance with this Agreement. Model Petroleum Concession Agreement 2009 57 ARTICLE30 MISCELLANEOUS AND APPLICABLE LAW 30.1 The Operator shall conduct all exploration exploitation drilling development and production operations in accordance with Good International Oilfield Practices and the principles and standards as laid down in the Rules. Consistent with this requirement the Operator shall endeavour to minimize exploration development production and operation costs and maximize the ultimate economic recovery of Petroleum. 30.2 The Operator shall not start production from any well prior to testing and making sure to the satisfaction of THE PRESIDENTs representative that the well has been properly completed. 30.3 The Operator shall not flare Natural Gas but shall use it commercially or for recycling. If Natural Gas is not so used or not planned to be so used the Working Interest Owners shall negotiate an arrangement making it available to THE PRESIDENT or its designee free of cost at the down stream flange of the gasoil separation facilities in accordance with Article 11.3. If THE PRESIDENT for whatever reason is unable or unwilling to take delivery of the Natural Gas that would otherwise be flared as provided for above the Operator will be allowed to flare such gas in accordance with the RulesPolicy without any royalty or excise duty liability until such time as THE PRESIDENT or his designee can take delivery. This Agreement shall be governed by and given effect in accordance with the laws of Pakistan. 30.4 All the rules laws regulations in effect on the Effective Date including the Workers Welfare Fund Ordinance 1971 and the Companies Profits Workers participation Act 1968 shall apply to this Agreement throughout its term whether or not subsequently amended or revised. 30.5 This Agreement sets forth the entire agreement reached between the Working Interest Owners and THE PRESIDENT and it shall remain and continue in force and shall be binding upon each of them throughout its duration without any amendment revision or alteration thereto except as may hereafter be mutually agreed by the Working Interest

Owners with the approval of THE PRESIDENT. The Rules Income Tax Ordinance 2001 Regulations of Mines and Oilfields and Mineral Development Government Control Act 1948 and other laws that are in force on the Effective Date shall remain applicable for purposes hereof whether or not the same are subsequently amended or revised; provided that where any matter is not specifically dealt with in this Agreement or where there is any conflict between the provisions of this Agreement and the laws such matter shall be governed in accordance with the applicable provision of the Rules Income Tax Ordinance 2001 Regulations of Mines and Oilfields and Mineral Development Government Control Act 1948 and other laws as are in force on the Effective Date of this Agreement.

30.6 This Agreement shall inure to the benefit of and be binding upon the respective successors and permitted assigns of the Working Interest Owners. Model Petroleum Concession Agreement 2009 58

30.7 All headings used herein are for the purpose of reference only and shall not be construed as in any way defining or limiting the meaning of any provision.

30.8 The Operator shall observe all laws rules and regulations issued by the Government in respect of protection of the environment and safety of operations including the Oil and Gas Safety in drilling and Production Regulations 1974 the Pakistan Environmental Protection Act 1997 and the Mines Act 1923 as amended from time to time.

30.9 The Working Interest Owners other than GHPL shall be required in consultation with local civil administration Provincial Governments to undertake social welfare programmes such as fight against narcotics promotion of sports rehabilitation of the mentally retarded and handicapped children improvement of educational facilities drinking water health roads and grant of scholarships for local students and shall spend during the exploration phase till the commencement of Commercial Production not less than thirty thousand Dollars US 30000 per annum. The Government will issue necessary guidelines for social welfare programs as deemed appropriate from time to time. After the commencement of Commercial Production in the Area the following minimum amounts will be spent during each year

Production Rate BOE/Day	Less than 2000	2000	5000	5000	10000	10000	50000	More than 50000	Amount/Year US Dollars
Zone I	50000	100000	200000	400000	700000	Zone II	37500	75000	150000
Zone III	300000	525000				These amounts			

will be increased from time to time by mutual agreement of the Working Interest Owners mentioned above and THE PRESIDENT. The Pakistani Working Interest Owners will incur these expenditures in Pak Rupees . Any amounts so spent shall be treated for Pakistani Income Tax purposes as wholly and exclusively incurred for the purpose of the business of the Working Interest Owners and shall be allowed against income under rule 25 of the Fifth Schedule. Model Petroleum Concession Agreement 2009 59 ARTICLE31 NOTICES 31.1 Any notice or advice required or convenient to be given to or by THE PRESIDENT or any Working Interest Owners shall be given in writing in the English language and delivered by hand or by telex confirmed by the correct answerback of the addressee at the foot of such telex. Any such notices or communications shall be effective at midnight of the Day during which such notice or communication is received. Any Working Interest Owner shall have the right to change its address by giving the other Working Interest Owners and THE PRESIDENT a written notice thereof. 31.2 Such notices or other communications shall be deemed to be effectively given or made a b On receipt by the addressee if delivered personally to its last notified address with signed receipt obtained acknowledging delivery; or on transmission to the addressee if transmitted by telex with the correct answerback confirmation during normal business hours at the place of receipt of the address or if so transmitted outside such hours on opening of business on the next business Day at such place provided a hard copy of the same will also be sent to the addressee through registered mail or hand delivery which if not received within next 24 hours will make the notice communication effective from date of receipt. 31.3 The addressees for such communication are as follows a In the case of The PRESIDENT to The Secretary Ministry of Petroleum and Natural Resources 3rd Floor Secretariat Block A Islamabad. Telephone Telex Fax 92519211220 5862 PETNR PK 9201770 b In the case of GOVERNMENT HOLDINGS PRIVATE LIMITED if applicable to Chief Executive OfficerChairman House No. 9 Street No. 29 F101 Islamabad Pakistan. Attention Telephone Telex Fax 92519266766 Chief Executive OfficerChairman 92519266746 9266747 Model Petroleum Concession Agreement 2009 c d 60 In the case of XYZ to Attention Telephone Telex In the case of ABC to Attention Telephone Telex IN WITNESS

WHEREOF this Agreement has been duly signed by the respective parties hereto as of the Day of 200.

WITNESSES 1. 2. For and on behalf of THE PRESIDENT OF THE ISLAMIC REPUBLIC OF PAKISTAN WITNESSES For and on behalf of GOVERNMENT HOLDINGS PRIVATE LIMITED if applicable 1. 2. WITNESSES For and on behalf of XYZ 1. 2. WITNESSES For and on behalf of ABC

1. 2. Model Petroleum Concession Agreement 2009 ANNEX I MAP OF THE AREA AND GEOGRAPHICAL DESCRIPTION 61 Model Petroleum Concession Agreement 2009 62 ANNEX II ANNEX II JOINT OPERATING AGREEMENT Annexed to and made a part of the Petroleum Concession Agreement Model Petroleum Concession Agreement 2009 63 Page

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Petroleum Concession Agreement 2009 65 Annexed to and made a part of the Petroleum Concession Agreement Joint Operating Agreement Between XYZ and GHPL if applicable THIS JOINT OPERATING AGREEMENT is made on the Day of 200. BETWEEN 1. XYZ 2. ABC 3. The Government Holdings Private Limited if applicable hereinafter referred to as the GHPL which term shall include its successors and assignees of the second part. WHEREAS THE PRESIDENT of the Islamic Republic of Pakistan THE PRESIDENT and the Parties hereto have entered into a Petroleum Concession Agreement for Block hereinafter referred to as the Concession Agreement dated the Effective Date for the exploration development and production of Petroleum in Pakistan and the purpose of this Joint Operating Agreement is to further define the respective rights and obligations of the Working Interest Owners and to regulate the conduct of their operations; NOW IT IS HEREBY AGREED AS FOLLOWS Model Petroleum Concession Agreement 2009 66 ARTICLE1

DEFINITIONS The terms defined in the Concession Agreement shall have the same meaning whenever used in this Joint Operating Agreement. Furthermore the following terms shall have the meanings as indicated 1.1 Joint Property means all assets of any nature whatsoever the cost of which is chargeable to the Joint Account and shall include but not be limited to buildings lands material equipment and fixtures acquired for the purposes hereof and other rights and all Joint Account funds. NonOperator means any Working Interest Owner not designated as the 1.2 Operator. 1.3 Work Obligations means the work obligations set out in Article 3 of Agreement of the Concession Agreement. In the event of any difference or inconsistency between the terms of this Joint Operating Agreement and those of the Concession Agreement the latter shall prevail. Model Petroleum Concession Agreement 2009 67 ARTICLE2 EFFECTIVENESS OF JOINT OPERATING AGREEMENT 2.1 This Joint Operating Agreement shall come into full force and effect on the

Effective Date of the Concession Agreement. Model Petroleum Concession Agreement 2009 68

ARTICLE3 WORKING INTEREST AND VOTING RIGHTS 3.1 The Working Interests of XYZ ABC and GHPL if applicable throughout the Area for each phase of the Joint Operations shall be governed by the provisions set forth in Article 5 of the Concession Agreement. Each Working Interest Owner shall be liable for all Expenditures to the extent of its Working Interest except as provided for in the Concession Agreement. 3.2 The voting rights of the Working Interest Owners shall be in proportion to their respective Working Interests at the time of the vote. Model Petroleum Concession Agreement 2009 69 ARTICLE4 MANAGEMENT AND OPERATIONS 4.1 4.2 To provide

general administration supervision direction and control of all Joint Operations to be conducted under this Joint Operating Agreement an Operating Committee shall be established consisting of a representative and an alternate representative who shall act in the absence of the representative to be appointed by each of the Working Interest Owners except as otherwise provided in the Concession Agreement. The Operator shall appoint the chairman of the Operating Committee who shall not have any voting rights. Each Working Interest Owner hereby vests its representative and alternate representative with full authority to represent and bind that Working Interest Owner in all matters arising under the Concession Agreement and this Joint Operating Agreement. Each Working Interest Owner shall designate its representative and alternate representative by written notice to the other Working Interest Owners stating the name and address of its representative and alternate representative. Subject to Article 15 of the Agreement each Working Interest Owner may by written notice to the other Working Interest Owners replace its representative or any alternate at any time and such substitute shall have the same powers and duties as the person he replaces. Subject to Article 11 hereof each representative may bring such advisers as it deems fit to any meeting of the Operating Committee. The Operating Committee shall meet quarterly to discuss important matters unless the Operating Committee agrees that any such meeting may be dispensed with and once each Calendar Year for the purposes of presenting the work programme and budget referred to in Article 6 and review thereof and shall meet at such other times as Operator or any

NonOperator may request. Notice of any Operating Committee meeting shall be given by the Operator at least fifteen 15 Days in advance of the proposed date of the meeting stating the time place and agenda to be considered at such meeting together with such supporting information as is practicable and the Operators recommendations if appropriate. Notwithstanding the foregoing when any meeting of the Operating Committee is called to consider any matter related to commerciality or the approval of a Development Plan the notice shall be given at least twenty eight 28 Days in advance. 4.3 No decision on any matters shall be taken at any meeting of the Operating Committee unless either prior notice as provided in Article 4.2 has been given or the representatives of the Working Interest Owners unanimously agree that a matter of which a prior notice has not been given shall be dealt with at such meetings. Operators representative shall prepare minutes covering business conducted at Operating Committee meetings copies of which shall be made available as soon as possible but in any event within fifteen 15 Days of the date of the meeting to all the Working Interest Owners through their representatives. Any Working Interest Owner having any corrections or objections to the minutes shall notify the Operator and other Working Interest Owners thereof. If a Working Interest Owner does not give notice of corrections or objections within thirty 30 Days after receipt of said minutes the same shall be deemed to have been Model Petroleum Concession Agreement 2009 4.4 4.5 4.6 4.7 70 approved. If the Operating Committee does not agree to the minutes such minutes shall be discussed at the next meeting of the Operating Committee. The decision taken by the Operating Committee in accordance with the provisions of Article 4 shall be binding upon all Working Interest Owners. All decisions of the Operating Committee in respect of Joint Operations under this Joint Operating Agreement shall require approval by more than seventy percent 70 of the total Working Interest. Each representative shall have voting rights equal to the Working Interest of his principal as set forth in Article 5 of the Concession Agreement. All meetings of the Operating Committee shall be held in Pakistan unless the Working Interest Owners unanimously agree to change the venue of any such meeting. The expenses of the representatives of the Working Interest Owners incurred in attendance at meetings shall be borne by the respective

Working Interest Owners and shall not be charged to the Joint Account. Any matters requiring Operating Committee approvals shall be submitted to the Operating Committee for consideration and vote without holding a meeting provided that such matter is submitted by notice in writing to all representatives and to the Operator. In such event each said representative shall within fifteen 15 Days after notice is received vote by giving notice of its vote to the Operator. Any Working Interest Owner that does not give notice of its vote as aforesaid shall be deemed to have voted in favour of the matter submitted. Any proposal which thus receives approval of the Operating Committee shall be deemed to be the proposal adopted by the Working Interest Owners and the decision thus taken shall be binding on them. Operator shall report to the Working Interest Owner in writing without undue delay the result of such vote after receipt of the votes of all Working Interest Owners and shall keep a written record thereof. A Working Interest Owner or the Chairman of the Operating Committee receiving notice of a matter to be voted upon without holding a meeting of the Operating Committee may instead of voting request a meeting of the Operating Committee. In that event such matter shall not be considered and deed without holding a meeting. 4.8 No business shall be transacted at any meeting unless a quorum is present. A quorum shall include the Operator and one NonOperator holding seventy percent 70 or more of the total Working Interest related to the matter under consideration. Any other representative not present at a meeting may vote on any item included in the agenda of the meeting in writing addressed to the Operator provided such vote is received by the Operator prior to the submission of such item to a vote at the meeting. 4.9 Notwithstanding other provisions hereof if the Operator shall be required within a period of time of less than fifteen 15 Days to take action which requires authorization of the Working Interest Owners which is not an emergency action as provided for in Article 5.8 the Operator shall give notice to each Working Interest Model Petroleum Concession Agreement 2009 71 Owner by telex or by telephone to be forthwith confirmed in writing of all circumstances pertaining to the taking of such action stating in addition the period of time which shall not be less than 48 hours by which a decision must be made. The action authorized by the appropriate vote of representatives who shall vote within the

time stated in the Operators notice shall be deemed the act of the Operating Committee and where any Working Interest Owner fails to vote within such time that Working Interest Owner shall be deemed to have voted in favour of the proposed action. 4.10 The Operating Committee may establish such advisory subcommittees as it technical or finance to considers appropriate to commerciality or subcommittees or special subcommittees development programs for the purpose of reviewing matters prior to their consideration by the Operating Committee. All such subcommittees shall consist of a representative of each Working Interest Owner. The duties and functions of any such subcommittees shall be as determined by the Operating Committee. time such as in relation from time 4.11 Except as otherwise stipulated in this Joint Operating Agreement all important matters concerning Joint Operations hereunder including but not limited to the following shall be submitted to the Operating Committee for review revision and decision to such extent as it may see fit and all decisions duly and properly taken by the Operating Committee shall be binding on the Working Interest Owners and to the extent applicable shall be executed promptly by the Operator 1. 2. 3. 4. 5. 6. 7. 8. Budgets and work programmes revisions and amendments thereto; Programmes in relation to the location drilling testing deepening plugging back completion reworking and abandonment of wells; Subject to Article 5.3 d the selection of professional consultants technical services award of contracts on bids for Joint Operations; Estimates of reserves of Petroleum; A Petroleum availability forecast giving the total quantities of Petroleum that can be produced from the Area in any quarter taking of recovery of the reserves from the Area in accordance with Good International Oilfield Practices at that time the determination shall be made for each Quarter not less than ninety 90 Days prior to the commencement of that Quarter; The extension or renewal of the Licence or the application for grant extension or renewal of any Leases; Subject to Article 13 hereof the Surrender of any part of the Area or of any Lease; The unitization of any acreage of a Licence or a Lease with acreage outside subject to the approval of THE PRESIDENT; Model Petroleum Concession Agreement 2009 72 9. 10. 11. The exchange of confidential proprietary information to or with third parties notice of which shall be given to THE

PRESIDENT; All press releases and publicity material to be issued by the Operator on behalf of the Working Interest Owners prior to the release of the same by the Operator. This will however be subject to prior approval of THE PRESIDENT; Any other matter that is specifically submitted to the Operating Committee for decision under other provisions of this Joint Operating Agreement or any other matter concerning Joint Operations hereunder not dealt with in this Joint Operating Agreement which may be specifically referred to the Operating Committee by any Working Interest Owner or;

12. Declaration of Commercial Discovery; 13. 14. The Development Plan for any Commercial Discovery and the vertical and horizontal boundaries for any Discovery Area; The selection of any areas outside the Area for which application may be made jointly. 4.12 In respect of the work

obligations set out in Article 3 of the Concession Agreement the Operating Committee shall unless and to the extent that relief from such obligation is sought and obtained from THE PRESIDENT determine the location and the time at which such obligations are to be discharged. Model

Petroleum Concession Agreement 2009 73 ARTICLE5 RIGHTS POWERS AND DUTIES OF

OPERATOR 5.1 5.2 XYZABC is hereby designated as the Operator for all Joint Operations and agrees to serve as such in accordance with the terms provisions conditions and limitations of this Joint Operating Agreement. Subject to the provisions of this Joint Operating Agreement the

Operator shall have the sole authority and responsibility for the direct management and supervision of all Joint Operations and shall have the sole custody and control of all the Joint Property under its care. Moreover the Operator shall perform its duties and carry out its responsibilities in accordance

with the terms and conditions of each approved work programme and budget Concession Agreement and Rules and subject to such instructions as may be given from time to time by the Operating Committee. 5.3 In order to carry out and perform all Joint Operations as aforesaid and in

connection therewith the Operator shall have the following exclusive rights duties and obligations a b To conduct all Joint Operations by its duly authorized officers employees or agents or by such

independent and qualified contractors consultants or service companies as the Operator may engage in accordance with the Concession Agreement and the Joint Operating Agreement. To

acquire and furnish for the Joint Account all materials and equipment required it shall be the duty of the Operator to make every reasonable effort to obtain such required materials and equipment on the terms and conditions most favourable to all of the Working Interest Owners and in accordance with the provisions of the Concession Agreement and the Rules. To allow the representatives of the Working Interest Owners and THE PRESIDENT access to the Joint Operations at all reasonable times provided that reasonable notice is given and that such access does not interfere with the conduct of the Joint Operations at their sole risk and expense with the right to observe any and all the Joint Operations being conducted and their results as well as inspect the records and accounts of such operations being also authorized to examine all data and interpretations thereof including but not limited to cores samples logs and surveys relating to the Joint Operations. The Operator shall promptly furnish each party with a reproducible copy of all logs geophysical data and all other geological geophysical drilling financial information including but not limited to reports on well tests and core analysis; provided however that all such data information and interpretations shall remain the exclusive property and confidential information of the Working Interest Owners to be based in accordance with the Rules and the Concession Agreement. THE PRESIDENT may appoint a representative to observe any or all of the Joint Operations at the expense of Joint Account and provided that the presence of such representative does not interfere with the conduct of the Joint Operations. A NonOperator may from time to time nominate selected staff Model Petroleum Concession Agreement 2009 74 c d to be present at Joint Operations in Pakistan for training on terms to be agreed upon ; To prepare and submit work programmes and budgets to the Operating Committee as provided in Article 6 hereof and make and implement such recommendations from time to time for the carrying out the Joint Operations hereunder efficiently as it may consider expedient; To enter into contracts including services purchases of materials and equipment which are advisable and necessary to carry out the Joint Operations. The Operator shall invite bids through a proper bidding procedure for any contract which will require Expenditure of more than U.S. Dollars one hundred and fifty Thousand US 150000 and such bids shall be opened publically.

Unless the Operating Committee dees otherwise each Party and its Affiliates may also submit a bid for such a contract. i ii In the case of any contract requiring Expenditure of more than U.S. Dollars one hundred and fifty Thousand US 150000but less than U.S. Dollars Five Hundred Thousand US 500000 the Operator shall award such a contract to the most suitable and competitive bidder and all such awards shall be reported to the Operating Committee at its next meeting. In the case of any contract to be awarded to a Working Interest Owner or its Affiliates or a contract requiring Expenditure of more than U.S. Dollars Five Hundred Thousand US 500000 the terms of the recommended bid shall be subject to the approval of the Operating Committee either at a meeting of the Operating Committee or by circulation of such bid to the Working Interest Owners along with the bid evaluation summary and other relevant documents and approval shall be deemed to have been given unless within ten 10 Days from the date of recommendation Working Interest Owners having in aggregate a Working Interest of 20 or 15 as per applicable Zone give notice that they do not support such recommendation. e f g to acquire any and all surface rights on behalf of the Working Interest Owners which may be required for or in connection with the conduct of Joint Operations; to promptly pay and discharge all Expenditures incurred in connection with Joint Operations; to keep and maintain permanent records of all relevant data and information obtained in the course of Joint Operations and to keep the Working Interest Owners currently informed by furnishing them from time to time in the form and frequency established by the Operating Committee statements and information on such Joint Operations; Model Petroleum Concession Agreement 2009 h i 75 To determine in accordance with the policy parameters as may be laid down by the Operating Committee the number of employees needed for the efficient conduct of the Joint Operations their selection the hours of labour and the compensation for service performed and other working conditions; provided however that the Operator shall give priority in employment to Pakistani citizens in conformity with Article 17 of the Concession Agreement and the Rules. To represent the Working Interest Owners before the Government or other authorities with respect to all matters arising under this Joint Operating Agreement subject to the requirement that the prior concurrence of the Working

Interest Owners shall be obtained with respect to representation on any matters materially affecting that Working Interest Owners. Each Working Interest Owner may be represented in meetings with THE PRESIDENT or other authorities on matters materially affecting the said Working Interest Owner provided that the Operator shall be the spokesman. The Operator for and on behalf of all Working Interest Owners shall prepare file and otherwise handle all reports applications and returns other than those relating to taxes based on income or profits which the Working Interest Owners are required to prepare separately which may be required by laws rules or regulations of the Government. However it is agreed that nothing set forth in this Article 5.3i shall prevent any Working Interest Owner from representing itself before any of the aforementioned bodies on matters which are appropriate and necessary provided that such Working Interest Owner shall notify the Operator and the other Working Interest Owners prior to any such representation. The Operator shall conduct the Joint Operations in a proper and workmanlike manner in accordance with methods and practices customarily used by the industry in accordance with Good International Oilfield Practices and with a degree of diligence and prudence reasonably and ordinarily exercised by experienced operators engaged in a similar activity under similar circumstances and conditions. The Operator shall further do or cause to be done with due diligence all such acts and things within its control as may be necessary to keep and maintain the Area in force and effect and shall conduct the Joint Operations in compliance with the requirements of the Concession Agreement the Licence any Leases and any other applicable law and rules and orders framed thereunder. The Operator shall not be liable for any loss or damage which results from Joint Operations unless such loss or damage results from Willful Misconduct of the Operator provided that the Operator shall not be responsible or liable under any circumstances for any consequential loss or damage including but not limited to inability to produce Petroleum lost production or loss of profits. For the purposes of this Joint Operating Agreement the term Wilful Misconduct shall mean such wanton and reckless conduct as amounts to a Model Petroleum Concession Agreement 2009 5.4 5.5 76 wilful and utter disregard consequences. for avoidable and foreseeable harmful 5.6. Each Working Interest Owner agrees to

indemnify the other Working Interest Owners to the extent of its Working Interest share for any claim by or liability to including any costs and expenses necessarily incurred in respect of such claim or liability any person not being a Working Interest Owner arising from or in connection with the Concession Agreement or Joint Operations. 5.7 Operator shall freely consult with the Working Interest Owners and keep them informed of all matters which the Operator contemplates to undertake. 5.8 If the Operator or any other Working Interest Owner is sued on an alleged cause of action arising out of Joint Operations it shall give prompt written notice of such suit to all other Working Interest Owners. The defence of any such suit shall be under the general direction of the Operator through its attorneys at the expense of the Joint Account but each of the other Working Interest Owners shall have the right to participate in the handling of such suit through its attorneys at its own expense. Any such suit may be settled during litigation by the Operator with prior approval of the Operating Committee. 5.9 Any damages claim caused by or arising out of Joint Operations shall be handled by the Operator and its attorneys at the expense of the Joint Account and may be settled by the Operator in its best judgement provided that no such claim shall be settled for an amount exceeding U.S. Dollars Fifty Thousand US 50000 without first obtaining the approval of the Operating Committee. 5.10 Notwithstanding other provisions hereof in case of explosion fire flood or other emergency the Operator shall take action deemed expedient by the Operator to protect and safeguard life and property. The Operator shall promptly report to the Working Interest Owners and the President a full description of the emergency the action taken the damage if any suffered and the expenses incurred hereunder. 5.11 The Operator may resign as the Operator at any time upon giving not less than ninety 90 Days written notice to the Working Interest Owners and the Government. The Operator shall be automatically removed in case of insolvency bankruptcy assignment for the benefit of creditors dissolution sale or transfer of its entire Working Interest to a third party or if the Operator defaults in its duties or obligations or any of them hereunder and does not commence to rectify the default within thirty 30 Days of having been notified in writing by the Operating Committee of the alleged default by not less ninety 90 Days notice provided that in

respect of any vote of the Operating Committee on any such removal the vote of the Working Interest Owner which is the Operator and the votes of any Working Interest Owner which is an Affiliate of the Operator shall be ignored and the percentage figure set out in Article 4.5 shall apply to the total votes available of the remaining Working Interest Owners. The Operator shall continue to serve until a successor Operator is appointed but shall not be required to do so for a period of more than one hundred and eighty 180 Days following the date of commencement of the original notice period for resignation or removal. Model Petroleum Concession Agreement 2009 77 5.12 Upon the resignation or removal of the Operator one of the other Working Interest Owners shall be selected as a successor Operator by the Operating Committee. In the event that no Working Interest Owner is willing to accept appointment as the Operator no Working Interest Owner shall be elected as the Operator without its consent a suitable entity shall be selected and designated as successor Operator and engaged under a written contract approved by the Operating Committee. The successor Operator shall succeed to the powers and duties of the Operator as per the Concession Agreement and Joint Operating Agreement. 5.13 Immediately after the notice of resignation or removal of an Operator is given the Working Interest Owners shall arrange for taking of an inventory of the equipment material and supplies acquired by the Operator for the Joint Account. On the effective date of the resignation or removal of the Operator such outgoing Operator shall deliver to the successor Operator all equipment material supplies and other assets then in its custody and shall account for those it is unable to deliver. The outgoing Operator shall also deliver to the successor Operator any and all data including but not limited to core samples log surveys records data documents and balances of the Joint Account which came into its possession as the Operator. The Working Interest Owners shall also arrange for an audit of the Joint Account before the new Operator takes charge of Joint Account. Model Petroleum Concession Agreement 2009 78

ARTICLE6 WORK PROGRAMME AND BUDGET 6.1 6.2 All Joint Operations conducted by the Operator and all Expenditure incurred for the Joint Account in connection therewith shall be performed and incurred only pursuant to an approved work programme and budget thereto or

pursuant to an approved supplementary work programme and supplementary budget thereto. The Operator shall submit to the Operating Committee a proposed work programme and budget prepared in such detail as is required by the Operating Committee for each Calendar Year and one for the planning purposes of the GHPL if required for the period 01 July to 30 June. The initial budget shall be submitted as soon as possible after activities hereunder are commenced and shall cover the remaining period of the then Calendar Year as well as the next Calendar Year. All budgets thereafter shall be submitted not later than seventy five 75 Days prior to the beginning of each Calendar Year and additional budget at the same time for the GHPL if applicable planning purposes for the period 01 July of that year to thirty 30 June of the succeeding year. In respect of budget items for which sufficient details are not then available to enable the Operating Committee to approve such contingent items the Operating Committee may authorize such items in principle subject to later submission of the required information for approval. The Operating Committee shall agree to the work programme and budget therefor within thirty 30 Days prior to the beginning of each such year. The work programme and budget shall be approved by the Operating Committee except that any well or development programme proposed therein that does not receive approval of the Operating Committee shall be removed from the said work programme and budget and may be subject to the terms of Article 9 hereof. The Operator is hereby authorized to conduct Joint Operations and to incur all Expenditure for the Joint Account to the extent that such work and Expenditures are included within a work programme and budget which have been approved by the Operating Committee. When so approved anticipated Expenditures pursuant to each such budget and Authority For Expenditure AFE issued thereunder shall be the basis for the cash calls by the Operator as provided in the Accounting Procedure. 6.3 The Operator shall undertake all Joint Operations as set forth in each approved annual work programme and budget and incur and pay on behalf of the Joint Account all Expenditure resulting from such work provided that the following work should be performed after the Operator has received written approval of its AFE in respect thereof from the Working Interest Owners and such AFE has been approved by the Working Interest

Owners having in aggregate at least the percentage figure of Working Interest specified in Article 4.5 i ii seismic surveys; Any operation in relation to a well including but not limited to drilling deepening plugging back reworking testing or completion; Model Petroleum Concession Agreement 2009 79 iii iv Any single addition to fixed assets other than a well amounting to U.S. dollars two hundred thousand US 200000 or equivalent or more; and Any single maintenance project amounting to U.S. dollars one hundred and fifty thousand US 150000 or equivalent or more; The Operator shall furnish as early as possible to each Working Interest Owner and THE PRESIDENT a copy of the AFE for any items of Expenditures in excess of U.S. dollars one hundred thousand US 100000. Provided however that any subdivision of a project for the purpose of award of a contract will require specific approval of Operating Committee. 6.4 The Operator shall not undertake any Joint Operation not included in an approved work programme or make any Expenditure in excess of an approved budget therefor except as follows; i ii If necessary to carry out an approved work programme the Operator is authorized to make Expenditures in excess of the budget adopted therefor up to but not exceeding ten percent 10 of such budget provided that such actual or foreseen excess Expenditures shall be reported to the Working Interest Owners by the Operator giving the details and justification for such excessive Expenditures; and In case of emergency the Operator may incur such immediate Expenditures as it deems expedient for protection of Joint Operations life or property and such Expenditures shall be reported promptly to the Working Interest Owners. 6.5 If any Working Interest Owner Defaulting Party fails to pay in full its share of any cash calls by the due date in accordance with the Accounting Procedure i the Operator shall as soon as practicable notify by telex all the Working Interest Owners of such default. ii With the exception of the Defaulting Working Interest Owner each Working Interest Owners Non Defaulting Party shall contribute as hereinafter provided a share of the amount in default in the proportion that its percentage interest bears to the total of the Working Interests of the NonDefaulting Working Interest Owners and pending receipt of such additional contributions the Operator shall make arrangements to meet any commitments falling due by borrowing the necessary finance from outside sources or by making the

necessary finance available itself and all reasonable costs of any such finance shall be charged to the NonDefaulting Working interest owners. Finance made available by the Operator shall bear interest calculated on a Day to Day basis at a rate equal to three 3 per cent above the London Interbank Offer Rate LIBOP from time to time; iii Within three 3 calendar Days following the notification by the Operator under i above the Operator shall notify all the Working Interest Owners of the Model Petroleum Concession Agreement 2009 6.6 6.7 6.8 80 liability of each of the NonDefaulting Working Interest Owners to contribute to the amount in default and shall make a further cash calls accordingly to take effect on the expiry of the six 6 calendar Days specified in iv below; and iv If such default continues for more than six 6 calendar Days after the date of notification by the Operator each of the NonDefaulting Working Interest Owners shall on the Calendar Day next following such sixth calendar Day pay the amount notified under iii above and thereafter shall continue to pay in addition to its share of subsequent cash calls the same proportion of all such subsequent cash calls until Defaulting Working Interest Owners has remedied its default in full or until forfeiture as hereinafter provided and failure by any Working Interest Owners to make such payments shall likewise and with the same results render that Working Interest Owner in default. The Defaulting Working Interest Owners shall have the right to remedy the default at any time prior to forfeiture as hereinafter provided by payment in full to the Operator or if the Nondefaulting Working Interest Owners have paid any amounts under 6.5 iv above the Non defaulting Working Interest Owners in proportion to the amount so paid by them of all amounts in respect of which the Defaulting Working Interest Owner is in default together with interest thereon calculated on a Day to Day basis at the rate of three 3 percent above LIBOR from time to time from and including the due date for payment of such amounts until the actual date of payment If any default continues for more than six 6 calendar Days after the date of notification by the Operator under above clause for so long as the default continues the Defaulting Working Interest Owners shall not be entitled to receive its entitlement of Petroleum attributable to its Working Interest share which shall instead be owned by the Nondefaulting Working Interest Owners in the proportions in

which their respective Working Interests bear to the total of the same. During the continuation of any default the Defaulting Working Interest Owners shall not be entitled to be represented at meetings of the Operating Committee or any subcommittee thereof nor to vote thereat so that the voting interest of each Working Interest Owners other than the Defaulting Working Interest Owners shall be in the proportion which its Working Interest bears to the total of the Working Interests of such Working Interest Owners and shall have no further access to any data and information relating to the Joint Operations. The Defaulting Working Interest Owner shall be bound by decisions of the Operating Committee made during the continuation of the default. i In the event that the default continues for more than sixty 60 Days then each of the NonDefaulting Working Interest Owners shall have the right to have forfeited to it and to acquire by notice to the other Working Interest Owners given within thirty 30 Days after such period of sixty 60 calendar Days the Working Interest of the Defaulting Working Interest Owners in the LicenceLease and under Concession Agreement and this Joint Operating Agreement or if more than one Model Petroleum Concession Agreement 2009 81 ii NonDefaulting Working Interest Owners exercises such right its proportionate share of the Working Interest of the Defaulting Working Interest Owner in the Licence Lease Concession Agreement and this Joint Operating Agreement such share being the proportion in which its Working Interest bears to the total Working Interest of such NonDefaulting Working Interest Owners; If none of the NonDefaulting Working Interest Owners exercises such right as is mentioned above then without prejudice to any rights of the Nondefaulting Working Interest Owners the Working Interest Owners shall be deemed to have deed to abandon the Joint Operations and each Working Interest Owner including the Defaulting Working Interest Owner shall pay its Working Interest share of the costs of abandoning the Joint Operations including but not limited to pay liquidated damages if applicable.

6.9 With respect to above Article any such forfeiture and acquisition of the Working Interest of the Defaulting Working Interest Owner in the Licence Lease Concession Agreement and this Joint Operating Agreement shall be i ii iii iv subject to necessary approvals of the Government under the Rules; without prejudice to any other rights of each Working Interest Owner other than the

Defaulting Working Interest Owner;. so forfeited and acquired as beneficial owner or owners free of any charges and encumbrances Other than rents and royalty under the Licence or the Lease; subject to the Defaulting Working Interest Owner remaining liable and obligated for its Working Interest share of all Expenditure that in any way relate to abandonment of Joint Operations; and v effective as of the date of default. The Defaulting Working Interest Owner shall promptly join in such actions as may be necessary or desirable to obtain necessary approval of the Government under the Rules and shall execute and deliver any and all documents which are necessary to effect such forfeiture and acquisition including for the avoidance of doubt any stamp duty incurred on the document executed to effect such forfeiture and acquisition which shall be the responsibility of the Defaulting Working Interest Owner.

Model Petroleum Concession Agreement 2009 82 ARTICLE7 EXPENDITURES 7.1 7.2 7.3 Subject to of the Concession Agreement each of the Working Interest Owners shall be severally liable for and shall bear all Expenditures incurred by the Operator for the Joint Account in proportion to its Working Interest from time to time. Subject to the provisions of this Joint Operating Agreement each of the Working Interest Owners shall own at any given time an undivided share equal to its Working Interest contribution in all property acquired hereunder. All charges to the Joint Account and all matters of Accounting Procedure between the Working Interest Owners shall be governed by these provisions and provisions of the Accounting Procedure. If any conflict or discrepancy exists between these provisions and those contained in the Accounting Procedure the provisions of this Joint Operating Agreement shall prevail.

Model Petroleum Concession Agreement 2009 83 ARTICLE8 DISPOSAL OF PETROLEUM 8.1 Without prejudice to the right of THE PRESIDENT to take and receive royalty in cash or in kind and subject to the right of the Operator to use Petroleum for Joint Operations each Working Interest Owner shall own and have the right to take in kind and separately dispose of its Working Interest share of Petroleum won and saved after payment of royalty and shall own the Petroleum so taken. 8.2 8.3 8.4 Each of the Working Interest Owners shall have the obligation to lift and separately dispose of its entitlement in all Petroleum produced and/or stored at such times in such quantities and in accordance with such

procedures as may be agreed by all Working Interest Owners prior to the commencement of Commercial Production the Lifting Procedures which have or may have entitlements in respect of the said development in question prior to the commencement of production but so that the rights of each of such Working Interest Owners to lift Petroleum to which it is entitled shall not be prejudiced. In the event that any of the Working Interest Owners having a Working Interest in Field development shall find itself unable for any reason to lift such quantities of Petroleum as are to be lifted in accordance with the Lifting Procedures it shall forthwith notify the other Working Interest Owners having Working Interest in such development to that effect and such quantities of Petroleum shall be dealt with in accordance with the Lifting Procedures. The Working Interest Owners recognize that in the event of the production of Natural Gas and LPG it may become or shall be desirable for them to enter into special arrangements for the disposal of the same and they agree that in such event and upon the request of any of them their respective representatives shall meet as necessary to consider their entry into such arrangements.

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ARTICLE 9 SOLE RISK

9.1 As used in this Article 9 the terms set out below shall have the following meanings

9.1.1 Sole Risk Well means a well other than a well included in Minimum Work Obligation specified in Article 3 of the Concession Agreement and drilled and completed by less than all the Working Interest Owners hereto in accordance with the provisions of this Article 9 or such other limited well site operation as specified in Article 9.9.

9.1.2 Location means the geographic point at the surface being the vertical projection of the point where the well bore actually encounters the objective formation in the case of an existing well or where the well bore is expected to encounter the objective formation in the case of drilling well or a well included in the currently approved work programme and budget.

9.2 9.3 9.1.3 Commercial Quantities shall have the same meaning as the definition of Commercial Production in Article 1.11 of the Concession Agreement. Any Party shall have the right by complying with the terms of this Article 9 to drill any well within the Area other than a well approved by the Operating Committee and included in the currently approved annual work programme and budget. Any Working Interest Owner proposing to drill a Sole Risk Well shall give

notice thereof Notice to the other Working Interest Owners specifying the Location provided that such Location shall conform to any spacing pattern for the development drilling previously approved by the Operating Committee the drilling operations to be conducted and the objective formations.

9.4 Within thirty 30 Days after the receipt of the Notice except as otherwise provided in Article 9.9 hereof the Operator shall notify each Working Interest Owner of the Operators detailed cost estimates with respect to the drilling of such well and the Operators estimate of the date on which such well may be commenced without interfering with the execution of work programme thereto for approved by the Operating Committee Commencement Date. The Operators estimate shall include the total costs of all operations and equipment necessary for locating drilling testing completing and equipping including necessary flow lines and storage tanks or abandoning said well. 9.5 Within fortyfive 45 Days after receipt of the Notice except as otherwise provided in Section 9.9 hereof each Working Interest Owner shall elect whether or not to participate in drilling the proposed well by giving written notice to the other Working Interest Owners. Failure to give notice within such period of time shall be deemed to be an election by such Working Interest Owner not to participate in the drilling of such proposed well. An election to participate shall be deemed approval of the drilling of such well. Model Petroleum Concession Agreement 2009 85 9.6 If less than all Working Interest Owners elect to participate in the Sole Risk Drilling each Working Interest Owner electing to participate hereinafter called Drilling PartyParties whether one or more shall have a Working Interest in such well in the proportion that its Working Interest bears to the total of the Working Interests of all Drilling Parties or in such other proportion as mutually agreed upon by the Drilling Parties. 9.7 9.8 9.9 This Joint Operating Agreement shall be divisible and shall apply independently in the manner of a separate contract for the drilling and operations of any Sole Risk Well. This Joint Operating Agreement shall cease to apply as an independent and separate contract with respect to a Sole Risk Well when Drilling Party has fully recovered the value referred to in Article 9.10 hereof. The Drilling Party shall cause such well to be drilled as a Sole Risk Well at the sole cost and risk of the Drilling PartyParties. The Working Interest Owner or Working Interest Owners not electing to

participate in the drilling of such well shall hereinafter be called NonDrilling Party whether one or more. The Drilling PartyParties may ask the existing Operator to Drill the Sole Risk Well or may Operate the Sole Risk Well itself and such new Operator shall be obligated to conduct all operations necessary for the drilling of a Sole Risk Well in accordance with the provisions of this Joint Operating Agreement and the Operators cost estimate by the Commencement Date; provided however that with respect to the drilling of a well where the Operator is a NonDrilling Party Drilling Party may within sixty 60 Days after receipt of the Notice as defined in Article 9.3 hereof notify the existing Operator of the election by Drilling Party to conduct by itself all operations with respect to the drilling of such Sole Risk Well and the existing Operator shall be relieved of its obligations to conduct such operations in which case the Drilling Party shall conduct the operations itself as the new Operator. In the event Drilling Party shall elect not to have the Operator drill the Sole Risk Well the Drilling Party must cause the drilling of the Sole Risk Well to commence within six 6 months after the Notice. If the Drilling Party has not commenced the Drilling of such Sole Risk Well within the period specified the Drilling Party shall not be entitled to commence the drilling of such Sole Risk Well until such time as a new Notice shall be given and the provisions of this Article 9 are again complied with. If the Notice described in Article 9.3 relates to a well site operation such as proposed redrilling sidetracking deepening reworking testing or plugging back a well such Notice shall be acted upon within 48 hours if the drilling equipment is on location. The Operator shall perform all redrilling sidetracking deepening reworking testing or plugging back operations in accordance with a Notice approved by all or less than all the Working Interest Owners at the sole cost and risk of the Working Interest Owners who voted in favour of such Notice which Working Interest Owner or Working Interest Owners shall be deemed as Drilling Party. The Working Interest Owner or Working Interest Owners who voted against such Notices shall be deemed NonDrilling Party. If the proposed sole risk drilling operations consist of redrilling sidetracking deepening reworking testing or plugging back a well the Drilling Party shall pay the Non Drilling Partys ownership interest in the salvage value of all equipment installed in said well as may be Model Petroleum Concession Agreement

2009 86 mutually agreed. The Drilling PartyParties shall own all production resulting from such operations until the Drilling PartyParties has fully recovered the value referred to in Article 9.10 hereof with respect to such operations. Only the Working Interest Owner or Working Interest Owners who participate in the last operation with respect to a well shall bear the cost of abandonment. In the event of a disagreement between Drilling PartyParties on the order and manner in which sole risk proposals of redrilling sidetracking deepening reworking testing or plugging back a well are to be undertaken the matter shall be referred to the Operating Committee for a decision. 9.10 If any Sole Risk Well is drilled it shall be operated by the Operator except as provided in Article 9.7 and if completed as a producing well the Drilling PartyParties shall own all of the production from such well and shall bear all the cost of operating such well until the Drilling Party has recovered from production an amount equal to the sum of i ii iii Eighteen Hundred percent 1800 of what would have been the NonDrilling Partys Working Interest share of costs of drilling such well to total depth conducting such production tests as may be carried out with drilling equipment equipping such well for production upto and including the Christmas Tree such amounts to be recovered resulting from such well or wells or from the proceeds from the first sales of production resulting from the discovery of an accumulation of Petroleum by such well or wells; and Four Hundred percent 400 of what would have been the NonDrilling Partys Working Interest share of costs of all production facilities associated with production of petroleum from a Sole Risk Well downstream from the Christmas Tree and necessary to handle treat and bring production from such well to the point where such production is handled by such facilities which are to be used in common with production but not associated with such well or to the point of delivery of such production by the Operator to Drilling Party and shall include but not be limited to the flow lines and storage tanks required for handling production from such Sole Risk Well; and Two Hundred Percent 200 of what would have been the NonDrilling Partys Working Interest share of the costs and expenses incurred and paid by the Drilling Party for the operations of such well until such time as the Drilling Party is reimbursed as provided in paragraphs i and ii above; and thereafter such well shall be owned by all Parties hereto

and each Party shall participate with respect thereto in accordance with such Partys Working Interest herein. 9.11 If a Working Interest Owner initially elects to participate in a Sole Risk Well and subsequently fails to timely meet its payments there for as provided in the Accounting Procedure then at the option of the other Working Interest Owners constituting the Drilling Partys the provisions of this Article 9 shall apply as if that Working Interest Owner were a NonDrilling Party. Model Petroleum Concession Agreement 2009 87 9.12 The Working Interest Owners comprising any Drilling Parties shall in proportion to their respective Working Interests in the Sole Risk Drilling indemnify the NonDrilling Parties against all losses damages and claims against them arising out of Sole Risk Drilling. 9.13 The Drilling Party shall be entitled to use for Sole Risk Drilling any data and information which they own jointly with a NonDrilling Party. Data and information obtained in respect of Sole Risk Drilling shall be made available to the NonDrilling Party but shall remain the property of the Drilling Party subject to the Rules and the Concession Agreement. 9.14 Drilling equipment owned by Working Interest Owners or under contract to the Operator and being used in operations hereunder may not be employed to drill a Sole Risk Well if such equipment is scheduled for other Joint Operations work unless approved by the Working Interest Owners. However in the case of redrilling sidetracking deepening completing plugging back testing or reworking said equipment if on the drilling location shall be used to carry out the desired operation unless agreed otherwise. 9.15 Notwithstanding the foregoing if in the reasonable judgement of the Operator or a Working Interest Owner there is a substantial risk that the proposed operations would appreciably impair the present or potential future production from a producing oil or gas well or well capable of production the Operator or the Working Interest Owner shall so advise the other Working Interest Owners stating the reasons substantiating its judgement and the proposed Sole Risk operations shall not be undertaken unless approved by all Working Interest Owners. 9.16 In the event that less than all the Working Interest Owners participate in the development of a Discovery pursuant to the Concession Agreement any non participating Working Interest Owner shall have the right to acquire a Working Interest in such development equivalent to its Working Interest hereunder by paying in cash an

amount equal to one hundred and seventyfive percent 175 of the amount which it would have paid had it participated in the development from the date of its failure to participate pursuant to the Concession Agreement. Such right shall be exercisable at any time up to one year from the date referred to above by payment of the sum mentioned in cash in full and shall be effective as of the date of such payment. Any non participating Working Interest Owner which fails to exercise such right within the time period specified shall have no further right to elect to participate therein and the Lease relating to any such Discovery Area shall constitute a separate Lease Area and the Working Interests therein and the production of Petroleum there from shall be owned exclusively by the Working Interest Owners participating therein. Model Petroleum Concession Agreement 2009 88

9.17 Following approval of a Development Plan pursuant to Article 6 of the Concession Agreement any Working Interest Owner may request a review of the provisions contained in this Article 9 and if following such review all Working Interest Owners agree that an amendment to such provisions is required it shall be amended accordingly for submission to the Government. Model Petroleum Concession Agreement 2009 89

ARTICLE 10

10.1 The Operator shall for the benefit and protection of the Working Interest Owners obtain insurance with reputable insurers upon reasonable and competitive terms on behalf of the Working Interest Owners as be required by contract applicable laws rules and regulations together with such other insurances which the Operating Committee may determine in accordance with this Joint Operating Agreement; provided that in respect of such other insurance any Working Interest Owner may elect to take out its own insurance provided that it gives written notice to the Operator. The cost of insurance in which all the Working Interest Owners are participating shall be charged to the Joint Account and the cost of insurance in which less than all the Working Interest Owners are participating shall be in proportion of their respective Working Interests.

10.2 The Operator or any Working Interest Owner shall duly file all claims with respect to insurance arranged and maintained by the Operator and shall take all necessary and proper steps to collect the proceeds and properly apply them in accordance with the terms of this Joint Operating Agreement.

10.3 The Operator shall at all times use all reasonable endeavors to require contractors

and subcontractors engaged in operations under this Joint Operating Agreement to obtain and maintain all such insurances pertaining to such work as they may be required to carry by virtue of any applicable law or regulation and such other insurance as the Operator may deem advisable. The policies of any such insurance shall be endorsed with waivers of all explicit or implicit rights of subrogation to the beneficiaries eventual rights against the Working Interest Owners or alternatively to the extent practicable the Operator shall have the other Working Interest Owners or contractors and subcontractors named as additional insured.

10.4 Each Working Interest Owner may for its own account and at its own expense obtain insurance other than the insurance referred to in Article 10.1 pertaining to the Joint Operating Agreement as it may deem expedient provided however that the obtaining of such insurance shall not in any way directly interfere with the Operators placement of insurance for the Joint Account in accordance with the terms of Article 10.1 hereof. The Operator shall use its best endeavours to facilitate in cooperation with the other Working Interest Owners the orderly settlement of claims by their respective insurers.

10.5 All damages losses and liabilities incurred in connection with the Joint Operations which are not recoverable from insurance procured for the Joint Account under this Article shall be charged to the Joint Account.

Model Petroleum Concession Agreement 2009 90 ARTICLE 11 CONFIDENTIAL INFORMATION

11.1 All information acquired by any Working Interest Owner in respect of the Joint Operations hereunder including but not limited to all seismic and well data and related information that pertains to or results from the Joint Operations conducted hereunder or any data or information contributed by any Working Interest Owner to such Joint Operations shall be considered as confidential and shall not be disclosed to any other person or entity which is not a Working Interest Owner except a b c d e To an Affiliate of a Working Interest Owner provided such Affiliate executes a strict undertaking to treat and maintain all such information as confidential; or As required by THE PRESIDENT or any applicable laws or regulations of a stock exchange having jurisdiction over a Working Interest Owner; or its Affiliate; or To contractors including consultants employed by a Working Interest Owner THE PRESIDENT or the Operator where disclosure of such data or information is essential to such

contractors work provided such contractor executes an agreement to treat and to maintain all such information as strictly confidential; or To a bonafide prospective assignee of a Working Interest Owner provided such prospective assignee first executes an agreement to treat and maintain all such information as strictly confidential; or To a bank or lending agency to the extent required by a Working Interest Owner for arranging the funds for its obligations under this Joint Operating Agreement provided that such bank or lending agency first executes an agreement to treat and maintain all such information as strictly confidential. 11.2 The provisions of this Article 11 shall be continuing obligations notwithstanding the fact that a Working Interest Owner ceases to be a Working Interest Owner. 11.3 Subject to Article 11.4 the Operator shall be responsible for the preparation and release of all public announcements and statements regarding this Joint Operating Agreement or the Joint Operations provided always that no such public announcement or statement shall be issued or made unless prior thereto all the Working Interest Owners have been furnished with a copy thereof and the approval of the Operating Committee and THE PRESIDENT has been obtained in accordance with the Rules. 11.4 If any Working Interest Owner shall itself wish to issue or make any public announcement or statement regarding this Joint Operating Agreement or the Joint Operations it shall not do so unless prior thereto it furnishes all the Working Interest Owners with a copy of such announcement or statement and shall obtain the Model Petroleum Concession Agreement 2009 91 approval of the Operating Committee and THE PRESIDENT provided that notwithstanding any failure to obtain such approval no Working Interest Owner or any Affiliate of such Working Interest Owner shall be prohibited from issuing or making a public announcement statement if it is expedient to do so in order to comply with any applicable law or the regulations of a recognized stock exchange. Model Petroleum Concession Agreement 2009 92 ARTICLE12 TRANSFER OF INTEREST 12.1 No Working Interest Owner shall have the right to assign transfer convey encumber hypothecate or otherwise dispose of its Working Interest or part thereof except in accordance with the provisions of Articles 12 and 13 hereof and Article 7 of the Concession Agreement. 12.2 No assignment of any Working Interest shall be binding upon the Operator until the

first Day of the calendar month following the month in which the assignor or assignee shall have furnished the Operator with an executed or photo static copy of the approval of THE PRESIDENT and assignee shall have properly ratified and become a party to this Joint Operating Agreement. Any assignment of interest whether it is expressed or implied shall operate to impose upon the assignee and the assigned interest the proportionate part or share of any unpaid obligations thereto or chargeable hereunder to the assignor and the said assigned interest. An assignment shall not operate to relieve the assigned interest or the assignor from any liability or obligations which accrued prior to such assignment.

12.3 Notwithstanding the provisions of this Article 12 and subject to the provisions of the Concession Agreement any Working Interest Owner shall upon informing the other Working Interest Owners assign transfer convey encumber pledge hypothecate or otherwise mortgage to any financial institution bank or lender any or all of its rights hereunder to secure the prompt payment of sums of money principal and interest so borrowed and the full and faithful discharge of any and all obligations which it may undertake to obtain finance from such financial institution for the purpose of this Joint Operating Agreement. Any such mortgage or hypothecation shall not give rise to a division of the undivided interest in Joint Property.

12.4 Subject to the provisions of Article 7 of the Concession Agreement a Working Interest Owner may transfer or may assign to an Affiliate or to a NonAffiliate all or part of its rights duties and obligations under the Concession Agreement and this Joint Operating Agreement.

Model Petroleum Concession Agreement 2009 93 ARTICLE13 SURRENDER

13.1 If any Working Interest Owner hereinafter referred to as the Surrendering Working Interest Owner desires to Surrender its Working Interest subject to Article 7 of the Concession Agreement it shall notify the other Working Interest Owners of its desire to Surrender as of a specified date not less than two 2 Calendar Months after such notice. The other Working Interest Owners shall have thirty 30 Days after such notice within which to give notice of election to join in such Surrender. The Surrendering Working Interest shall accrue to and be assumed by the Working Interest Owners electing not to Surrender pro rata to their respective Working Interests on the specified date. The Surrendering Working Interest Owner shall execute

and deliver any and all documents and take action necessary to accomplish such assignment. Similarly if all Working Interest Owners shall elect to Surrender each Working Interest Owner shall execute and deliver any and all documents and take all actions to accomplish such Surrender. 13.2 Without the specific consent of the Working Interest Owners other than the Surrendering Working Interest Owner an assignment made under the provisions of Article 13.1 above shall not relieve the Surrendering Working Interest Owner of any liability or obligation created prior to the date of such assignment and any then approved work programme and budget. 13.3 At such time and in such manner as prescribed under the Concession Agreement whenever the Working Interest Owners are required to reduce the extent of the Area the Operating Committee shall determine the Area to be retained.

Model Petroleum Concession Agreement 2009 94 ARTICLE14 RELATIONSHIP OF THE WORKING INTEREST OWNERS 14.1 The rights obligations and liabilities of the Working Interest Owners under the Joint Operating Agreement shall be several and not joint or collective each Working Interest Owner being responsible only for its Working Interest share of costs and liabilities incurred for the Joint Account. 14.2 The relationship between the Working Interest Owners with respect to the Joint Property is that of tenants in common. Neither juridical person or entity is created by this Joint Operating Agreement nor is it the purpose or intention of this Joint Operating Agreement to create any corporation partnership or association nor shall this Joint Operating Agreement and the operations hereunder be interpreted or considered as creating an entity since each Working Interest Owner shall be individually responsible only for its own obligations hereunder.

Model Petroleum Concession Agreement 2009 95 ARTICLE15 TAXES 15.1 The Operator shall subject to the Concession Agreement pay any and all duties other assessments and Governmental charges excluding income taxes on profit whether national or local levied or assessed against any of the Joint Property royalty and other applicable taxes as the case may be on Petroleum produced and saved for the Working Interest Owners the costs of which are charged to the Joint Account. 15.2 The Operator shall contest the validity or payment of any assessment or charge referred to in Article 15.1 above for the Joint Account if so directed by the Operating Committee. Nothing herein

shall prevent a NonOperator at its sole cost and expense from having its own attorney appear and participate in any such contest in addition to the Operators attorney without prejudice to the right of the Operator to direct such contests as determined by the Operating Committee above. Model Petroleum Concession Agreement 2009 96 ARTICLE16 FORCE MAJEURE 16.1 The provisions of Article 27 of the Concession Agreement are herein incorporated by reference and will apply to this Joint Operating Agreement accordingly. Model Petroleum Concession Agreement 2009 97 ARTICLE17 ARBITRATION 17.1 Any dispute arising out of this Joint Operating Agreement shall be dealt with mutatis mutandis in accordance with Article 28 of the Concession Agreement. Model Petroleum Concession Agreement 2009 98 ARTICLE18 LAWS RULES AND REGULATIONS 18.1 This Joint Operating Agreement is subject to the Concession Agreement and all Joint Operations shall be conducted in accordance with its provisions and of all other valid and applicable laws rules regulations and orders of the Government. If this Joint Operating Agreement in any respect shall be found to be inconsistent with or contrary to the terms of the Concession Agreement this Joint Operating Agreement shall be regarded as modified to conform thereto and as so modified shall continue in full force and effect. 18.2 No Working Interest Owner shall resort to any action for partition of the Area or Joint Property except in accordance with the provisions of the Concession Agreement and this Joint Operating Agreement. Model Petroleum Concession Agreement 2009 99 ARTICLE19 TERM 19.1 This Joint Operating Agreement shall become effective on the Effective Date and shall remain in full force and effect until a It is terminated by the written consent of all Working Interest Owners or b All the Working Interests become vested in one Working Interest Owner or c The termination of the Concession Agreement. 19.2 Before this Joint Operating Agreement terminates there shall be a final Audit and settlement of the Joint Account between the Working Interest Owners in accordance thereof. Model Petroleum Concession Agreement 2009 100 ARTICLE20 NOTICES 20.1 Any notice required or permitted to be given hereunder including but not limited to bills statements cash calls reports and notices shall be deemed to have been effectively given to and received by a Working Interest Owner and the Government to whom it is addressed by

telex telegraphic message facsimile or hand delivery. All notices shall be delivered to the Working Interest Owners and the Government so notified at the respective addresses given in or pursuant to the Concession Agreement.

20.2 Any notice or advice required or permitted to be given to or by any Working Interest Owner under this Joint Operating Agreement shall be given in writing in the English language and delivered by hand by telegraph cable or telex or fax confirmed in writing as above.

20.3 Such notices or other communications shall be deemed to be effectively given or made i ii On receipt by the addressee if delivered personally with signed receipt obtained acknowledging delivery; or On transmission to the addressee if transmitted by telex or fax with the correct receipt confirmation during normal business hours at the place of receipt of the addressee or if so transmitted outside such hours on opening of business on the next business Day at such place.

Model Petroleum Concession Agreement 2009 101 ARTICLE21 MISCELLANEOUS 21.1 The heading of each Article hereof and the are for convenience only and shall be disregarded in construing or interpreting this Joint Operating Agreement. 21.2 Except as otherwise provided herein this Joint Operating Agreement shall be binding on and shall inure to the benefit of the Working Interest Owners and their respective successors and assigns. 21.3 Any modification of this Joint Operating Agreement shall not be effective until such modification is executed in writing by the Working Interest Owners. IN WITNESS WHEREOF this Joint Operating Agreement has been duly executed the Day and year first above written Signed for and on behalf of XYZABC BY WITNESSES 1 2 Signed for and on behalf of the GOVERNMENT HOLDINGS PRIVATE LIMITED if applicable BY WITNESSES 1 2 Model Petroleum Concession Agreement 2009 102 APPENDIX A

ACCOUNTING	PROCEDURE	Page	ARTICLEI	GENERAL
PROVISIONS.....		104	107	ARTICLEII CHARGES TO
THE JOINT ACCOUNT.....		108	114	ARTICLEIII BASIS OF
CHARGES TO THE JOINT ACCOUNT.....		114	115	ARTICLEIV DISPOSAL OF
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.....		117		ARTICLEVI TERMINATION

Agreement 2009 103 APPENDED TO AND MADE A PART OF THE JOINT OPERATING AGREEMENT MADE BETWEEN XYZ ABC AND GHPL if applicable The purpose of this Accounting Procedure is to establish equitable methods of determining charges and credits applicable to operations under the Joint Operating Agreement which will truly reflect the Operators actual costs to the end that the Operator shall neither gain nor lose in relation to the Working Interest Owners by reason of the fact that it acts as Operator. If at any time or from time to time any such methods prove unfair or inequitable to Operator or Nonoperators the Working Interest Owners will meet and in good faith endeavour to agree on changes in methods deemed necessary to correct any unfairness or inequity. Model Petroleum Concession Agreement 2009 104 ARTICLEI GENERAL PROVISIONS 1. DEFINITIONS The terms defined in Article I of the Concession Agreement and in Article I of the Joint Operating Agreement shall have those meanings wherever used in this Accounting Procedure and the following words and phrases shall have the meanings set forth against them below Joint Property means all real property and all assets acquired or created by Expenditures charged to the Joint Account. Materials shall mean personal property equipment or supplies acquired or held for the Joint Account. 2. RECORDS STATEMENTS AND REPORTS A. B. The Operator shall at all times maintain and keep true and correct records of the production and disposition of all Petroleum and of all Expenditures and disposition of Materials under the Concession Agreement and the Joint Operating Agreement as well as all other data necessary or proper for the settlement of accounts between the Working Interest Owners hereto in connection with the Concession their rights and obligations under Agreement and the Joint Operating Agreement and to enable the Working Interest Owners to comply with all applicable income tax and other laws. The Operator shall also establish and maintain a system of internal controls and prepare and present for approval of Working Interest Owners a statement of joint assets and liabilities. Such records shall be open at reasonable times for inspection and copying by authorized representatives of any NonOperator and THE PRESIDENT. The Operator shall submit to each Working Interest

Owner and THE PRESIDENT each month within thirty 30 Days after the close of the relevant month accurate statements of the Expenditures incurred during such months indicating by appropriate classification the nature thereof the portion of such costs charged to each of the Working Interest Owners the amount of funds advanced to the Operator by each of the Working Interest Owners and from such advances. These statements shall include a detailed statement of all charges and credits to the Joint Account summarized by appropriate classification indicative of the nature thereof and the unusual charges and credits. All records kept and reports made shall be in Pakistan Rupees and in United States Dollars. Transactions incurred in currencies other than Pakistan Rupees or United States Dollars shall be converted at the appropriate official rates of exchange. the commitments and Expenditures made Model Petroleum Concession Agreement 2009 105 3. PAYMENTS AND ADVANCES Upon approval of any work programme and budget the Operator will have the right on a current basis only to make monthly advance cash calls to all Working Interest Owners for the period covered by such work programmes and budgets. In the event of a Commercial Discovery a monthly or other suitable time frame for cash calls and the procedures for such calls will be as adopted or determined by the Operating Committee. Each such month cash call shall be equal to Operators estimate of the actual money required by it to perform its duties under the approved work programme and budget therefor during the month concerned. Each such call shall be made in writing detailing the payments the Operator anticipates to be required during the period covered thereby and shall be delivered or sent by telex fax delivered personally to all Working Interest Owners not later than 20 Days prior to the beginning of the month preceding the month when such Expenditures are to be made and each Working Interest Owner hereto shall pay its Working Interest share of the full amount of each such cash call in cash to the Operator not later than the first working Day of the month for which the funds are required and if not so paid the Working Interest Owner in default will pay an additional sum calculated on the unpaid balance at the rate of one and half percent 1.5 per month or any fraction of a month until paid. If a Working Interest Owner is in default of payments due by it under the Joint Operating Agreement the applicable provisions of the

Joint Operating Agreement shall apply. Cash calls shall be increased or decreased as required by the Operator in order to adjust for payments made on behalf of the Joint Venture for services and materials furnished by the Operator or to replace any deficit or eliminate any surplus as the case may be of the cash funds available in the Joint Account. Funds made available to the Operator on trust are for the account of the NonOperators and shall not be subjected to any prior lien in favor of a third party. Subject to Article 8 of the Concession Agreement all payments by Pakistani Working Interest Owners may be made in Pakistan Rupees irrespective of the currencies in which such costs and expenses are to be incurred and by foreign Working Interest Owners in United States Dollars or any other currency in which Expenditures are incurred. Subject to the provisions of the Concession Agreement the Operator shall have the right at any time and from time to time to use the joint funds or to convert the same or any part to other currencies to the extent that such currency is then required for operations and the actual cost of currency loss or gain of any such conversions shall be charged or credited to the Joint Account. Any conversions between United States Dollars and Pakistan Rupees or any other currency shall be stated in the Joint Account at the rate of exchange on the Day of conversion. The Operator shall restrict the funds held in the bank account for Joint Operations to a level consistent with that required for the conduct of Joint Operations. In the event Operator accumulates funds exceeding US Dollars Twenty Thousand US 20000 or Pakistani Rupees Three Hundred and Fifty Thousand Rs. 350000 under this Accounting Procedure Operator if so requested by the Working Inte shall make appropriate refunds to Working Interest Owners within five 5 calendar Days of determination of such excess Model Petroleum Concession Agreement 2009 106 funds. Such determination of excess funds shall be made every quarter and for this purpose any amount representing such excess as reflected in the Operators monthly Expenditure statement shall be refunded by the Operator. ADJUSTMENTS 4. Payments of any advances or cash calls shall not prejudice the right of any NonOperator to protest or question the correctness thereof; provided however all reports and statements rendered to NonOperators during any Calendar Year shall conclusively be presumed to be true and correct after a twentyfour 24

month period unless a NonOperator takes written exception thereto and makes claims on the Operator for adjustment within such period. No adjustment favourable to the Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of the Joint Property as provided for in Article V hereof.

5. AUDITS a In accordance with Article 22 of the Concession Agreement the Joint Account shall be audited for the period commencing with the Effective Date to December 31 and thereafter annually by one independent firm of Chartered Accountants with the appropriate level of joint venture Petroleum auditing experience to be selected by a subCommittee of Operating Committee comprising a representative each of the Working Interest Owners hereinafter referred as Audit Committee subject to the condition that guidelines issued by the Government from time to time would be followed in the matters connected with the appointment of auditors and the scope of work of the audits. The selection must be made by consensus of all members of the Audit Committee. The firm selected must demonstrate its qualifications in joint venture auditing and independence from all parties involved to the satisfaction of all members of the Audit Committee. In addition once selected a firm can only perform this audit for a period of not more than three consecutive Calendar Years. The selected firm will submit a detailed audit plan including but not limited to procedure for physical verification of inventories for approval before commencement of the aforementioned audit. The audit will commence not more than 90 Days from end of audit year and be completed within 180 Days from the end of the aforementioned audit year. Copies of the audited accounts and report shall be delivered to THE PRESIDENT and to each of the Working Interest Owners. The cost of the audit shall be charged to the Joint Account. b A NonOperator upon at least thirty 30 Days advance written notice to the Operator and other NonOperators shall have the right at its sole expense to audit the Joint Account and related records for any Calendar Year or portion thereof within the twentyfour 24 month period following the receipt Model Petroleum Concession Agreement 2009 107 of the audited accounts of such Calendar Year or portion thereof regardless of the fact that the accounts for the year remain to be audited or are being audited. However the conducting of an audit by a

NonOperator shall not extend the time for taking written exception to and the adjustment of accounts under Sub Article 4 above. Where there are two or more NonOperators the NonOperators shall make every reasonable effort to conduct joint or simultaneous audits. Such NonOperators shall be provided with the accounts supporting vouchers and documents together with such reasonable facilities as may be necessary for the inspection of the financial affairs of the Joint Operations. In case the Operator and NonOperators are unable to reach final agreement on audit exceptions then such exceptions shall be referred to an internationally recognized firm of chartered accountants selected by the Audit Committee.

Model Petroleum Concession Agreement 2009 108 ARTICLE II

CHARGES TO THE JOINT ACCOUNT

1. ALLOCABLE CHARGES In the event any of the Operators employees or field camps suboffices or other facilities in Pakistan serve properties in addition to the Joint Property and costs cannot be identified with the properties served such costs shall be prorated or charged on an equitable basis to be approved by the Operating Committee.

2. DIRECT CHARGES The Operator shall charge the Joint Account with all Expenditures incurred in connection with all Joint Operations under the Concession Agreement and the Joint Operating Agreement and for the performance of its duties hereunder. The Expenditures shall be recorded as required for the settlement of accounts between the Working Interest Owners under the Concession Agreement and the Joint Operating Agreement and for identification to comply with relevant laws.

Chargeable Expenditures shall include

a b All payments to the Government other than income tax and royalty payments made by the Operator and necessary in the performance of its duties under the Joint Operating Agreement. Cost of establishing and maintaining field offices camps warehouses supply bases offices and other facilities including housing in Pakistan devoted exclusively to serving the License or Lease.

A. Labour

a. The Operators employees directly engaged in the Area of operations or outside of the Area shall be charged as follows

i Salaries and wages of personnel located within Pakistan and permanently attached to and engaged in Joint Operations in Pakistan. Labour charges for persons not working fulltime on two or more operations shall be allocated on the basis of time sheets or as may be approved by the Operating Committee. Wages charged should

not exceed the prevailing market rates. Model Petroleum Concession Agreement 2009 b. 109 ii Scientific technical professional employees of the Operator or its Affiliates while directly performing work on specific projects for the sole benefit of the operations costs of which shall not exceed the cost of equivalent services on the open market. The Operators cost of annual leave and other holidays vacation sickness disability benefits living and housing allowances medical allowances travel allowances travel time bonuses and other customary allowances as well as the Operators cost for employees benefits including but not limited to employees group life treatment insurance group medical hospitalization retirement bonuses provident fund gratuity fund and other benefit plans of a like nature all applicable to the salaries and wages are chargeable hereunder. Such costs may be charged on actual basis when and or accrued or on a percentage basis on the amount of salaries and wages chargeable under this Section A. If percentage basis is used the rate will be based on the Operators cost experience and adjusted annually to actual costs. These costs will be competitive and will not exceed the costs generally applicable in the industry. insurance medical c. Expenditures or contributions made pursuant to assessments imposed on the Operator by the Government authority which are applicable to the Operators labor costs of salaries and wages as provided under this Section A. B. Materials Cost of equipment machinery material articles purchased or furnished by the Operator for the Joint Account as per provisions of the Joint Operating Agreement. Price shall include such costs as export brokers fees transportation charges loading unloading fees export and import duties surcharges and license fees associated with the procurement of material and equipment and intransit losses if any not covered by insurance. So far as it is reasonably practical and consistent with efficient and economical operation only such material shall be purchased for or transferred to the Joint Account as may be required for immediate use; and accumulation of surplus stocks shall be kept to a minimum considering the distance of materials in remote locations and the provisions of any relevant law of Pakistan relating to the importation of material and equipment. Model Petroleum Concession Agreement 2009 C. Transportation 110 Transportation of employees equipment materials machinery facilities and supplies necessary for the performance of Joint

Operations including costs of packaging brokerage insurance and other related costs as per normal industry practice. However the transportation of equipment machinery and materials in respect of Section B above shall not be charged hereto. Employee transportation costs to the extent covered by the established policy of the Operator shall include travel expenses for employees and their families to and from the employees point of origin at the time employment commences at the time of final departure and for vacations as well as traveling expenses in Pakistan for employees and their families incurred as a result of transfer from one location to another and traveling expenses relating to the periodical recuperation leaves of field personnel.

D. Services

a. b. The services of consultants contract services utilities and other services procured from outside sources rentals or compensation paid or incurred for the use of any equipment and facilities. The aforesaid services shall be charged to the Joint Account at the actual price paid by the Operator procured on a competitive basis in accordance with the Joint Operating Agreement with approval of the Operating Committee. The actual cost of technical services procured in accordance with as per the provisions of the Joint Operating Agreement on a competitive basis without the following being limited to such as laboratory analyses drawings geophysical and geological interpretation drafting engineering studies and related data processing etc. performed by the Working Interest Owners or their Affiliates for the benefit of the Joint Operations with approval of the Operating Committee.

c. Per diem travel expenses living and accommodation expenses for expatriate employees of the Operator or of the Operators Affiliate companies called on from abroad for periods of short duration as approved by the Working Interest Owners.

E. Working Interest Owners exclusively owned equipment and facilities

Charges for Working Interest Owners exclusively owned equipment facilities and utilities on the basis of actual usage at rates commensurate with the cost of ownership and operation but not in excess of rates currently prevailing for like service and equipment in the area as approved by the Operating Committee.

Model Petroleum Concession Agreement 2009 111 On request the Working Interest Owner shall furnish the Operator and the Operator shall furnish the NonOperators a list of rates and the basis of application. Such rates shall be revised from time to time if found to be either

excessive or insufficient but not more than once every six 6 months. Drilling tools and other equipment lost in the hole or damaged beyond repair may be charged at an agreed value considering depreciation and transportation cost to deliver like equipment to the scene. Model Petroleum Concession Agreement 2009 F. Damages and losses to property 112 All reasonable costs or expenses necessary to replace or repair damages or losses incurred by fire flood storm acent or any other cause not controllable by the Operator through the exercise of reasonable diligence and not covered by insurance carried at the expense of the Joint Account. The Operator shall furnish NonOperators written notice of damages or losses incurred in excess of United States Dollars ten thousand US 10000 as soon as practicable after report of the same has been received by the Operator. All losses shall be listed separately in the monthly statement of costs and Expenditures. G. Litigation expenses Except to the extent the same are to be borne by the Drilling Parties Pursuant to Article 9 of the Joint Operating Agreement there shall be charged to the Joint Account all costs and expenses of litigation or other legal services necessary or expedient for the protection of the Working Interest Owners interest including lawyers fees and expenses as hereinafter provided together with any judgements resulting therefrom and actual expenses incurred by the Operator or NonOperators in securing evidence for the purpose of defending such action or claim. Details will however be provided to the Operating Committee at its next meeting. a. b. c. If NonOperators so agree such actions or claims may be handled by the legal staff of one or more of the Working Interest Owners and a charge commensurate with cost of providing and furnishing such services rendered may be made against the Joint Account but no charge shall be made until approved by the Operating Committee. Fees and expenses of outside lawyers in connection with litigation shall not be charged to the Joint Account unless authorized by the Operating Committee. Fees and expenses of outside lawyers not exceeding United States Dollars fifty thousand US 50000 per year and not involving litigation shall not require the Operating Committee approval. H. Insurance a. Premiums for insurance pursuant to Article 10 of the Joint Operating Agreement any insurance that is not carried for the benefit of all Working Interest Owners the cost of such insurance

Model Petroleum Concession Agreement 2009 113 shall only be charged to the Working Interest Owners participating therein. b. c. Credits for insurance settlements received pursuant to Article 10 of the Joint Operating Agreement any insurance that is not carried for the benefit of all the Working Interest Owners any such credits shall only be made to the Working Interest Owners participating in such insurance. If no insurance is carried all actual Expenditures incurred and paid by Operator in settlement of any and all losses claims damages judgements and any other expenses including legal services shall be charged to the Joint Account. I. Other Expenditures Any other costs and Expenditures incurred by the Operator for the necessary and proper conduct of the operations in accordance with approved work programmes and budgets and not covered in this Article II 2. 3. INDIRECT CHARGES INCLUDED IN OVERHEAD Excluding all expenditures incurred by the Operator to cover the actual cost of services as provided for in Article II 1 2 hereinabove the Operator will incur under the Joint Operating Agreement expenses in the performance and discharges of its functions and duties. Such expenses relate to legal treasury tax [other than corporate income tax] employee relations including management staff and all operating departments having a general action in the operations of the Joint Operations. The carrying out of such functions shall be compensated as a whole by applying the percentages specified below. The overhead charges shall be debited to the Joint Account on a monthly basis and shall be determined on the total annual expenditures as set forth in Article II2 hereof less payments to the Government litigation expense and damages and losses to property as follows a Exploration 3 of Expenditures per calendar year b Development and Production Expenditures From US 0 to US 10000000 2 each calendar year. From US 10000000 to US 50000000 1 each calendar year. Above US 50000000 0.25 each calendar year. Model Petroleum Concession Agreement 2009 114 The above rates have been selected to represent as fairly as possible the overhead of the Operator not otherwise chargeable. These rates shall be reviewed by the Operating Committee from time to time on the basis of actual expenditures and the prevailing conditions. These will also be adjusted reasonably in case the Operator is carrying out operations in two or more blocks. ARTICLEIII BASIS OF CHARGES TO

THE JOINT ACCOUNT 1. PURCHASES Material purchased and services obtained directly for the Joint Operations shall be charged at the price paid by the Operator; however such price shall not exceed that currently prevailing in normal armslength transactions on the open market. Price shall include such costs as export brokers fees transportation charges loading and unloading fees import duties surcharges and license fees associated with the procurement of materials and equipment and applicable taxes. 2. PREMIUM PRICES In the event material is not obtainable at recognized current list prices from general supply sources due to national emergency strikes Governmental regulations or other unusual circumstances over which the Operator has no control and it is so established provisions of prior paragraphs pertaining to pricing of material and costs of transportation shall not apply and the Operator may supply Materials from any available source charging therefor the current replacement cost including the cost of transporting such materials to the Area; provided when practicable a NonOperator who may become an undivided interest owner in such Materials shall be given the opportunity of furnishing its share in kind. 3. MATERIAL FURNISHED BY OPERATOR Materials transferred from the Operators warehouse or staging areas to the Joint Property and charged to the Joint Account shall be priced based on the current replacement cost on a world wide competitive basis for the same brand and specifications of the Materials effective on that date and also adjusted for condition of Material as provided hereunder. A. i Condition A means that which is new; ii Condition B means that which has been used but is sound and is suitable for its original function without reconditioning; iii Condition C means that which has been used and would be suitable for its original function after reconditioning or that which cannot be reconditioned but has a limited service in its original functions; Model Petroleum Concession Agreement 2009 115 iv Condition D means that which is unsuitable for its original function but is usable for another function; and v Condition E means that which is junk. B. All Material furnished to the Joint Property from Operators warehouse or staging areas unless otherwise agreed to by the Parties shall be priced on the following basis and charged or credited to the Joint Account. a Condition A Material at Current Price; b c d Condition B Material at seventyfive percent 75 of Current Price of Condition A Material;

Condition C Material at fifty percent 50 of Current Price of Condition A Material; Condition D and E Material at a value commensurate with its use at current prices. There may be cases where the same items of the Material due to their unusual condition shall be fairly and equitably priced by the Operator subject to the approval of the Operating Committee. C. Operator shall only supply Material for the Joint Account from the Operators warehouse if the ultimate cost of such Material is equivalent to the most economical cost of the same or similar Material currently prevailing in normal arms length transactions on the open market. Model Petroleum Concession Agreement 2009 116

ARTICLEIV DISPOSAL OF EQUIPMENT AND MATERIAL 1. MATERIAL PURCHASED BY THE OPERATOR OR NONOPERATOR The Operator shall be under no obligation to purchase the interest of a NonOperator in surplus new or used Material. The Operator shall dispose of and account for the disposition of surplus Material. 2. SALES TO OUTSIDERS Sales to outsiders of major Material shall be made with the consent of NonOperators as to both terms and price and where made proceeds shall be credited by the Operator at the full amount collected from the purchaser. Any claim by a purchaser for defective Material or otherwise shall be charged back if and when paid by the Operator. Model Petroleum Concession Agreement 2009 117

ARTICLEV INVENTORIES PERIODIC INVENTORIES NOTICE AND REPRESENTATION At reasonable intervals or as directed by the Operating Committee inventories shall be taken by the Operator of all Joint Account stock and installed Material and Equipment on which detailed accounting records are normally maintained for material control purposes. The Operator shall give NonOperators at least thirty 30 Days written prior notice of its intention to take inventory and NonOperators at their sole cost and expense shall be entitled to have a representative present. The failure of any NonOperator to be represented at such inventory shall bind such NonOperator to accept the inventory taken by the Operator who shall in that event furnish each NonOperator with a reconciliation of overages and shortages. Inventory adjustments to the Joint Account shall be made by the Operator for overages and shortages but the Operator shall be held accountable to NonOperators only for shortages due to lack of reasonable diligence. Any adjustments of inventory by one percent 1 or more shall be

brought to the attention of the Operating Committee for review. 2. SPECIAL INVENTORIES

Whenever there is a sale or change of interest in the Joint Property a special inventory may be taken by the Operator provided the seller and/or purchaser of such interest agrees to bear all of the expense thereof. In such case both seller and purchaser shall be entitled to be represented and shall be governed by the inventory so taken. Model Petroleum Concession Agreement 2009 118

ARTICLE VI TERMINATION As soon as practical after termination of the Concession Agreement and the Joint Operating Agreement the Joint Account shall be finally settled and balanced by whatever cash payments between the Working Interest Owners are expedient following presentation by the Operator to all Working Interest Owners of a final statement of the costs and credits in the Joint Account subject to any adjustment that may be required as the result of any final audit performed in accordance with the procedures provided elsewhere in the Concession Agreement and the Joint Operating Agreement. Model Petroleum Concession Agreement 2009 119 ANNEX III

STANDARD FORM OF DEVELOPMENT AND PRODUCTION LEASE The President of Pakistan hereinafter referred to as the President hereby grants under and in accordance with the provisions of the Pakistan Petroleum Exploration and Production Rules 2009 and on the terms and conditions set forth or referred to therein and hereinafter referred to as the Lessee hereby accepts a Development and Production Lease on the terms and conditions aforesaid and on further terms and conditions set forth herein as follows 1 This Lease is granted to the following companies with working interests as stated herein Names of Lessees 2 This Lease gives the Lessees the exclusive right to perform activities in connection with the Development and Production of Petroleum in the following areas Lease Area No. Coordinate Km² 3 4 The Lease is valid for a period of . The Lessees shall be entitled to renewal of the Lease as follows The Lessees shall develop the Petroleum deposits in the Lease Area with due diligence and substantially in accordance with the Development Plan dated subject to such modifications thereto as THE PRESIDENT may approve. Model Petroleum Concession Agreement 2009 120 5 When the deposits have been developed Petroleum shall be produced in accordance with the production profile approved from time to time by

THE PRESIDENT. 6 The laws of Pakistan shall govern all activities pursuant to this Lease. In witness whereof the President has set his hand and seal and the Lessees has caused its Common Seal to be affixed hereon this Day of 200. Model Petroleum Concession Agreement 2009 121

ANNEXIV GOVERNMENT OF PAKISTAN MINISTRY OF FINANCE REVENUE AND ECONOMIC AFFAIRS REVENUE DIVISION Islamabad the 7th August 2004. NOTIFICATION CUSTOMSSALES TAX S.R.O. 678I2004. In exercise of the powers conferred by section 19 of the Customs Act 1969 IV of 1969 and clause a of subsection 2 of section 3 of the Sales Tax Act 1990 and in supersession of its Notification No. S.R.O. 448I2004 dated the 12th June 2004 the Federal Government is pleased to exempt 1 machinery equipment materials specialized vehicles or vessels pickups 4x4 helicopters aircraft accessories spares chemicals and consumables as are not manufactured locally imported by the Exploration and Production EP Companies their contractors subcontractors and service companies from customs duty in excess of five per cent ad valorem leviable under the First Schedule to the Customs Act 1969 IV of 1969 and the whole of sales tax leviable under the Sales Tax Act 1990 on their import and subsequent supply subject to the conditions specified under the caption CONDITIONS WITH REFERENCE TO CLAUSES 1 AND 2; 2 machinery and equipment as are not manufactured locally imported by companies other than Exploration and Production Companies from custom duty in excess of five per cent ad valorem leviable under the First Schedule to the Customs Act 1969 IV of 1969 subject to the conditions specified under the caption CONDITIONS WITH REFERENCE TO CLAUSES 1 AND 2; 3 goods as mentioned in CLAUSES 1 and 2 above as are manufactured locally imported by Exploration and Production Companies their contractors subcontractors and service companies other petroleum and public sector companies as is in excess of ten per cent ad valorem leviable under the First Schedule to the Customs Act 1969 IV of 1969 except Xmass trees wellhead and integral components and parts thereof which shall be exempted from so much of the customs duty as is in excess of fifteen per cent ad valorem; imported by EP Companies their contractors subcontractors and service companies provided that goods imported by public sector companies shall be subject to provisions of Notification No. S.R.O.

827/2001 dated the 3rd December 2001 except for projects wherein an investor or multinational company has a Model Petroleum Concession Agreement 2009 122 blocking vote. Components and parts of wellhead and Xmass tree if imported for their otherwise utilization will be allowed on payment of 10 customs duty on the basis of certification of respective EP Company. However items not manufactured locally shall remain subject to 5 customs duty. All items falling under this serial No. 3 shall also be exempt from whole of the sales tax if these are plant machinery equipment and proprietary spares of parent equipment 1[provided such spares are] not manufactured locally. 4 raw materials and components as are not manufactured locally and are imported for use in the manufacture of goods specified in clauses 1 and 2 to be supplied to the petroleum sector companies as specified in the said Notification from whole of customs duty leviable under the First Schedule to the Customs Act 1969 IV of 1969 1[and the whole of sales tax leviable under the Sales Tax Act 1990] subject to the conditions specified under the caption CONDITIONS WITH REFERENCE TO CLAUSE 4. 1[5 Two vehicles Pajero Toyota Land Cruiser etc imported by Exploration and Production EP Companies shall be exempt from whole of customs duty while the 3rd and 4th vehicle shall be exempt from duty as is in excess of 10 and 25 respectively. Similarly one vehicle imported by Service Company shall be exempt from the whole of customs duty and their 2nd vehicle shall be exempt from duty as is in excess of 10 ad valorem; subject to the following conditions namely a b Life of the vehicle shall be five years unless sooner it is damaged to the extent that it cannot be used; and for claiming replacement of any vehicle the vehicle required to be replaced shall be surrendered to the customs authority free of cost.]; CONDITIONS WITH REFERENCE TO CLAUSES 1 AND 2. i Only such goods shall be entitled to the exemption under this notification as have been certified for clause 1 by an EP Company and for clause 2 by a company other than an EP company for its own use or its contractors subcontractors and service companies for its projects of oil and gas exploration and production refinery oil and gas pipeline liquefied petroleum gas LPG compressed natural gas CNG petroleum terminals energy conservation environment and safety controls; the exemption available to EP companies shall be admissible only to such EP companies

who hold permits or licences or leases or concession or Model Petroleum Concession Agreement 2009 123 production sharing agreement and who enter into supplemental agreements with Government of Pakistan; the importers shall maintain an account of all imports alongwith the relevant record as prescribed by the Customs Rules 2001 and Sales Tax Act 1990; iv in the event a dispute arises whether any item is entitled to exemption under this notification the item will be immediately released by the Customs Department against a corporate guarantee valid for a period of nine months extendable by the concerned Collector of Customs on time to time basis. A certificate from the relevant Regulatory Authority that the item is covered under this notification shall be given due consideration by the Customs Department towards finally resolving the dispute. Disputes regarding the local manufacturing only shall be resolved through the Engineering Development Board; v in the event that an emergency condition occurs in connection with operations by a petroleum sector company which seriously endangers life or property of the operations of the project the relevant Regulatory Authority shall declare an emergency and the operating company shall be allowed to import any item or items considered necessary by the said company to deal with the emergency under intimation to the Regulatory Authority without fulfilling such formalities as are likely to cause delay. Payment of duties and taxes if any will be paid upfront based on the calculations by the respective EP Company of the declared value. Such payment can be made at the time of clearance in cash or by opening a current account with customs or by pay order or by a cheque issued by the respective EP company. vi items imported at concessionary rates which become surplus scrap junk obsolete or otherwise shall be disposed of in the following manner namely a in the event an item other than vehicles is sold to another company in the petroleum sector no import duties shall be levied or charged. Otherwise it shall be sold through a public tender and duties shall be recovered at the rate of ten per cent ad valorem of the sale proceeds; b for vehicles there would be a minimum retention period of five years after which the vehicles may be disposed of in the manner provided in a above except that the full rate of import duties net of any import duties already paid shall be charged subject to an adjustment of

depreciation at the rate of two per cent per month up to a maximum of twenty four months; c vehicles can be surrendered at any time to the Government of Pakistan without payment of any import duties under intimation to the Central Board of Revenue; and Model Petroleum Concession Agreement 2009 124 vii d items imported on payment of 5 customs duty ad valorem or above which have been rendered scrap with change in their physical status composition or condition and PCT classification will be dealt with as scrap and shall be chargeable to customs duties and sales tax accordingly at standard rates; all petroleum sector companies corporations and organizations including their contractors and subcontractors and service companies shall be entitled to import machinery equipment helicopters aircrafts drilling bits drilling and seismic on shore or off shore vessels drilling rigs specialized vehicles which fall under PCT heading 87.05 including accessories and spares 1[excluding those for current use] that are part of such vehicles and vessels for the purpose of construction erection exploration and production of petroleum projects on an importcumexport basis without payment of duties and taxes against a corporate guarantee valid for a period of two years equal to the value of import duties and taxes exempted extendable by the Collector of Customs on time to time basis if the importer has a definite contract. Should the goods etc. not be exported on the expiry of the project or transferred with the approval of the Collector of Customs to another petroleum project or the period of stay has been extended by the Collector of Customs then the company or their contractors or subcontractors or service companies as the case may be shall be liable to pay duties and taxes chargeable at the time of import as per clauses 1 2 and 3 above. viii each importer or EP company shall develop a software within a period of one year from the date of issuance of said Notification and shall establish an online connection with the customs authorities for regulating the imports made under this notification. ix any item imported under this notification may be exported for replacement or otherwise repair modification or renovation and may be reimported by paying concessionary duty and taxes only as per serial 1 on the actual cost of repair renovation or modification of the respective items. CONDITIONS WITH REFERENCE TO CLAUSE 4 ABOVE i The manufacturer has suitable inhouse facilities and

registration with the Sales Tax Department for manufacture of such goods or the importer cum manufacturer is in possession of a firm contract for the manufacture of such goods with any other manufacturer having suitable inhouse facilities and registered with Sales Tax Department for the manufacture of such goods; ii the manufacturer cum importer shall furnish to the Collector of Customs and Collector of Sales Tax the list of such goods that he is manufacturing or intends Model Petroleum Concession Agreement 2009 125 to manufacture alongwith the details of raw materials and components required for the manufacture of each item and the total 1[anticipated] annual requirement of all such inputs; iii 1[Omitted;] iv v the clearance of inputs shall be allowed through 1[Karachi Custom House or Port Muhammad Bin Qasim or a part] nearest to the manufacturing unit; the manufacturer cum importer shall at the time of import of raw materials and components make a written declaration on the goods declaration to the effect that the raw materials and components have been imported for manufacturing of goods to be supplied to the petroleum sector companies as specified in condition i under the caption CONDITIONS WITH REFERENCE TO CLAUSES 1 AND 2; vi the manufacturer cum importer shall maintain record of the inputs and the goods manufactured out of them in such form as may be prescribed by the Central Board of Revenue or required under any other law in force by the CBR; 1[vii The manufacturer cum importer shall communicate to the concerned Collector of Customs in writing about the consumption of imported goods within one month of consumption. In case of nonconsumption within a period of one year extendable for another year by the concerned Collector the importer shall pay the customs duty and other taxes involved. The importer may however reexport the unconsumed portion during the validity period;] viii in case the manufacturer cum importer does not provide information regarding consumption or otherwise of the imported goods within a period of one hundred eighty days of import or such extended period as allowed by the Collector or if otherwise deemed necessary the records of importer cum manufacturer shall be audited by the Duty Suspension Audit Organization DSAO or by any other person duly appointed by the Collector. If upon audit consumption of goods is not found satisfactory the Collector of Customs shall initiate proceedings for the recovery of leviable

customs duty and other taxes besides penal action under the relevant provisions of laws in force; and 1[ix The manufacturercumimporter of goods shall furnish a delivery note duly supported with a corresponding purchase order from any petroleum sector companies as prescribed in clauses 1 and 2 of this notification.] Explanation.1. The expression not manufactured locally shall mean the goods which are not included in the list of locally manufactured goods specified in the General Order issued by the Central Board of Revenue. Model Petroleum Concession Agreement 2009 126 Explanation.2. Used and refurbished machinery equipment materials specialized vehicles or vessels their components and parts importable under this notification will be subject to the provisions of Import Trade and Procedures Order in effect. Explanation.3. For the import of 4x4 single or double cabin pickup a committee will be constituted for giving approval. It will comprise nominees of CBR and Pakistan Petroleum Exploration and Production Companies Association. [C.No.110Mach.2004] As Amended Muhammad Ramzan Additional Secretary 1. S.R.O.5711/2005 dated 06.06.2005 Model Petroleum Concession Agreement 2009 127 LIST OF MACHINERY AND EQUIPMENT REQUIRED FOR JOINT OPERATIONS ANNEXV 1. 2. 3. 4. 5. The following items will be required for Joint Operations and not for the personal use of employees Drilling rigs vessels and machinery including prefabricated derricks drawworks rotary tables high pressure hoses kelly stems tongs swivels hooks elevators slips boilers bales traveling blocks crown blocks wire lines wellhead equipment blow out preventers control heads drilling bits reamers thread dope rope wire and hemp and well cementing equipment. Machinery including such items as steam diesel petrol and gas engines electric motors and generators including electric arc welding and gas welding generators and welding torches electrical power switchgear pumps of all types and sizes for drilling and producing Petroleum machine tools as required in connection with exploration drilling or production of Petroleum including lathes grinders planners power saws presses drills and hammers power driven winches air compressors pneumatic tools special cables including steel electric and hemp mechanical power transmitters. control Scientific and engineering instruments including surveyors transits levels Alidades Brunton and prismatic compasses seismic instruments gravity meters magnetometers

instruments and equipment required for well logging and surveying including photographic recording mudtreating and in particular gaschromatograph microscopes ultra violet lamps rocksaw special photographic and such special instruments as will be required to establish geophysical geological engineering and chemical laboratories radio telemetering radio facilities and other electronic equipment and seismic energy sources dynamite etc. and consumables. core analysis and gas testing Tools including drilling tools oil well fishing and speciality tools drill stem test wire line test well surveying and logging well cementing tools and equipment also oil well cement drilling mud and admixtures drilling equipment and all types of support equipment. All forms of vessels heavy hauling and oilfield service vehicles four wheel drive single and double cabin pickups jeeps station wagons trucks and general purpose vehicles built primarily terrain transportation of staff and equipment excluding saloon cars and luxury for offroadrough Model Petroleum Concession Agreement 2009 128 five door jeeps and aircraft required to support the marine drilling units and onshore support operations specialized transportation and earth moving equipment; trailers for field use aircraft boats barges swamp buggies including tires tubes valves and valve stems for the above equipment. for construction of exploration and exploitation facilities. All equipment and working material necessary 6. 7. 8. 9. Steel pipe of all sizes including drill pipe drill collars oil well casing tubing and line pipe and all necessary control valves and fittings. Special prefabricated steel structures including but not limited to marine production facilities fully outfitted all forms of subsea equipment for exploration drilling and production tanks and pressure vessels and all semi finished goods steel plates etc. for their construction on location and all related instruments regulating and measuring equipment controllers gauges indicators etc. Specialized fire fighting equipment for oil field use both mounted and portable fire and smoke detectors and all forms of precautionary devices to protect life and property. Special Petroleum field designed electric communication and cooling equipment computing hardwaresoftware. [For software subject to Article 13.7]. 10. Safety equipment of all kinds including items such as boots coveralls safety helmets gloves protection eyeglasses H2S equipment life rafts life boats safety jackets first aid kits medical supplies transport equipment emergency

lighting radioactive monitoring tools fresh water making equipment gas detection systems blow out preventers etc. 11. Replacement parts for the foregoing. NOTE I II The foregoing enumeration of items is not exhaustive and each category shall be deemed to include articles of similar nature required for the specific purpose of operations on land sea and air for onshore and offshore petroleum exploration production and development projects. The foregoing list shall not include articles which are produced and available in Pakistan at the same delivery date of the same quality at comparable prices as certified by the Director General of Petroleum Concessions and which are banned for import under the Import Export Trade Policy by the Government Model Petroleum Concession Agreement 2009 129 from time to time notwithstanding the fact that such items may be among those described above. III No customs concessions will be allowed on spare parts office equipment stationery articles and other goods items etc. which are locally manufactured and so certified by the Director General Petroleum Concessions. IV It is clarified that the Operator its contractors or subcontractors can import on an import cum export basis the used equipment and machinery such as seismic acquisition equipment drilling rigs and equipment production testing equipment etc. for the purposes of temporary Operations on the recommendations of the Director General Petroleum Concessions but the same will have to be either exported after the operations have been completed or the transfer of the said equipment to another company has been authorized by the appropriate Regulatory Authority the notifications issued by the Central Board of Revenue. the Petroleum Policy and in accordance with Model Petroleum Concession Agreement 2009 130 C.No.101493ICMCON. DATED 13 JUNE 1994 GOVERNMENT OF PAKISTAN CENTRAL BOARD OF REVENUE ANNEXVI C.No.101493ICMCON. Islamabad the 13th June 1994. From Ghulam Ahmad Secretary ICMCon To The Collector of Customs Appraisement Preventive Custom House Karachi. The Collector of Customs and Central Excise Peshawar Rawalpindi Faisalabad Gujranwala Multan Hyderabad Quetta Lahore. SUBJECT EXEMPTION OF CUSTOMS DUTY SALES TAX AND IQRA SURCHARGE ON FOODSTUFF LIQUOR AND HOUSEHOLD EFFECTS OF EXPATRIATE EMPLOYEES OF THE OIL

DRILLING COMPANIES AND THEIR CONTRACTORSSUBCONTRACTORS. The Central Board of Revenue has been pleased to order that henceforth foreign expatriate employees of the Oil Companies and the contractorssubcontractors of the oil companies coming to work on petroleum projects covered following under Petroleum Concession Agreements will be entitled of concessions a Foreign employees and consultants of petroleum sector companies and foreign employees of such companies contractors and subcontractors will be entitled to import free of import duties including customs duties sales tax Iqra surcharge and any other surcharges and licenceauthorization fees used and bonafide personal and household effects excluding passenger vehicles provided that the effects were acquired or were in such persons possession before his arrival in Pakistan or were imported within 6 months of such arrival. Such personal and household effects may thereafter be freely exported free of export duties and fees. Such articles shall not be sold or disposed off or transferred in Pakistan except with the prior permission of Regulatory Authority and on payment of import duties Model Petroleum Concession Agreement 2009 131 at the rate and value operating on the date the goods at the time of import less depreciation 10 per annum.

b Foreign employees and consultants of petroleum sector companies and foreign employees of such companies contractors and subcontractors shall be allowed to import commissary goods free of import duties including customs duty sales tax Iqra surcharge and any other surcharges to the extent of US 1200 each excluding family members per annum or such greater amount notified from time to time subject to the condition that the said goods shall not be sold or disposed off in Pakistan and no foreign exchange from Pakistan shall be involved. The previous 3. C.No.52692Cus.Ex. dated 29.12.1992 are hereby withdrawn. issued on instructions the subject vide Boards letter Ghulam Ahmad Secretary ICMCON Copy to Mr. Akhlaque Mahmud Deputy Director Imp Directorate General Petroleum Concessions 1019A Pak Plaza FazaleHaq Road Blue Area Islamabad. with reference to Boards letter No.52692Cus. Ex. dated 29.12.1992 Sd Ghulam Ahmad Secretary ICMCON Model Petroleum Concession Agreement 2009 LIST OF COMMISSARY STORES 132 ANNEXVII The following food stuff and commissary stores can be imported Food i Meat Beef Pork

Ham Bacon Miscellaneous meat including tinned meat. ii Vegetables tinned and glassed including juices. iii Fruits tinned including juices. iv Liquor Tobacco and cigarettes of all kinds. v Sea Food Tinned tuna salmon sardines etc. Note Import of Liquor by the nonMuslim foreigners shall be subject to the regulations and orders of the Government of Pakistan. Model Petroleum Concession Agreement 2009 133 BANK GUARANTEE ANNEXVIII The President Islamic Republic of Pakistan Through Director General Petroleum Concessions Ministry of Petroleum and Natural Resources Islamabad Gentlemen Regarding Our Irrevocable Bank Guarantee No In compliance with the request of XYZABC the Company we Name of Bank issue this unconditional irrevocable Bank Guarantee in your favour for a sum not exceeding United States Dollars US which represents 25 of the Minimum Financial obligations for the initial exploration period for Block No under the Concession Agreement dated 200 Agreement among the Company XYZABC GHPL if applicable and THE PRESIDENT of the Islamic Republic of Pakistan THE PRESIDENT relating to Petroleum exploration development and production in Pakistan to guarantee the Companys faithful performance of its financial obligations as provided for in the Agreement the said sum of United States Dollars US to be reduced annually by an amount proportionate to 25 of the discharge of Minimum Work Commitment for that year as provided for in the said Agreement as evidenced by a signed certificate from THE PRESIDENT or his designee Director General Petroleum Concessions. The terms and conditions of this Bank Guarantee are as follows 1 The said amount or any part thereof shall be paid to Director General Petroleum Concessions without recourse to any person on receipt of your first written demand that the amount claimed is duly payable under the Agreement. 2 We hereby waive any or all rights and demands including but not limited to diligence presentment demand for payment protest as guarantor of first requiring the President to proceed against or enforce his contractual or legal right against the Company obligations hereunder are continuing absolute and unconditional and will not be in any way affected by giving of time or any forbearance by THE PRESIDENT the waiver or consent by THE PRESIDENT with respect to any provisions of the Agreement and irrespective of the validity regularity enforceability or value of the Agreement or

by any other circumstances which might otherwise constitute a legal or equitable discharge or defence of a surety or guarantor all of which are hereby expressly waived. Model Petroleum Concession Agreement 2009 134 3 Our obligations hereunder shall be paid in United States Dollars to the bank account designated by THE PRESIDENT or his designee Director General Petroleum Concessions free and clear of and without reduction by reason of any and all present and imposts deductions assessments charges or withholdings whatsoever. We shall bear and pay any and all fees and expenses in relation to or in connection with this Bank Guarantee. levies taxes future 4 In order to give effect to this Bank Guarantee we hereby declare that THE PRESIDENT or his designee Director General Petroleum Concessions shall be at liberty to act as though we were the principal debtor and we hereby waive all and any of the rights as surety which may at any time be inconsistent with any of the above provisions. 5 Any claim or demand under this Bank Guarantee shall be presented to us on or before the expiration of the date of the validity of this Bank Guarantee. 6 This Bank Guarantee shall be effective immediately and expire on NB ninety 90 Days after the end of the term and thereafter automatically without any formality become null and void for all its effects and this Bank Guarantee shall be returned to us immediately. 7 Notwithstanding anything contained hereinabove our maximum liability hereunder shall not exceed the sum of US .

Yours very truly Name of Bank Model Petroleum Concession Agreement 2009 135 PARENT COMPANY GUARANTEE GIVEN PURSUANT TO ARTICLE XXV OF THE PETROLEUM CONCESSION AGREEMENT ANNEX IX Whereas XYZ ABC a Company having its registered office at is the owner of the majority of the shares in a party to the Agreement as hereinafter defined and is its parent company. Whereas hereinafter referred to as the Company has entered into a Concession Agreement herein referred to as the Agreement with THE PRESIDENT of the Islamic Republic of Pakistan and GHPL if applicable relating to the Area as defined therein and assumed various obligations in favour of THE PRESIDENT. hereby acknowledges that it is dutifully aware of and understands the legal and contractual obligations undertaken by the Company under the Rules Licence and the Agreement and hereby guarantees that in the case of a default by the Company of

any of its obligations under the Rules Licence and the Agreement it will provide the Company with all necessary financial and other means to enable it to fully perform its aforesaid obligations and rectify the default provided that not less than fourteen 14 Days notices of the alleged default and amount payable thereon have been communicated in writing. This Guarantee will apply as of the Effective Date as defined in the Agreement and as long as the Company is a party to the Agreement. The laws of Pakistan shall govern this guarantee. IN WITNESS whereof this Deed has been executed on the Day of 20 The Common Seal of Model Petroleum Concession Agreement 2009 ANNEX X 136 WORK UNITS ARTICLE 1 1.1 Purpose GENERAL PROVISIONS The purpose of this Annex regarding Work Units is to set out the principles and procedures whereby the work program under Article 3.3 of the Agreement shall be carried out on the basis of Work Units as per Rules as hereinafter defined. 1.2 Definitions The definitions of Article 1 of the Agreement shall apply to this Annex and have the same meaning except that references herein to Article refer to Articles hereof unless otherwise indicated. In addition the following terms will have the meaning given below a Well Depth means the well depth measured along the well bore from the rotary table to the total depth for onshore wells. In case the well is a deepening of an existing well the well depth is measured from the deepest point in the existing well to the new total depth. In case a well is sidetracked the depth shall not include any depth drilled below the kick off point of the side track but shall include the redrilled part of the well from the kick off point to the total depth. In case a well is horizontally drilled or deviated the length of the horizontaldeviated segment well shall be added to the vertical well depth. b Work Unit means a unit of work for the purpose of measuring the quantum of Minimum Work under Article 3.3 of the Agreement as set out in more detail in Articles II and III of this Annex. 1.3 Precedence of Documents In the event of any inconsistency or conflict between the provisions of this Annex III and the provisions of the Agreement the provisions of the Agreement shall prevail. 1.4 Qualifying Work The only work that qualifies for Work Units are new 2D and 3D seismic surveys and Exploration Wells carried out during the Exploration Period in the Area. Work shall include any seismic surveys for the purpose of locating Exploration Well and Exploration Model

Petroleum Concession Agreement 2009 137 Wells drilled in Development Areas during the Exploration Period. Any work carried out as an Appraisal Program or as part of the development of a Commercial Discovery shall not qualify for Work Units.

ARTICLE II VALUE OF WORK UNITS

2.1 Value of Work Units The value of one Work Units is Ten Thousand 10000 Dollars.

ARTICLE III EQUIVALENCY OF WORK UNITS

3.1 Equivalency of Work Units The following equivalency applies in order to equate work that has been carried out with Work Units

a 2D seismic surveys One linekilometer of 2D seismic surveys which has been acquired processed interpreted and mapped 0.3 Work Unit.

b 3D seismic surveys One square kilometer of 3D seismic surveys which has been acquired processed interpreted and mapped 1.0 Work Unit.

c One Exploration Well with a surface location in Zone I or Zone II

Well Depth in meters	Work Units
1000	2000
3000	4000
5000	6000
7000	100
200	400
600	1000
2000	3000

d One Exploration Well with a surface location in Zone III

Well Depth in meters	Work Units
1000	50

Model Petroleum Concession Agreement 2009

Well Depth in meters	Work Units
2000	3000
4000	5000
6000	7000
138	80
100	200
330	600
900	

3.2 Interpolation For Well Depths intermediate to the ones indicated in the tables of Article 3.1 c 3.1 d and 3.1e the Work Units shall be determined on the basis of linear interpolation.

ARTICLE IV MINIMUM WORK UNITS DURING THE EXPLORATION PERIOD

4.1 Minimum Work Units The minimum Work Units required by the Minimum Work programme will be set out in Article 3.3 of the Agreement with respect to Phase One Phase Two and Phase Three of the Initial Term and the First and Second Renewal thereof in accordance with the Rules.

4.2 Work which does not Qualify The following work does not qualify for Work Units

a work carried out prior to the Effective Date

b work carried out after the termination of the Exploration Period

c work carried out outside the Area

d work which is not carried out in accordance with work program stipulated in Article 3 of the Agreement.

e work which does not qualify as Joint Operations under the Agreement.

f g any Exploration Wells which are terminated less than 100 metres below the seabed and the portion of any Well Depth for which no well logs were obtained as a result of blowouts other acentis or drilling problems.

4.3 Completion of Work

Model Petroleum Concession Agreement 2009 139 The work in order to earn Work Units shall be

considered completed where a DGPC has received satisfactory proof from the Working Interest Owner that the work has been executed in accordance with the Agreement and the Rules and b DGPC has received the minimum required information pursuant to the Agreement and the Rules.

4.4 Value of Work The reduction of the irrevocable unconditional bank guarantee pursuant to Article 3.8 of the Agreement or the determination of the non performance compensation/liquidated damages pursuant to Article 3.4 of the Agreement shall be based on the value of the Work Units that have been completed or not completed by the Working Interest Owner irrespective of whether the actual cost of the work has been more or less than the value of the Work Units.

4.5 Free Selection of Work The Working Interest Owner is free to define the work that qualifies for Work Units subject to approval of the work program by the Management Committee.

4.6 Crediting of Work Units Any Work Units executed in excess of the amounts required under the Agreement for each Phase of the Initial Term or the First Renewal can be carried forward to the next period in accordance with the provisions of the Agreement. The value of Work Units which are being transferred to subsequent years shall be adjusted in accordance with Article 2.1 of this AnnexIII.

4.7 Nontransferability of Work Units Work Units cannot be transferred from one Area to another.

4.8 Allocation of Work Units Where seismic surveys are being carried out jointly by several Working Interest Owners in different Areas and/or on open acreage the Working Interest Owner shall only convert to Work Units the work which is carried out inside the Area and shall allocate such work based on the line/kilometres or square kilometres carried out in the Contract Area. Where a Working Interest Owner contributes to or shares in the costs of an Exploration Well drilled outside the Area the Working Interest Owner shall not claim such well or any portion of such well for the earning of Work Units.

Model Petroleum Concession Agreement 2009 140 Annexure XI WELL HEAD GAS PRICE ILLUSTRATION AS PER PRICING PROVISIONS OF POLICY 2009 BBL A. Weighted average imported Crude Oil C F Price Assumed RCP 35.0000 10.0000 100.0000 Floor Price C F Ceiling Price C F B. Apply sliding scale discounts to CF crude oil price after floor upto ceiling USBBL Applicable of CF Price Upto 20 Above 20 to 30 Above 30 to 40 Above 40 to 70 Above 70 to 100 Applicable C F Price ABCDE 100 Plus 50

of incremental increase Plus 30 of incremental increase Plus 20 of incremental increase Plus 10 of
 incremental increase USBBL 20.0000 A 5.0000 B 1.5000 C 0.0000 D 0.0000 E 26.50000 C. Marker
 Price Applicable CF price x respective Zonal discount Zone O Offshore deep ultra deep Zonel Zone
 O Offshore shallow 82.5 of Applicable CF Price 21.8625 77.5 of Applicable CF Price 20.5375 Zonell
 Zonelll 72.5 of Applicable CF Price 67.5 of Applicable CF Price D. Conversion factor assumed MM
 Btubbl 19.2125 17.8875 5.7 E. Zone wise producer prices for Pipeline quality specification gas in
 USMMBtu Zone O Offshore deep ultra deep Zonel Zone O Offshore shallow Zonell Zonelll 3.8355
 3.6031 3.3706 3.1382 Note Weighted average heating value in MMBtubbl per type of imported
 Crude Oil as applicable during the period. Model Petroleum Concession Agreement 2009 141 WELL
 HEAD GAS PRICE ILLUSTRATION AS PER PRICING PROVISIONS OF POLICY 2009 BBL A.
 Weighted average imported Crude Oil C F Price Assumed RCP 140.0000 10.0000 100.0000 Floor
 Price C F Ceiling Price C F B. Apply sliding scale discounts to CF crude oil price after floor upto
 ceiling USBBL Applicable of CF Price Upto 20 Above 20 to 30 Above 30 to 40 Above 40 to 70
 Above 70 to 100 Applicable C F Price ABCDE 100 Plus 50 of incremental increase Plus 30 of
 incremental increase Plus 20 of incremental increase Plus 10 of incremental increase USBBL
 20.0000 A 5.0000 B 3.0000 C 6.0000 D 3.0000 E 37.0000 D. Marker Price Applicable CF price x
 respective Zonal discount Zone O Offshore deep ultra deep Zonel Zone O Offshore shallow 82.5 of
 Applicable CF Price 30.5250 77.5 of Applicable CF Price 28.6750 Zonell Zonelll 72.5 of Applicable
 CF Price 67.5 of Applicable CF Price D. Conversion factor assumed MM Btubbl 26.8250 24.9750
 5.7 E. Zone wise producer prices for Pipeline quality specification gas in USMMBtu Zone O Offshore
 deep ultra deep Zonel Zone O Offshore shallow Zonell Zonelll 5.3553 5.0307 4.7061 4.3816 Note
 Weighted average heating value in MMBtubbl per type of imported Crude Oil as applicable during
 the period. Model Petroleum Concession Agreement 2009 142 Model Petroleum Concession
 Agreement 2009 Western Australia Iron Ore Yandicoogina Agreement Act 1996 As at 15 Dec 2011
 Version 01c005 Published on www.legislation.wa.gov.au Western Australia Iron Ore Yandicoogina
 Agreement Act 1996 . 2. 3. 4. 5. Short title Commencement Interpretation Agreement ratified and

implementation authorised State empowered under clause 12C9a Schedule 1 Agreement Schedule 2 First Variation Agreement Schedule 3 Second Variation Agreement Notes Compilation table 1 1 1 2 2 152 As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page i Western Australia Iron Ore Yandicoogina Agreement Act 1996 An Act to ratify and authorise the implementation of an agreement between the State and Hamersley IronYandi Pty. Ltd. and Hamersley Iron Pty. Ltd. relating to the establishment and operation of an iron ore mine in the central Hamersley Range. 1. Short title This Act may be cited as the Iron Ore Yandicoogina Agreement Act 1996. 2. Commencement 1. This Act comes into operation on the day on which it receives the Royal Assent. 3. Interpretation 1. In this Act Agreement means the agreement a copy of which is set out in Schedule 1 and except in section 41 includes that agreement as amended from time to time in accordance with clause 33 of the agreement and by the First Variation Agreement and the Second Variation Agreement; the First Variation Agreement means the agreement a copy of which is set out in Schedule 2; the Second Variation Agreement means the agreement a copy of which is set out in Schedule 3. [Section 3 amended No. 61 of 2010 s. 22; No. 61 of 2011 s. 20.] As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 1 Iron Ore Yandicoogina Agreement Act 1996 s. 4 4. Agreement ratified and implementation authorised 1 The Agreement is ratified. 2A The First Variation Agreement is ratified. 2B The Second Variation Agreement is ratified. 2 The implementation of the Agreement is authorised. 3 Without limiting or otherwise affecting the Government Agreements Act 1979 the Agreement operates and takes effect despite any other written law or law. 4 To avoid doubt it is declared that the provisions of the Public Works Act 1902 section 96 do not apply to a railway constructed under the Agreement. [Section 4 amended No. 61 of 2010 s. 23; No. 61 of 2011 s. 21.] 5. State empowered under clause 12C9a The State has power in accordance with clause 12C9a of the Agreement. [Section 5 inserted No. 61 of 2010 s. 24.] page 2 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Schedule 1 Agreement [s. 3] THIS AGREEMENT is made this day 22 of October 1996 BETWEEN THE HONOURABLE RICHARD

FAIRFAX COURT B. Com. M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and its instrumentalities from time to time hereinafter called the State of the first part HAMERSLEY IRONYANDI PTY LIMITED A.C.N. 009 181 793 a company incorporated in Western Australia and having its registered office at Level 22 Central Park 152 158 St Goerges Terrace Perth hereinafter called the Company in which term shall be included its successors and permitted assigns of the second part and HAMERSLEY IRON PTY LIMITED A.C.N. 004 558 276 a company incorporated in the State of Victoria and having its registered office in the State of Western Australia at Level 22 Central Park 152 158 St. Georges Terrace Perth hereinafter called Hamersley of the third part. W H E R E A S a b c the Company has established within the lands the subject of Exploration Licences Nos. E474 and E476 to E4710 inclusive iron ore of tonneages and grades sufficient to warrant economic recovery and marketing; the Company has put forward a project outline for a mining operation which will have capacity to produce up to 15000000 tonnes of iron ore per annum for transportation from the mining lease as markets develop and which will provide accommodation for the mine workforce by way of facilities established in the vicinity of the mining lease; and the parties hereto have agreed to enter into this Agreement for the purpose of assisting the establishment of the mining operation as described above and providing a framework for managing future changes to the project particularly in relation to production and workforce increases and changes in workforce accommodation arrangements. NOW THIS AGREEMENT WITNESSES

As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 3 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Definitions 1. In this Agreement subject to the context accommodation area means an area or areas on or in the vicinity of the mining lease for accommodation and ancillary facilities for the mine workforce; Acquisition Act means the Land Acquisition and Public Works Act 1902; advise apply approve approval consent certify direct notify request or require means advise apply approve approval consent certify direct notify request or require in writing as the case may be and any inflexion or derivation of any of those words has a corresponding meaning; approved proposal means a proposal approved or determined under this

Agreement; beneficiated ore means iron ore which has been concentrated or upgraded otherwise than by washing drying crushing or screening or a combination thereof by the Company in a plant constructed pursuant to an approved proposal or such other plant as is approved by the Minister after consultation with the Minister for Mines and beneficiation and beneficiate have corresponding meanings; Clause means a clause of this Agreement; commencement date means the date the Bill referred to in Clause 3 comes into operation as an Act; Commonwealth means the Commonwealth of Australia and includes the Government for the time being thereof; Companys workforce means the persons and the dependants of those persons connected directly with the Companys activities under this Agreement whether or not such persons are employed by the Company; EP Act means the Environmental Protection Act 1986; fine ore means iron ore excluding beneficiated ore which is nominally sized minus six millimetres; page 4 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement iron ore includes beneficiated ore; Land Act means the Land Act 1933; Land Tenure Plan means the plan marked A initialled by or on behalf of the parties hereto for the purpose of identification; laws relating to native title means laws applicable from time to time in Western Australia in respect of native title and includes the NTA; loading port means the port of Dampier or if iron ore is not shipped or is not shipped from that port then such port which may include the port of Dampier as the Minister may determine for the purpose of this definition; local authority means the council of a municipality that is a city town or shire constituted under the Local Government Act 1995; lump ore means iron ore excluding beneficiated ore which is nominally sized plus six millimetres minus thirty millimetres; metallised agglomerates means the product of a pyrometallurgical iron ore reduction process which has a composition of not less than 85 eighty five per cent total iron excluding carbon; mine site means the mining lease the accommodation area and other areas provided for the facilities of the Company in the vicinity of the mining lease; mine workforce means the Companys workforce engaged for the Companys activities on the mine site but does not include persons visiting the mine site in connection with the Companys mining activities on

a short term basis only or employed for a specific task of limited duration; Mining Act means the Mining Act 1978; mining lease means the mining lease granted pursuant to Clause 11 and includes any renewal thereof and according to the requirements of the context describes the area of land demised as well as the instrument by which it is demised; Minister means the Minister in the Government of the State for the time being responsible for the administration of the Act to ratify this Agreement and pending the passing of that Act means the Minister for As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 5 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement the time being designated in a notice from the State to the Company and includes the successors in office of the Minister; Minister for Mines means the Minister in the Government of the State for the time being responsible for the administration of the Mining Act; month means calendar month; native title and native title rights and interests have the meaning given to them in the NTA; notice means notice in writing; NTA means the Native Title Act 1993 Commonwealth; person or persons includes bodies corporate; private roads means the roads referred to in subclause 1 of Clause 15 and any other roads whether within or outside the mining lease constructed by the Company in accordance with an approved proposal or agreed by the State and the Company to be a private road for the purposes of this Agreement; public road means a road as defined by the Road Traffic Act 1974; said State means the State of Western Australia; subclause means subclause of the Clause in which the term is used; this Agreement hereof and hereunder refer to this Agreement whether in its original form or as from time to time added to varied or amended; washing means a process of separation by water using only size as a criterion.

Interpretation 2. 1 In this Agreement a monetary references are references to Australian currency unless otherwise specifically expressed; page 6 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement b power given under any clause other than Clause 35 to extend any period or date shall be without prejudice to the power of the Minister under Clause 35; c clause headings do not affect the interpretation or construction; d words in the singular shall include the plural and words in

the plural shall include the singular according to the requirements of the context; e one gender includes the other genders; and f reference to an Act includes the amendments to that Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and the regulations for the time being in force thereunder. Nothing in this Agreement shall be construed to exempt the State or the Company from compliance with or to require the State or the Company to do anything contrary to any law relating to native title or any lawful obligation or requirement imposed on the State or the Company as the case may be pursuant to any law relating to native title. Nothing in this Agreement shall be construed to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or incidental to its activities under this Agreement that may be made pursuant to the EP Act.

2 3 Ratification and Operation

3. 1 The State shall introduce and sponsor a Bill in the State Parliament of Western Australia to ratify this Agreement and endeavour to secure its passage as an Act prior to 31 December 1996 or such later date as may be agreed between the parties hereto.

2 The provisions of this Agreement other than this Clause and Clauses 1 and 2 shall not come into operation until the Bill As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 7 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement referred to in subclause 1 has been passed by the Parliament of Western Australia and comes into operation as an Act.

3 If before 31 December 1996 the said Bill has not commenced to operate as an Act then unless the parties hereto otherwise agree this Agreement shall then cease and determine and no party hereto shall have any claim against any other party hereto with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement.

4 On the said Bill commencing to operate as an Act all the provisions of this Agreement shall operate and take effect notwithstanding the provisions of any Act or law. Initial obligations of the Company

4. 1 The Company shall continue its field and office engineering environmental heritage market and finance studies and other matters necessary for the purposes of this Clause and to enable it to finalise and to submit to the Minister the detailed proposals referred to in Clause 6.

2 3 The Company shall keep

the State fully informed in writing quarterly as to the progress and results of its operations under subclause 1 and shall supply to the State such information in relation thereto as the Minister may request. The Company shall cooperate with the State and consult with the representatives or officers of the State regarding matters referred to in subclauses 1 and 2 and any other relevant studies in relation to those subclauses that the Minister may wish to undertake. Surveys of lands 5.

1 For the purposes of Clause 4 and to the extent reasonably necessary to enable the Company to carry out its obligations under that Clause and to carry out surveys of land and other works in relation to its proposed activities under this Agreement and for the purpose of complying with and making applications page 8 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement with respect to land under the Aboriginal Heritage Act 1972 for all of which purposes the Company shall be deemed to be within the expression the owner of any land in section 18 of that Act but subject to the adequate protection of the environment including flora and fauna and the land affected including improvements thereon the Company and its agents and contractors in relation to its proposed activities under this Agreement may subject to sections 82 and 83A of the Acquisition Act and authorisations pursuant to those sections exercise the powers set out in those sections as if such activities were a work under that Act. 2 The land to be granted pursuant to this Agreement whether under the Land Act or the Mining Act will be drawn from within the areas coloured red and blue on the Land Tenure Plan and such other land as may be agreed between the State and the Company.

Company to submit proposals 6. 1 Subject to the provisions of this Agreement the Company shall on or before 31 December 1997 submit to the Minister to the fullest extent reasonably practicable its detailed proposals including plans where practicable and specifications where reasonably required by the Minister with respect to the production of up to 15000000 tonnes of iron ore per annum for transportation from the mining lease and the transport and shipment of iron ore produced which proposals shall make provision for the Companys workforce and associated population required to enable the Company to mine and recover iron ore from the mining lease and transport and ship the

iron ore and shall include the location area layout design quantities materials and time programme for the commencement and completion of construction or the provision as the case may be of each of the following matters namely a the mining and recovery of iron ore including mining crushing screening handling transport and storage of As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 9 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement b c d iron ore and plant facilities and any beneficiation or further processing of iron ore proposed to be carried out; a railway between the mining lease and Hamersleys existing railway from Dampier to Marandoo and works ancillary to or connected with the railway including fencing if any and crossing places; roads within the mining lease and roads serving the mining lease; temporary accommodation and ancillary facilities for the mine workforce on or in the vicinity of the mining lease and housing or other appropriate accommodation and facilities elsewhere for the Companys workforce; e water supply and disposal; f energy supplies; g storage and ship loading of iron ore; h mine aerodrome on or in the vicinity of the mining lease and any other aerodrome facilities and services; i j k l any other works services or facilities desired by the Company; use of local labour professional services manufacturers suppliers contractors and materials and measures to be taken with respect to the engagement and training of employees by the Company its agents and contractors; any leases licences easements and other titles to land required from the State; and an environmental management programme as to measures to be taken in respect of the Companys activities under this Agreement for rehabilitation and the protection and management of the environment.

Order of proposals 2 Each of the proposals pursuant to subclause 1 may with the approval of the Minister or if so required by him shall be page 10 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement submitted separately and in any order as to any matter or matters mentioned in subclause 1.

Additional submissions 3 At the time when the Company submits the said proposals it shall submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that

it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. Consideration of proposals

7. 1 In respect of each proposal pursuant to subclause 1 of Clause 6 the Minister shall

a b c approve of the proposal without qualification or reservation; or defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in subclause 1 of Clause 6 not covered by the said proposal; or require as a condition precedent to the giving of his approval to the said proposal that the Company make such alteration thereto or comply with such conditions in respect thereto as he thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions PROVIDED ALWAYS that where implementation of any proposals hereunder have been approved pursuant to the EP Act subject to conditions or procedures any approval or decision of the Minister under this Clause shall if the case so requires incorporate a requirement that the Company make such

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Act 1996 Schedule 1 Agreement alterations to the proposals as may be necessary to make them accord with those conditions or procedures. Advice of Ministers decision

2 The Minister shall within two months after receipt of proposals pursuant to subclause 1 of Clause 6 give notice to the Company of his decision in respect to the proposals PROVIDED THAT a where a proposal is to be assessed under section 401b of the EP Act the Minister shall only give notice to the Company of this decision in respect to the proposal within 2 months after service on him of an authority under section 457 of the EP Act; and b where implementation of a proposal by the State will require the State to take any native title rights and interests the Minister shall only give notice to the Company of his decision in respect to the proposal within 2 months of the process of taking such native title rights and interests by the State being completed. Consultation with Minister

3 If the decision of the Minister is as mentioned in either of paragraphs b or c of subclause 1 the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised

proposals either generally or in respect to some particular matter. Ministers decision subject to arbitration 4 If the decision of the Minister is as mentioned in either of paragraphs b or c of subclause 1 and the Company considers that the decision is unreasonable the Company within two months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision PROVIDED THAT any requirement of the Minister pursuant to the proviso to subclause 1 shall not be referable to arbitration hereunder. page 12 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Arbitration award 5 An award made on an arbitration pursuant to subclause 4 shall have force and effect as follows a b if by the award the dispute is deed against the Company then unless the Company within 3 months after delivery of the award gives notice to the Minister of its acceptance of the award this Agreement shall on the expiration of that period of 3 months cease and determine; or if by the award the dispute is deed in favour of the Company the decision shall take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. Effect of nonapproval of proposals 6 Notwithstanding that under subclause 1 any proposals of the Company are approved by the Minister or determined by arbitration award unless each and every such proposal and matter is so approved or determined by 31st December 1997 or by such extended date or period if any as the Company shall be granted pursuant to the provisions of this Agreement then the Minister may give to the Company 12 months notice of intention to determine this Agreement and unless before the expiration of the said 12 months period all the detailed proposals and matters are so approved or determined this Agreement shall cease and determine subject however to the provisions of Clause 39. Implementation of proposals 7 The Company shall implement the approved proposals in accordance with the terms thereof. Variation of proposals 8 Notwithstanding Clause 33 the Minister may during the implementation of approved proposals approve variations to those proposals. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 13 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1

Agreement Extension of periods 9 The periods set forth in subclause 1 of Clause 6 and subclause 6 of this Clause will be extended in addition to any extension granted pursuant to Clause 34 or 35 upon request of either the Company or the State for such reasonable period or periods as may be necessary from time to time to enable either of them to comply with laws relating to native title.

Termination of Agreement 10 If either the Company or the State considers the establishment of the mining operations as envisaged in subclause 1 of Clause 6 should not proceed having regard to matters arising out of laws relating to native title or by reason of claims or objections lodged under laws relating to native title that party shall consult with the other in regard thereto. Subject to such consultation either of them may at any time before production of iron ore in commercial quantities is commenced for reasons the subject of such consultation determine this Agreement by notice to the other whereupon this Agreement shall determine and the provisions of Clause 39 will apply. Overall

development 8. 1 Having regard to the geographical relationship and physical association of the mining lease with other iron ore deposits in and to the general development of the central Hamersley Range area the Company in its initial proposals under Clause 6 and any additional proposals pursuant to Clause 9 other than a proposal under that Clause to increase production of iron ore where the total production after such increase will not exceed 15000000 tonnes of iron ore per annum for transportation from the mining lease and the proposal does not involve any significant variation to the mine infrastructure or Clause 10 shall take into account and make provision where it is reasonably practicable so to do for a the economic and orderly overall development of the lands the subject of this Agreement and those other iron ore deposits; page 14 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement b c appropriate infrastructure development in the central Hamersley Range area having regard to then existing iron ore operations and facilities and to other existing infrastructure including the Great Northern Highway; and an open town or other appropriate housing and accommodation arrangements to service the iron ore mines and other developments in the central Hamersley Range area. 2 The Company and the State shall cooperate and consult with

each other regarding the matters referred to in subclause 1 State Government policies planning and development objectives the Companys commercial requirements and any other relevant matters that the Minister or the Company may wish to consider. Additional proposals 9. 1 2 If the Company at any time during the continuance of this Agreement desires to significantly modify expand or otherwise vary its activities carried on pursuant to this Agreement beyond those activities specified in any approved proposals it shall give notice of such desire to the Minister and within 2 months thereafter shall submit to the Minister detailed proposals in respect of all matters covered by such notice and such of the other matters mentioned in subclause 1 of Clause 6 as the Minister may require. The provisions of Clause 6 and Clause 7 other than subclauses 5a and 6 of Clause 7 shall mutatis mutandis apply to detailed proposals submitted pursuant to this subclause with the proviso that the Company may withdraw such proposals at any time before approval thereof or where any decision of the Minister in respect thereof is referred to arbitration within 3 months after the award by notice to the Minister that it shall not be proceeding with the same. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 15 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Limits on mining 10. 1 The Company shall not produce more than 15000000 tonnes of iron ore per annum for transportation from the mining lease nor shall the total number of the mine workforce exceed 150 without the prior consent of the Minister and approval of detailed proposals in regard thereto in accordance with this Clause. 2 a If the Company desires to increase the annual tonnage or the mine workforce beyond that specified in subclause 1 it shall give notice thereof to the Minister and furnish to the Minister with that notice an outline of its proposals in respect thereto including the matters mentioned in subclause 1 of Clause 6. b The Minister shall within one month of a notice under paragraph a of this subclause advise the Company whether or not he approves in principle the proposed increase. An approval by the Minister under this subclause may be given subject to conditions including a condition requiring variations of or additions to this Agreement PROVIDED THAT any such condition shall not without the consent of the Company require variations of i ii the term of the mining lease or the railway lease or the rental

thereunder; the rentals payable under any other lease or licence hereunder; iii the rates of or method of calculating royalty; iv the provisions of Clause 20; or v the provisions of Clause 23. 3 The Company shall not seek approval in principle to proposals in regard to the production of more than 30 million tonnes of iron ore per annum for transportation from the mining lease unless the Minister in accordance with subclause 4 of Clause 23 has approved or is deemed to have approved proposals submitted under subclause 2 of that Clause for the establishment within the State of plant for the production of page 16 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement metallised agglomerates or under subclause 6 of that Clause for an alternative project in lieu of the Companys obligations in respect of the establishment of plant for the production of metallised agglomerates under that Clause or unless the Minister otherwise agrees for the purpose of this subclause to receive a notice under subclause 2a. 4 a If the Minister approves in principle a proposed increase the Company must within three months of that approval submit to the Minister detailed proposals in respect thereof in accordance with any conditions of that approval otherwise that approval shall lapse. 5 b The provisions of subclause 2 of Clause 9 shall apply to detailed proposals submitted pursuant to this subclause. Any proposal under this Clause to increase the annual tonneage to be produced or the number of the mine workforce shall specify the proposed increase and on and after approval or determination of any such proposal pursuant to paragraph b of subclause 4 the provisions of this Clause shall apply mutatis mutandis to the increased tonneage or number of the mine workforce as the case may be and also to any subsequent desires of the Company for an increase in the tonneage or mine workforce. Mining lease 11. 1 On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 months after all its proposals submitted pursuant to subclause 1 of Clause 6 have been approved or determined and the Company has complied with the provisions of subclause 3 of Clause 6 for a mining lease of land within the land depicted by the area coloured red on the Land Tenure Plan then held by the Company or by Hamersley under the exploration licences referred to in recital a of this Agreement

the State shall subject to the conditions set out in the following subclauses and insofar as is permitted by laws relating to native title cause a mining lease of the land so applied for to be granted to the Company. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 17 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Conditions of grant of mining lease 2 The grant of the mining lease referred to in subclause 1 shall be subject to the conditions that a b c d e f the mining lease may be in respect of one or more pieces of land whether contiguous or not provided that the total area leased shall not exceed 777 square kilometres and each piece of land shall be in the form of a rectangle or as near thereto as is practicable; the mining lease may be granted before the area leased has been surveyed but in that case shall be granted subject to the condition that the area leased shall be surveyed by or on behalf of the State at the Companys expense and shall accord with that survey; the mining lease shall permit the Company to mine iron ore only; the mining lease shall only be granted on the surrender of Exploration Licences Nos. E474 and E477 to E4710 and any part of Exploration Licence No. E476 which is to be included in the mining lease; the rental payable in respect of the mining lease shall be that prescribed from time to time in the Mining Act otherwise than under regulation 28A; from and after the date 15 years after the first transportation from the mining lease of iron ore on which royalty is payable under subclause 2 of Clause 12 the Company in addition to the rental already referred to in paragraph e shall pay to the State an additional rental in respect of the mining lease equal to 25 cents per tonne on all iron ore in respect of which royalty is payable under subclause 2 of Clause 12 such additional rental to be paid in respect of the same periods and at the same times as such royalty is payable; and g the mining lease shall be granted under and except as otherwise provided in this Agreement subject to the Mining Act but in the form of the Schedule hereto. page 18 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Term of mining lease 3 Subject to the performance by the Company of its obligations under this Agreement and the Mining Act and notwithstanding any provisions of the Mining Act to the contrary the term of the mining lease shall be for a period of 21 years commencing from the date

of receipt of the application therefor under subclause 1 with the right during the currency of this Agreement to take two successive renewals of the said term each for a further period of 21 years upon the same terms and conditions subject to the sooner determination of the said term upon cessation or determination of this Agreement such right to be exercisable by the Company making written application for any such renewal not later than one month before the expiration of the current term of the mining lease.

Exemption from expenditure conditions 4 The State shall ensure that during the currency of this Agreement and subject to compliance with its obligations hereunder the Company shall not be required to comply with the expenditure conditions imposed by or under the Mining Act in regard to the mining lease.

Reports 5 The Company shall lodge with the Department of Minerals and Energy at Perth mineral exploration reports in accordance with section 115A of the Mining Act but shall not be required to lodge any operations reports in accordance with that section.

Access over mining lease 6 The Company shall at all times permit the State and third parties with the consent of the State with or without stock vehicles and rolling stock to have access to and to pass over the mining lease by separate route road or railway so long as that access and passage does not unduly prejudice or interfere with the activities of the Company under this Agreement.

Surrender of part of mining lease 7 Notwithstanding the provisions of this Clause and the Mining Act with the approval of the Minister the Company may from As at 15 Dec 2011 Version 01c005

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Schedule 1 Agreement time to time with abatement of future rent in respect to the area surrendered but without any abatement of rent already paid or any rent which has become due and has been paid in advance surrender to the State all or any portion or portions of the mining lease. Additional areas 8 9 10 Notwithstanding the provisions of the Mining Act the Company may from time to time during the currency of this Agreement apply to the Minister for areas held by the Company under a mining tenement granted under the Mining Act to be included in the mining lease but so that the total area of the mining lease shall not at any time exceed 777 square kilometres. The Minister shall confer with the Minister for Mines in regard to any such application and if they in their discretion

approve the application the Minister for Mines shall upon the surrender of the relevant mining tenement include the area the subject thereof in the mining lease subject to such of the conditions of the surrendered mining tenement as the Minister for Mines determines but otherwise subject to the same terms covenants and conditions as apply to the mining lease with such apportionment of rents as is necessary and notwithstanding that the survey of such additional land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. The Company shall not mine or carry out other activities other than exploration bulk sampling and testing on any area of areas added to the mining lease pursuant to subclause 8 of this Clause unless and until proposals with respect thereto are approved or determined pursuant to the subsequent provisions of this Clause. If the Company desires to commence mining of iron ore or to carry out any other activities other than as aforesaid on the said areas it shall give notice of such desire to the Minister and shall within 2 months of the date of such notice or thereafter within such extended time as the Minister may allow as hereinafter provided and subject to the provisions of this Agreement submit to the Minister to the fullest extent reasonably practicable its detailed proposals which proposals page 20 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement shall include plans where practicable and specifications where reasonably required by the Minister with respect to such mining or other activities as additional proposals pursuant to Clause 9. Other mining tenements 11 a Notwithstanding anything contained or implied in this Agreement or in the mining lease or the Mining Act mining tenements may subject to the provisions of this Clause be granted to or registered in favour of persons other than the Company under the Mining Act in respect of the areas the subject of the mining lease unless the Minister for Mines determines that such grant or registration is likely unduly to prejudice or interfere with the current or prospective operations of the Company hereunder with respect to iron ore assuming the taking by the Company of reasonable steps to avoid the prejudice or interference or is likely unduly to reduce the quantity of economically extractable iron ore available to the Company. b A mining tenement granted or registered as a result of this Clause

shall not confer any right to mine or otherwise obtain rights to iron ore on the tenement. c i In respect of any application for a mining tenement made under the Mining Act in respect of an area the subject of the mining lease the Minister for Mines shall consult with the Minister and the Company with respect to the significance of iron ore deposits in on or under the land the subject of the application and any effect the grant of a mining tenement pursuant to such application might have on the current or prospective iron ore operations of the Company under this Agreement. ii Where the Minister for Mines after taking into account any matters raised by the Minister or the Company determines that the grant or registration of the application is likely to have the effect on the operations of the Company or the iron ore referred As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 21 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement to in paragraph a of this subclause he shall notwithstanding any recommendation of any mining registrar or warden by notice served on the mining registrar with whom the application was lodged refuse the application. iii Before making a determination pursuant to d i subparagraph ii of this paragraph the Minister for Mines may request the warden of the mineral field or district thereof in which is situated the mining tenement for which the application was made to hear the application and any objections thereto and as soon as practicable after the hearing of the application to report to the Minister for Mines on the application and the objections and the effect on the current or prospective operations of the Company or the quantity of economically extractable iron ore that a grant of the application might have. Except as provided in paragraph c of this subclause no mining registrar shall deal with an application for a mining tenement in respect of an area the subject of the mining lease unless and until the Minister for Mines has notified him that it is not intended to refuse the application pursuant to paragraph c of this subclause. Following such advice to the mining registrar the application shall be disposed of under and in accordance with the Mining Act save that where the warden has heard the application and objections thereto pursuant to subparagraph iii of paragraph c of this subclause the application may be dealt with by the warden without further hearing. ii The Company may exercise in respect of any application for a mining tenement lodged

with a mining registrar any right that it may have under the Mining Act to object to the granting of the application. page 22 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011

Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement iii Any mining tenement granted pursuant to such application shall in addition to any covenants and conditions that may be prescribed or imposed be granted subject to such conditions as the Minister for Mines may determine having regard to the matters the subject of the consultations with the Minister and the Company pursuant to subparagraph i of paragraph c of this subclause and any matters raised by the Company before the warden pursuant to subparagraph iii of paragraph c of this subclause or to subparagraph ii of this paragraph. e i On the grant of any mining tenement pursuant to an application to which this subclause applies the land the subject thereof shall thereupon be deemed excised from the mining lease with abatement of future rent in respect of the area excised but without any abatement of rent already paid or of rent which has become due and has not been paid in advance. ii On the expiration or sooner determination of any such mining tenement or if that tenement is a prospecting licence exploration licence or retention licence and a substitute tenement is granted in respect thereof pursuant to an application made under section 49 or section 67 or section 70L of the Mining Act then on the expiration or sooner determination of the substitute title the land the subject of such mining tenement or substitute title as the case may be shall thereupon be deemed to be part of the land in the mining lease with appropriate adjustment of rental and unless the Minister otherwise directs shall be subject to the terms and conditions of the mining lease and this Agreement. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 23

Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Royalties 12. 1 In this Clause agreed or determined means agreed between the Company and the Minister or failing agreement within three months of the Minister giving notice to the Company that he requires the value of a quantity of iron ore to be agreed or determined as determined by the Minister and in agreeing or determining a fair and reasonable market value of such iron ore assessed at an arms length basis the Company and/or the Minister as the case may be shall have regard to the prices for

that type of iron ore prevailing at the time the price for such iron ore was agreed between the Company and the purchaser in relation to the type of sale and the market into which such iron ore was sold and where prices beyond the deemed f.o.b. point are being considered the deductions mentioned in the definition of f.o.b. value; deemed f.o.b. point means on ship at the loading port; deemed f.o.b. value means an agreed or determined value of the iron ore as if the iron ore was sold f.o.b. at the deemed f.o.b. point as at i ii in the case of iron ore the property of the Company which is shipped out of the said State the date of shipment; in any other case the date of sale transfer of ownership disposal or use as the case may be; f.o.b. value means i in the case of iron ore shipped and sold by the Company the price which is payable for the iron ore by the purchaser thereof to the Company or where the Minister is not satisfied that the price payable in respect of the iron ore represents a fair and reasonable market value for that iron ore assessed at an arms length basis such amount as is agreed or determined less all export duties and export taxes payable to the Commonwealth on the export of the iron ore and all costs and charges properly incurred and payable by the Company from the time the iron ore shall

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1 Agreement be placed on ship at the loading port to the time the same is delivered and accepted
by the purchaser including 1 ocean freight; 2 marine insurance; 3 port and handling charges at the
port of discharge; 4 5 6 7 8 all costs properly incurred in delivering the iron ore from port of
discharge to the smelter and evidenced by relevant invoices; all weighing sampling assaying
inspection and representation costs; all shipping agency charges after loading on and departure of
ship from the loading port; all import taxes by the country of the port of discharge; and such other
costs and charges as the Minister may in his discretion consider reasonable in respect of any
shipment or sale; ii in all other cases the deemed f.o.b. value. For the purpose of subparagraph i of
this definition it is acknowledged that the consideration payable in an arms length transaction for
iron ore sold solely for testing purposes may be less than the fair and reasonable market value for
that iron ore and in this circumstance where the Minister in his discretion is satisfied such

consideration represents the entire consideration payable the Minister shall be taken to be satisfied that such entire consideration represents the fair and reasonable market value. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 25 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 2 The Company shall during the continuance of this Agreement pay to the State royalty on all iron ore from the mining lease other than iron ore shipped solely for testing purposes and in respect of which no purchase price or other consideration is payable or due as follows a for the period ending on 31 December 2010 i on lump ore at the rate of 7.5 of the f.o.b. value; ii on fine ore at the rate of 5.625 of the f.o.b. value; iii on beneficiated ore at the rate of 5.0 of the f.o.b. value; and iv on any other iron ore at the rate of 7.5 of the f.o.b. value b for the period commencing on 1 January 2011 on all iron ore at the rate or rates from time to time prescribed under the Mining Act PROVIDED HOWEVER in respect to paragraphs a and b of this subclause c where iron ore sold or intended to be sold as fine ore includes lump ore nominally sized minus 10 millimetres the royalty payable on such iron ore shall be the royalty payable on fine ore; and d where iron ore from the mining lease is processed in the said State into pellets sinter metallised agglomerates or steel by the Company or a third party the rates applicable pursuant to this subclause shall be reduced in respect of that iron ore by i ii 0.5 in respect of iron ore processed into pellets or sinter; 1.0 in respect of iron ore processed into metallised agglomerates; iii 2.0 in respect of iron ore processed into steel. page 26 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 3 The Company shall a within fourteen days after the quarter days the last days of March June September and December in each year commencing with the quarter day next following the first transportation of iron ore from the mining lease furnish to the Minister a return showing the quantity of all beneficiated ore produced and all fine ore lump ore and other iron ore the subject of royalty hereunder and sold transferred or otherwise disposed of or used as the case may be during the quarter immediately preceding the due date of the return and shall not later than 2 months after such due date pay to the Minister the royalty payable in respect thereof or if the f.o.b. value is not

then finally calculated agreed or determined pay to the Minister on account of the royalty payable hereunder a sum calculated on the basis of invoices or provisional invoices as the case may be rendered by the Company to the purchaser which invoices the Company shall render without delay simultaneously furnishing copies thereof to the Minister of such iron ore or on the basis of estimates as agreed or determined and shall from time to time in the next following appropriate return and payment make by return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. value shall have been finally calculated agreed or determined; b permit the Minister or his nominee to inspect at all reasonable times the books of account and records of the Company including contracts relative to any shipment or sale of iron ore hereunder and records of iron ore in stockpile or transit and to take copies of extracts therefrom and for the purpose of determining the f.o.b. value in respect of any shipment sale transfer or other disposal or use or production of iron ore hereunder the Company will take reasonable steps i to provide the Minister with current prices for iron ore and other details and information that may be required by the Minister for the purpose of agreeing or determining the f.o.b. value; and As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 27 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement to satisfy the State either by certificate of a competent independent party acceptable to the State or otherwise to the Ministers reasonable satisfaction as to all relevant weights and analyses and will give due regard to any objection or representation made by the Minister or his nominee as to any particular weight or assay or iron ore which may affect the amount of royalty payable hereunder; ii and c as and when required by the Minister for Mines from time to time install and thereafter maintain in good working order and condition meters for measuring quantities of iron ore and iron ore products of such design or designs and at such places as the Minister for Mines may require. Protection and management of the environment 13. 1 The Company shall in respect of the matters referred to in paragraph I of subclause 1 of Clause 6 which are the subject of approved proposals carry out a continuous programme of investigation research and monitoring to ascertain the effectiveness of the measures it is taking both generally and pursuant to

such approved proposals as the case may be for rehabilitation and the protection and management of the environment. 2 The Company shall during the currency of this Agreement submit to the Minister a not later than the 30th day of June 1998 and the 30th day of June in each year thereafter except those years in which a comprehensive report is required to be submitted pursuant to paragraph b of this subclause a brief report concerning investigations and research carried out pursuant to subclause 1 and the implementation by the Company of the elements of the approved proposals relating to the rehabilitation protection and management page 28 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement b of the environment in the year ending the 30th day of April immediately preceding the due date for the brief report; and not later than the 30th day of June 2000 and the 30th day of June in each third year thereafter if so requested by the Minister from time to time a comprehensive report on the result of such investigations and research and the implementation by the Company of the elements of the approved proposals relating to the rehabilitation protection and management of the environment during the three year period ending the 30th day of April immediately preceding the due date for the detailed report and the programme proposed to be undertaken by the Company during the following three year period in regard to investigation and research under subclause 1 and the implementation by the Company of the elements of the approved proposals relating to the rehabilitation protection and management of the environment. 3 The Minister may within 2 months of receipt of a detailed report pursuant to paragraph b of subclause 2 notify the Company that he a approves the report and programme if any; or b c requires amendment of the report andor programme if any for the ensuing 3 years; or requires additional detailed proposals to be submitted for the rehabilitation protection and management of the environment. The Company shall within 2 months of receipt of a notice pursuant to paragraph b of subclause 3 submit to the Minister an amended report andor programme as required. The Minister shall afford the Company full opportunity to consult with him on his requirements during the preparation of any amended report or programme. The Minister may within

1 month of receipt of an amended report or programme pursuant to subclause 4 notify the Company that he requires additional detailed proposals to be 4 5 As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 29 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement submitted for the rehabilitation protection and management of the environment. 6 The Company shall within 2 months of receipt of a notice pursuant to paragraph c of subclause 3 or subclause 5 of this Clause submit to the Minister additional detailed proposals as required and the provisions of subclauses 1 2 3 4 5 and 7 of Clause 7 shall mutatis mutandis apply to those proposals. Use of local labour professional services and materials 14. 1 The Company shall for the purposes of this Agreement a b c except in those cases where the Company can demonstrate it is impracticable so to do use labour available within Western Australia using all reasonable endeavours to ensure that as many as possible of the contractors workforce be recruited from the Pilbara or if such labour is not available then except as aforesaid use labour otherwise available within Australia; as far as it is reasonable and economically practicable so to do use the services of engineers surveyors architects and other professional consultants experts and specialists project managers manufacturers suppliers and contractors resident and available within Western Australia or if such services are not available within Western Australia then as far as practicable as aforesaid use the services of such persons otherwise available within Australia; during design and when preparing specifications calling for tenders and letting contracts for works materials plant equipment and supplies which shall at all times except where it is impracticable so to do use or be based upon Australian Standards and Codes ensure that suitably qualified Western Australian and Australian suppliers manufacturers and contractors are given fair and reasonable opportunity to tender or quote; page 30 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement d e give proper consideration and where possible preference to Western Australian suppliers manufacturers and contractors when letting contracts or placing orders for works materials plant equipment and supplies where price quality delivery and service are equal to or better than that obtainable

elsewhere or subject to the foregoing give that consideration and where possible preference to other Australian suppliers manufacturers and contractors; and if notwithstanding the foregoing provisions of this subclause a contract is to be let or an order is to be placed with other than a Western Australian or Australian supplier manufacturer or contractor give proper consideration and where possible preference to tenders arrangements or proposals that include Australian participation. Except as otherwise agreed by the Minister the Company shall in every contract entered into with a third party for the supply of services labour works materials plant equipment or supplies for the purposes of this Agreement require as a condition thereof that such third party shall undertake the same obligations as are referred to in subclause 1 and shall report to the Company concerning such third partys implementation of that condition. The Company shall submit a report to the Minister at monthly intervals or such longer period as the Minister determines commencing from the date of this Agreement concerning its implementation of the provisions of this Clause together with a copy of any report received by the Company pursuant to subclause 2 during that month or longer period as the case may be PROVIDED THAT the Minister may agree that any such reports need not be provided in respect of contracts of such kind or value as the Minister may from time to time determine. The Company shall keep the Minister informed on a regular basis as determined by the Minister from time to time or otherwise as required by the Minister during the currency of this Agreement of any services including any elements of the project investigations design and management and any works 2 3 4 As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 31 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement materials plant equipment and supplies that it may be proposing to obtain from or have carried out or permit to be obtained from or carried out outside Australia together with its reasons therefor and shall as and when required by the Minister consult with the Minister with respect thereto. Roads Private roads 15. 1 Except with the consent of the Minister private roads providing access to the mining lease shall be restricted to a b a road between the mining lease and the accommodation area; a road between the mining lease and the mine aerodrome serving the mining

lease; and c a railway maintenance road within the railway lease. Construction of private roads 2

The Company shall a b c be responsible for the cost of the construction and maintenance of all private roads which shall be used in its activities hereunder; at its own cost erect signposts and take other steps that may be reasonable in the circumstances to prevent any persons and vehicles other than those engaged upon the Companys activities and its invitees and licensees from using the private roads; and at any place where any private roads are constructed by the Company so as to cross any public roads or private railways provide at its cost such reasonable protection and signposting as may be required by the Commissioner of Main Roads or the owner of the private railway as the case may be. Maintenance of public roads 3 The State shall maintain or cause to be maintained those public roads under the control of the Commissioner of Main Roads or page 32

Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement a local authority which may be used by the Company for the purposes of this Agreement to a standard similar to comparable public roads maintained by the Commissioner of Main Roads or a local authority as the case may be. Upgrading of public roads 4 In the event that for or in connection with the Companys activities hereunder the Company or any person engaged by the Company uses or wishes to use a public road whether referred to in subclause 3 or otherwise which is inadequate for the purpose or any use by the Company or any person engaged by the Company of any public road results in excessive damage to or deterioration thereof other than fair wear and tear the Company shall pay to the State or the local authority as the case may require the whole or an equitable part of the total cost of any upgrading required or of making good the damage or deterioration as may be reasonably required by the Commissioner of Main Roads having regard to the use of such public road by others. Acquisition of private roads 5 Where a road constructed by the Company for its own use is subsequently required for public use the State may after consultation with the Company and so long as resumption thereof shall not unduly prejudice or interfere with the activities of the Company under this Agreement resume and dedicate such road as a public road. Upon any such resumption the State shall pay to the Company

such amount as is reasonable. Aerodrome 16. 1 The Company shall confer with the Minister on any upgrading of existing aerodrome facilities and services in the Pilbara region that the Minister after consultation with the relevant local authority may consider to be required as a result of the Companys activities under this Agreement. 2 The Company shall not without the approval of the Minister propose or construct any mine aerodrome of a standard greater As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 33 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement than the standard requirements for aircraft with a maximum take off weight of 20000 kg. Electricity purchase of electricity 17. The Company may in accordance with its approved proposals hereunder and subject to the provisions of the Electricity Act 1945 and any other relevant Act a b install and operate without cost to the State at an appropriate location or locations equipment of sufficient capacity to generate electricity for its activities on the mine site; and transmit power within the mine site subject to the provisions of the Electricity Act 1945 and any other relevant Act. Water mining lease 18. 1 a To the fullest extent reasonably practicable the Company shall use water obtained from dewatering on the mining lease for its purposes under this Agreement. b Nothing in this Agreement shall be construed to exempt the Company from any liability to the State or to third parties arising out of or caused by extraction of water from the mining lease by dewatering or any discharge or escape from the mining lease of water obtained by dewatering. Water requirements 2 The State and the Company shall agree upon the amounts and qualities thereof of the Companys annual and maximum daily water requirements for use in its activities hereunder at the mine site which amounts or such other amounts as shall from time to time be agreed between them to be reasonable are hereinafter called the mining water requirements and amounts required to be withdrawn in dewatering. page 34 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Rights to water and water services 3 Except as otherwise specifically provided for under this Clause the mining water requirements shall be obtained in accordance with laws applicable from time to time in Western Australia in respect of rights in water and the supply of water

and water services. Grant of licence 4 Subject to and in accordance with the approved proposals and the Rights in Water and Irrigation Act 1914 the State shall grant or cause to be granted to the Company a licence to develop and draw from the source specified in those proposals at the Companys cost but without fee the mining water requirements less any withdrawal amounts included therein and withdrawal amounts on such terms and conditions as are necessary to ensure good water resource management as the Minister may from time to time require and during the continuance of this Agreement grant renewals of any such licence PROVIDED HOWEVER that should that source prove hydrologically inadequate to meet the mining water requirements on a continuous basis the State may on at least 6 months prior notice to the Company or on at least 48 hours prior notice if in the opinion of the Minister an emergency situation exists limit the amount of water which may be taken from that source at any one time or from time to time to the maximum which in the opinion of the Minister that source is hydrologically capable of meeting as aforesaid.

Minimisation of water consumption 5 The Company shall to the extent that it is practical and economical design construct and operate all plant and equipment used in its activities under this Agreement so as to minimise water consumption and shall at all times use its best endeavours to minimise the consumption of water in its activities under this Agreement and ensure the most efficient use of the available water resources. As at 15 Dec 2011 Version 01c005 Published on

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Agreement Provision of accommodationhousing 19. 1 Accommodation for the mine workforce at the mine site when the Company is producing not more than 15000000 tonnes of iron ore per annum for transportation from the mining lease and the total number of the mine workforce is not more than 150 shall be by way of temporary accommodation units not caravans and ancillary facilities of a standard generally used in the mining industry located in the vicinity of the mining lease and a b c the accommodation units and facilities ancillary to the accommodation units which may include a messwet mess amenities blocks and offices for Company management personnel may be provided by the Company or a contractor to the Company but shall be subject to the prior approval of the

Minister as to nature and type; all accommodation units on the mine site shall be removed from the mine site upon the mine workforce being accommodated elsewhere than at the mine site; only the mine workforce and persons visiting the mine site in connection with the Companys mining activities on a short term basis or employed for a specific task of limited duration shall be permitted to stay at the accommodation area; and d no dependants or pets shall be allowed on the mine site. 2 If and whenever the Company proposes a b c to give a notice of proposed increase of tonneages or workforce pursuant to Clause 10; to substantially add to upgrade replace or relocate accommodation units; or to use its own workforce in place of a contractor workforce or to use a contractor workforce in place of its own workforce in its mining activities; or page 36 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement d to construct an additional accommodation area separate from that already established it shall confer with the Minister with respect to the future accommodation of the mine workforce including those members of the mine workforce then accommodated at the accommodation area which may include expansion or alteration of the accommodation area establishment of or assimilation into a new townsite and assimilation into an existing town before submitting any proposal in regard thereto to the Minister. The Company shall likewise confer with the Minister at the request of the Minister if the State proposes an open town in the central Hamersley Range area and shall cooperate with the State on any studies in relation to such a proposal that may be required to select a site for the town. If the State and the Company agree that the mine workforce can be located in the proposed open town then the Company will relocate the workforce to the open town within an agreed period of time at no cost to the State and make such contributions to the infrastructure and community facilities in the open town as are agreed between the State and the Company to be required to service the needs of the Companys workforce. As and when required by the Minister after consultation with the relevant local authority the Company shall confer with the Minister with a view to assisting in the cost of providing any appropriate community recreation civic or social amenities at any existing town required for the Companys workforce and

associated population. 3 4 5 Railway 20. 1 Subject to and in accordance with approved proposals the Company shall in a proper and workmanlike manner and in accordance with recognised standards for railways of a similar nature operating under similar conditions construct along the route specified in the approval proposals but subject to the provisions of the Acquisition Act to the extent that they are As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 37 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 2 3 applicable a standard gauge railway specified in the approved proposals connecting the mining lease to Hamersleys existing Dampier Marandoo railway and shall also construct inter alia any necessary deviations loops spurs sidings crossing points bridges signalling switches and other works and appurtenances and provide for crossings and where appropriate and required by the Minister grade separation or other protective devices all of which together with the specified railway is referred to in this Agreement as the railway and shall operate the railway with sufficient and adequate locomotives freight cars and other railway stock and equipment for the purposes of the Companys activities under this Agreement. The Company shall during the continuance of this Agreement operate the railway in a safe and proper manner and shall provide crossings for livestock and also for any roads and other railways which now exist and where it can do so without unduly prejudicing or interfering with its activities hereunder the Company shall allow such crossings for roads and railways which may be constructed for future needs and which may be required to cross the railway. The Company shall if and when reasonably required so to do transport passengers and carry the freight of the State and third parties over the railway where it can do so without unduly prejudicing or interfering with its activities under this Agreement and subject to the payment to it of the charges prescribed by and for the time being payable under any bylaws made by the Company in respect of the transporting of passengers and the carriage of freight over the railway and subject to the due compliance with the other requirements and conditions prescribed by such bylaws or should there be no such bylaws for the time being in force then subject to the payment of such charges and the due compliance with such requirements and conditions as in either case shall be reasonable having

regard to the cost to the Company of the construction and operation of the railway. 4 In relation to its use of the railway when transporting passengers or carrying freight pursuant to subclause 3 the Company shall not be deemed to be a common carrier at law or otherwise. page 38 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 5 6 The Company shall not enter into any agreement or other arrangement for the use of or the carriage of iron ore or iron ore products of the Company over any railway not established by the Company pursuant to this Agreement other than Hamersleys existing Dampier Marandoo railway without the prior approval of the State thereto and to the proposed terms and conditions including charges for such use or carriage. The Minister may upon recommendation by the Company make alter and repeal bylaws for the purpose of enabling the Company to fulfil its obligations under this Clause upon terms and subject to conditions including terms and conditions as to user charging and limitation of the liability of the Company as set out in such bylaws consistent with the provisions hereof. Should the Minister at any time consider that any bylaw made hereunder has as a result of altered circumstances become unreasonable or inapplicable then the Company shall recommend such alteration or repeal thereof as the Minister may reasonably require or in the event of there being any dispute as to the reasonableness of such requirement then as may be deed by arbitration hereunder. 7 a Where the railway crosses the Great Northern Highway the Company shall be responsible at its cost for the construction operation and maintenance of level crossing warning signs and such extra warnings to Highway users as may be reasonably required by the Commissioner of Main Roads. b The Company and the State shall cooperate and consult with each other on additional works and actions which may be required from time to time to ensure safe operation of the railway crossing referred to in paragraph a and the Company shall be responsible at its cost for carrying out such additional works and actions. Lands 21. 1 On application made by the Company not later than 3 months after a proposal submitted pursuant to subclause 1 of Clause 6 has been approved or determined or not later than 3 months As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 39 Iron Ore Yandicoogina Agreement Act

1996 Schedule 1 Agreement after proposals submitted under subclause 1 of Clause 9 or subclause 3 of Clause 10 have been approved or determined the State shall in accordance with the Companys approved proposals and insofar as is permitted by laws relating to native title grant to the Company or arrange to have the appropriate authority or other interested instrumentality of the State grant from within the land depicted by the area coloured blue on the Land Tenure Plan and in respect of other land approved for the purposes of this Clause by the Minister for such periods and on such terms and conditions including rentals and renewal rights as shall be reasonable having regard to the requirements of the Company leases and where applicable licences for the use of land easements and rights of way for all or any of the purposes of the Companys activities hereunder including any of the following namely accommodation area aerodrome railway private roads tailing areas water pipelines pumping installations and reservoirs power transmission lines radio and communication sites plant site areas and pits for obtaining stone sand clay and gravel. Modification of Land Act 2 For the purpose of this Agreement in respect of any land the subject of or proposed to be the subject of a lease or licence granted by the State to the Company under subclause 1 a b c d the Minister for Lands may lease to the Company any lot being town or suburban lands without offering that land to the public; the Minister for Lands may grant a lease of land to the Company without giving notice of the Companys application for that land or of the purpose or term for which it is proposed to be granted; an application for land made by the Company under subclause 1 shall take priority over any other application made for that land under the Land Act; it shall not be a prerequisite to the validity of any transfer mortgage or sublease permitted under this Agreement of any lease or licence that the approval to the transfer mortgage or sublease of the Minister for Lands or of an

page 40 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement e f officer of the department of the State government assisting him in the administration of the Land Act be obtained; the Minister for Lands may grant occupancy rights over land on such terms and conditions as the Minister for Lands may determine; the Minister for Lands may grant leases or licences for terms or periods and on

terms and conditions including renewal rights and in forms consistent with the provisions of this Agreement in lieu of the terms or periods terms and conditions and forms referred to in the Land Act. The provisions of this subclause shall not operate so as to prejudice the rights of the State to determine any lease licence or other right or title in accordance with the other provisions of this Agreement. Stone sand clay and gravel 3 The State shall in accordance with approved proposals grant to the Company a mining lease or mining leases for the obtaining of stone sand clay and gravel for the construction of works the subject of approved proposals such mining lease or mining leases to be granted under and except as otherwise provided herein subject to the Mining Act but limited in term to a reasonable period required for construction of the works and rehabilitation in accordance with the proposals. No royalty shall be payable under the Mining Act in respect of stone sand clay and gravel obtained from any such mining lease. Resumption for the purposes of this Agreement 22. 1 The State pursuant to the Acquisition Act may for the purpose of conferring interests therein on the Company take and resume any land within the areas coloured red and blue on the Land Tenure Plan the subject of approved proposals and any other land as specified in approved proposals and may grant leases licences or easements in respect of the whole or portions of that land to the Company. The Company shall pay to the State on As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 41 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 2 demand the costs to the State of and inental to the taking of any land pursuant to this Clause including the cost of any compensation due to any holder of native title or native title rights and interests in the land. For the purposes of this Agreement and in the Acquisition Act when construed for the purposes of this Agreement a reference to land shall be read as extending to any land or to any portion of any land and to the subsoil surface or airspace relating thereto and to any estate right title easement lease licence privilege native title right or interest or other interest in over under affecting or in connection with that land or any portion stratum or other specified sector of that land. Further processing 23. 1 During the continuance of this Agreement the Company shall undertake ongoing investigations into the technical and economic feasibility of

establishing within the said State plant for the production of metallised agglomerates and shall on or before the earlier of a b the date 7 years after the date on which iron ore from the mining lease other than iron ore transported solely for testing purposes and in respect of which no purchase price or other consideration is payable or due is first transported from the mining lease; and the date on which the 100 millionth tonne of such iron ore from the mining lease is transported from the mining lease submit to the Minister detailed reports of such investigations to the date of the report and its program budget and timetable for the preparation of the proposals referred to in subclause 2. 2 The Company shall a on or before the earlier of i the date 10 years after the date on which iron ore from the mining lease other than iron ore transported solely for testing purposes and in page 42 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement respect of which no purchase price or other consideration is payable or due is first transported from the mining lease; and ii the date on which the 150 millionth tonne of such iron ore from the mining lease is transported from the mining lease which date is hereinafter called the m.a. date; or b if proposals under this subclause are postponed for a 3 year period pursuant to subclause 3 on or before the third or subsequent third anniversary as the case may require of the m.a. date submit to the Minister detailed proposals for the establishment within the said State of plant for the production of metallised agglomerates containing provisions that such plant will within 3 years of the date on which the proposals are submitted have the capacity to produce not less than two million tonnes of metallised agglomerates per annum and will within 8 years of the date on which the proposals are submitted have the capacity to produce not less than three million tonnes of metallised agglomerates per annum. 3 a If the Company believes that the submission of proposals pursuant to subclause 2 on the m.a. date or a third anniversary of the m.a. date where a 3 year postponement has been allowed pursuant to this subclause should be postponed because the establishment of the said plant is not then economically feasible the Company may apply to the Minister not more than 6 months nor less than 3 months before the date for submission of those proposals for postponement for a period of 3 years of the date for

submission of proposals under subclause 2 and shall provide to the Minister with such application all relevant information and supporting data available to the Company relating to such application. b The Company shall supply to the Minister such other information and data as the Minister may reasonably require in relation to its application. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 43 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement c d If the Minister is satisfied that there are reasonable grounds for the postponement applied for the requirement on the Company to submit proposals under this subclause shall be postponed for a period of 3 years. If the Minister notifies the Company that he does not agree with its submission then at the request of the Company made within two 2 months after receipt of the Company of the notification from the Minister the Minister will appoint a tribunal hereinafter called the Tribunal consisting of one person if the Company and the State agree on that person or failing such agreement consisting of three persons one of whom shall be a Judge of the Supreme Court of Western Australia or failing him or her a Commissioner appointed pursuant to section 49 of the Supreme Court Act 1935 or a Queens Counsel and the others of whom shall have appropriate technical or economic qualifications to dee in accordance with clause 37 whether or not the metallising operation is feasible and the Tribunal in reaching its decision shall take into account inter alia the Companys submission the amount of capital required for the metallising operation the availability of that capital at that time on reasonable terms and conditions the likelihood of the Company being able to sell metallised agglomerates at sufficient prices and in sufficient quantities and for a sufficient period to justify the metallising operation having regard to the amount and rate of return on total funds that would be involved in or in connection with the production and sale of metallised agglomerates and the weighted average cost of capital to the Company. 4 The Minister shall within two 2 months of receipt of proposals under subclause 2 give to the Company notice of his approval of those proposals which approval shall not be unreasonably withheld or of any objections raised or alterations desired thereto and in the latter case shall afford the Company an opportunity to consult with and to submit new proposals to the Minister. If within two 2 months of

receipt of such notice agreement is not reached as to the proposals the Company may within a further period of two 2 months elect by notice to the page 44 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 5 State to refer to arbitration as provided in Clause 37 any dispute as to the reasonableness of the Ministers decision. If by the award on arbitration the question is deed in favour of the Company the Minister shall be deemed to have approved the proposals of the Company. The Company shall except to the extent otherwise agreed with the Minister before the end of the respective times specified in subclause 2 complete the construction of plant in accordance with the Companys proposals as finally approved or determined under this Clause and shall thereafter continue to produce metallised agglomerates from such plant at not less than the rates provided for in subclause 2 for so long as the Company continues to ship from the said State iron ore from the mining lease. 6 a The Company may at any time before the time for submission of proposals pursuant to subclause 2 apply to the Minister for approval that an alternative project be accepted by the State in lieu of all or some part of the Companys obligations in respect of the establishment of plant for the production of metallised agglomerates pursuant to this Clause. b Where the Minister approves an application under paragraph a of this subclause the Company shall implement the alternative project in accordance with that approval and upon completion thereof or earlier with the agreement of the Minister the provisions of subclause 2 or that part of those provisions which pursuant to the said approval are to be satisfied by the alternative project shall cease to apply PROVIDED FURTHER that the provisions of subclause 2 shall cease to apply upon completion of an alternative project which represents or alternative projects which together represent economic development in the said State either alone or in the aggregate with other alternative projects of value approximately equivalent to a plant for the production of two million tonnes of metallised agglomerates per annum. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 45 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 7 For the purposes of subclause 6 alternative project means a project under which the

Company or a related body corporate within the meaning of the Corporations Law of the Company undertakes to establish and operate plant in the said State which processes and adds to the value of minerals mined in the said State. Training levy exemption 24. The provisions of the Building and Construction Industry Training Levy Act 1990 and the Building and Construction Industry Training Fund and Levy Collection Act 1990 shall have no application to the Company when acting pursuant to and in accordance with this Agreement. Commonwealth licences and consents 25. 1 The Company shall from time to time make application to the Commonwealth or to the Commonwealth constituted agency authority or instrumentality concerned for the grant to it of any licence or consent under the laws of the Commonwealth necessary to enable or permit the Company to enter into this Agreement and to perform any of its obligations hereunder. 2 On request by the Company the State shall make representations to the Commonwealth or to the Commonwealth constituted agency authority or instrumentality concerned for the grant to the Company of any licence or consent mentioned in subclause 1. Subcontracting 26. The State shall ensure that without affecting the liabilities of the parties under this Agreement the State and the Company shall have the right from time to time to entrust to third parties the carrying out of any portions of the activities which it is authorised or obliged to carry out hereunder. page 46 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Zoning 27. Rating 28. The State shall ensure after consultation with the relevant local authority that the mining lease and any lands the subject of any lease licence easement or other title granted to the Company under this Agreement shall be and remain zoned for use or otherwise protected during the currency of this Agreement so that the activities of the Company hereunder may be undertaken and carried out thereon without any interference or interruption by the State or by any State agency or instrumentality or by any local or other authority of the State on the ground that such activities are contrary to any zoning bylaw regulation or order. The State shall ensure that notwithstanding the provisions of any Act or anything done or purported to be done under any Act the valuation of all lands the subject of this Agreement except the accommodation area and any

other parts of the lands the subject of this Agreement on which accommodation units or housing for the Company's workforce is erected or which is occupied in connection with such accommodation units or housing and except as to any part upon which there stands any improvements that are used in connection with a commercial undertaking not directly related to the mining activities carried out by the Company pursuant to approved proposals shall for rating purposes under the Local Government Act 1995 be deemed to be on the unimproved value thereof and no such lands shall be subject to any discriminatory rate. No discriminatory charges 29. Except as provided in this Agreement the State shall not impose nor shall it permit or authorise any of its agencies or instrumentalities or any local or other authority of the State to impose discriminatory taxes rates or charges of any nature whatsoever on or in respect of the titles property or other assets products materials or services used or produced by or through the activities of the Company in the conduct of its business hereunder nor will the State take or permit to be taken by any such State authority any other discriminatory action which would As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 47 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement deprive the Company of full enjoyment of the rights granted and intended to be granted under this Agreement. No resumption 30. Subject to the performance by the Company of its obligations under this Agreement the State shall not during the currency of this Agreement without the consent of the Company resume nor suffer nor permit to be resumed by any State instrumentality or by any local or other authority of the State any of the works installations plant equipment or other property for the time being belonging to the Company and the subject of or used for the purpose of this Agreement or any of the works on the lands the subject of any lease or licence granted to the Company in terms of this Agreement and without such consent which shall not be unreasonably withheld the State shall not create or grant or permit or suffer to be created or granted by any instrumentality or authority of the State as aforesaid any road rightofway water right or easement of any nature or kind whatsoever over or in respect of any such lands which may unduly prejudice or interfere with the Company's activities under this Agreement. Indemnity 31. The

Company shall indemnify and keep indemnified the State and its servants agents and contractors in respect of all actions suits claims demands or costs of third parties arising out of or in connection with any work carried out by or on behalf of the Company pursuant to this Agreement or relating to its activities hereunder or arising out of or in connection with the construction maintenance or use by the Company or its servants agents contractors or assignees of the Companys works or services the subject of this Agreement or the plant apparatus or equipment installed in connection therewith PROVIDED THAT subject to the provisions of any other relevant Act such indemnity shall not apply in circumstances where the State or its servants agents or contractors are negligent in carrying out work for the Company pursuant to this Agreement. page 48 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Assignment 32. 1 2 Subject to the provisions of this Clause the Company may at any time assign mortgage charge sublet or dispose of to any person with the consent of the Minister the whole or any part of the rights of the Company hereunder including its rights to or as the holder of the mining lease or any other lease licence easement or other title and of the obligations of the Company hereunder subject however in the case of an assignment subletting or disposition to the assignee sublessee or disponee as the case may be executing in favour of the State unless the Minister otherwise determines a deed of covenant in a form to be approved by the Minister to comply with observe and perform the provisions hereof on the part of the Company to be complied with observed or performed in regard to the matter or matters the subject of such assignment subletting or disposition. Notwithstanding anything contained in or anything done under or pursuant to subclause 1 the Company shall at all times during the currency of this Agreement be and remain liable for the due and punctual performance and observance of all the covenants and agreements on its part contained in this Agreement and in the mining lease or any other lease licence easement or other title the subject of an assignment mortgage subletting or disposition under subclause 1 PROVIDED THAT the Minister may agree to release the Company from such liability where the Minister considers such release will not be contrary to the interests of the State. 3 Notwithstanding

the provisions of the Mining Act and the Transfer of Land Act 1893 insofar as the same or any of them may apply a no assignment mortgage charge sublease or disposition made or given pursuant to this Clause of or over the mining lease or any other lease licence easement or other title granted under or pursuant to this Agreement by the Company or any assignee sublessee or disponent who has executed and is for the time being bound by deed of covenant made pursuant to this Clause; and As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 49 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement b no transfer assignment mortgage or sublease made or given in exercise of any power contained in any such mortgage or charge shall require any approval or consent other than such consent as may be necessary under this Clause and no equitable mortgage or charge shall be rendered ineffectual by the absence of any approval or consent otherwise than as required by this Clause or because the same is not registered under the provisions of the Mining Act. Variation 33. 1 2 3 The parties to this Agreement may from time to time by agreement in writing add to substitute for cancel or vary all or any of the provisions of this Agreement or of any lease licence easement or other title granted under or pursuant to this Agreement for the purpose of more efficiently or satisfactorily implementing or facilitating any of the objects of this Agreement. The Minister shall cause any agreement made pursuant to subclause 1 in respect of any addition substitution cancellation or variation of the provisions of this Agreement to be laid on the Table of each House of Parliament within 12 sitting days next following its execution. Either House may within 12 sitting days of that House after the agreement has been laid before it pass a resolution disallowing the agreement but if after the last day on which the agreement might have been disallowed neither House has passed such a resolution the agreement shall have effect from and after that last day. Force majeure 34. This Agreement shall be deemed to be made subject to any delays in the performance of the obligations under this Agreement and to the temporary suspension of continuing obligations under this Agreement that may be caused by or arise from circumstances beyond the power page 50 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement and control

of the party responsible for the performance of those obligations including without limiting the generality of the foregoing delays or any such temporary suspension as aforesaid caused by or arising from act of God force majeure earthquakes floods storms tempest washaways fire unless caused by the actual fault or privity of the party responsible for such performance act of war act of public enemies riots civil commotions strikes lockouts stoppages restraint of labour or other similar acts whether partial or general acts or omissions of the Commonwealth shortages of labour or essential materials reasonable failure to secure contractors delays of contractors inability to sell iron ore or metallised agglomerates profitably factors due to overall world economic conditions factors due to action taken by or on behalf of any government or governmental authority other than the State or any authority of the State or factors that could not reasonably have been foreseen PROVIDED ALWAYS that the party whose performance of obligations is affected by any of the said causes shall promptly give notice to the other party of the event or events and shall use its best endeavours to minimise the effects of such causes as soon as possible after the occurrence. Power to extend periods 35. Notwithstanding any provision of this Agreement the Minister may at the request of the Company from time to time extend or further extend any period or vary or further vary any date referred to in this Agreement or in any approved proposal for such period or to such later date as the Minister thinks fit whether or not the period to be extended has expired or the date to be varied has passed. Consultation 36. The Company shall during the currency of this Agreement consult with and keep the State fully informed on a confidential basis concerning any action that the Company propose to take with any third party including the Commonwealth or any Commonwealth constituted agency authority instrumentality or other body which might significantly affect the overall interest of the State under this Agreement. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 51 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Arbitration 37. 1 2 3 Any dispute or difference between the State and the Company arising out of or in connection with this Agreement the construction of this Agreement or as to the rights duties or liabilities of either of them under this Agreement or as to any matter to be agreed

upon between them under this Agreement shall in default of agreement between them and in the absence of any provision in this Agreement to the contrary be referred to and settled by arbitration under the provisions of the Commercial Arbitration Act 1985 and notwithstanding section 201 of that Act each party may be represented before the arbitrator by a duly qualified legal practitioner or other representative. Except where otherwise provided in this Agreement the provisions of this Clause shall not apply to any case where the State the Minister or any other Minister in the Government of the said State is by this Agreement given either expressly or impliedly a discretionary power. The arbitrator of any submission to arbitration under this Agreement is hereby empowered upon the application of either of the parties to the arbitration to grant in the name of the Minister any interim extension of any period or variation of any date referred to herein which having regard to the circumstances may reasonably be required in order to preserve the rights of that party or of the parties to the arbitration and an award may in the name of the Minister grant any further extension or variation for that purpose.

Determination of Agreement 38. 1 If a i the Company makes default which the State considers material in the due performance or observance of any of the covenants or obligations of the Company in this Agreement or in the mining lease or any other lease licence easement or other title or document granted or assigned under this page 52 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Agreement on its part to be performed or observed; or ii the Company abandons or repudiates this Agreement or its activities under this Agreement and such matter is not remedied within a period of 180 days after notice is given by the State as provided in subclause 2 or if the matter is referred to arbitration then within the period mentioned in subclause 3; or b the Company goes into liquidation other than a voluntary liquidation for the purpose of reconstruction and unless within 3 months from the date of such liquidation the interest of the Company is assigned to an assignee approved by the Minister under Clause 32 the State may by notice to the Company determine this Agreement. The notice to be given by the State in terms of paragraph a of subclause 1 shall specify the nature of the default abandonment or repudiation so entitling the State to exercise

such right of determination and where appropriate and known to the State the party or parties responsible therefor and shall be given to the Company and all such assignees mortgagees chargees and disponees for the time being of the Companys said rights to or in favour of whom or by whom an assignment mortgage charge or disposition has been effected in terms of Clause 32 whose name and address for service of notice has previously been notified to the State by the Company or any such assignee mortgagee chargee or disponent. 2 3 a If the Company contests the alleged default abandonment or repudiation referred to in paragraph a of subclause 1 the Company shall within 60 days after notice given by the State as provided in subclause 2 refer the matter in dispute to arbitration. b If the question is deed against the Company the Company shall comply with the arbitration award within a reasonable time to be fixed by that award PROVIDED THAT if the arbitrator finds that there was a bona fide As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 53 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 4 dispute and that the Company was not dilatory in pursuing the arbitration the time for compliance with the arbitration award shall not be less than 90 days from the date of such award. If the default referred to in paragraph a of subclause 1 shall not have been remedied within a period of 180 days after receipt of the notice referred to in that subclause or within the time fixed by the arbitration award as aforesaid the State instead of determining this Agreement as aforesaid because of such default may itself remedy such default or cause the same to be remedied for which purpose the State by agents workmen or otherwise shall have full power to enter upon lands occupied by the Company and to make use of all plant machinery equipment and installations thereon and the actual costs and expenses incurred by the State in remedying or causing to be remedied such default shall be a debt payable by the Company to the State on demand. Effect of cessation or determination of Agreement 39. 1 On the cessation or determination of this Agreement a b c except as otherwise agreed by the Minister the rights of the Company to in or under this Agreement and the rights of the Company or of any assignee of the Company or any mortgagee to in or under the mining lease and any other lease licence easement or other title or right granted hereunder or pursuant hereto but

excluding townsite lots which have been granted to or acquired by the Company and which are no longer owned by it shall thereupon cease and determine but without prejudice to the liability of any of the parties hereto in respect of any antecedent breach or default under this Agreement or in respect of any indemnity given under this Agreement; the Company shall forthwith pay to the State all moneys which may then have become payable or accrued due; save as aforesaid and as otherwise provided in this Agreement neither the State nor the Company shall have

page 54 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement 2 any claim against the other of them with respect to any matter or thing in or arising out of this Agreement. Except as otherwise determined by the Minister and subject to the provisions of subclause 3 upon the cessation or determination of this Agreement all buildings erections and other improvements erected on any land then occupied by the Company under the mining lease or any other lease licence easement or other title made under or pursuant to this Agreement shall become and remain the absolute property of the State without the payment of any compensation or consideration to the Company or any other party and freed and discharged from all mortgages and other encumbrances and the Company shall do and execute all such deeds documents and other acts matters and things including surrenders as the State may reasonably require to give effect to the provisions of this subclause.

3 a In the event of the Company immediately prior to the cessation or determination of this Agreement or within 3 months therefrom desiring to remove any of its fixed or movable plant and equipment or any part thereof from any part of the land occupied by it at the date of such cessation or determination it shall give to the State notice of such desire and thereby shall grant to the State the right or option exercisable within 3 months thereafter to purchase in situ such fixed or moveable plant and equipment at a fair valuation to be agreed between the State and the Company or failing agreement determined by arbitration under this Agreement.

b If the State does not exercise the right or option referred to in paragraph a the Company may on the expiry of the 3 month period referred to or sooner with the consent of the Minister remove the fixed or movable plant and equipment to which the right or option refers. As at

15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 55 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement Term of Agreement 40. Subject to the provisions of subclauses 6 and 10 of Clause 7 and Clauses 38 and 39 this Agreement shall expire on the expiration or sooner determination or surrender of the mining lease. Notices 41. Any notice consent or other writing authorised or required by this Agreement to be given or sent shall be deemed to have been duly given or sent by the State if signed by the Minister or by any senior officer of the Public Service of the said State acting by the direction of the Minister and forwarded by prepaid post or handed to the Company at its address hereinbefore set forth or other address in the said State nominated by the Company to the Minister and by the Company if signed on its behalf by any person or persons authorised by the Company or by its solicitors as notified to the State from time to time and forwarded by prepaid post or handed to the Minister and except in the case of personal service any such notice consent or writing shall be deemed to have been duly given or sent on the day on which it would be delivered in the ordinary course of post. Stamp Duty 42. The State shall exempt the following instruments from any stamp duty which but for the operation of this Clause would or might be assessed as chargeable on them a b c this Agreement; any instrument executed by the State pursuant to this Agreement granting to or in favour of the Company or any permitted assignee any licence lease easement or other title; any assignment sublease or disposition other than by way of mortgage or charge made by the Company arising from a proposal submitted to the Minister and consented to by the Minister under subclause 1 of Clause 32 page 56 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement PROVIDED THAT this Clause shall not apply to any instrument or other document executed or made more than 2 years after the commencement date. Guarantee 43. Notwithstanding any addition to or deletion or variation of the provisions of this Agreement or any time or other indulgence granted by the State to the Company whether or not notice thereof is given to Hamersley by the State Hamersley hereby guarantees to the State the due performance by the Company of all of the Companys obligations to be performed hereunder.

Applicable law 44. This Agreement shall be interpreted according to the law for the time being in force in the State of Western Australia. THE SCHEDULE WESTERN AUSTRALIA MINING ACT 1978 IRON ORE YANDICOOGINA AGREEMENT ACT 1996 MINING LEASE MINING LEASE NO. The Minister for Mines a corporation sole established by the Mining Act 1978 with power to grant leases of land for the purposes of mining in consideration of the rents hereinafter reserved and of the covenants on the part of the Lessee described in the First Schedule to this lease and of the conditions hereinafter contained and pursuant to the Mining Act 1978 except as otherwise provided by the Agreement hereinafter called the Agreement described in the Second Schedule to this lease hereby leases to the Lessee the land more particularly delineated and described in the Third Schedule to this lease for iron ore subject however to the exceptions and reservations set out in the Fourth Schedule to this lease and to any other exceptions and reservations which subject to the Agreement are by the Mining Act 1978 and by any Act for the time being in force deemed to be contained herein to hold to the Lessee this lease for a term of twenty one years As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 57 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement commencing on the date set out in the Fifth Schedule to this lease subject to the sooner determination of the said term upon the cessation or determination of the Agreement upon and subject to such of the provisions of the Mining Act 1978 except as otherwise provided by the Agreement as are applicable to mining leases granted thereunder and to the terms covenants and conditions set out in the Agreement and to the covenants and conditions herein contained or implied and any further conditions or stipulations set out in the Sixth Schedule to this lease the Lessee paying therefor the rents for the time being and from time to time prescribed pursuant to the provisions of the Mining Act 1978 at the times and in the manner so prescribed and royalties as provided in the Agreement with the right during the currency of the Agreement and in accordance with the provisions of the Agreement to take two successive renewals of the term each for a further period of 21 years upon the same terms and conditions subject to the sooner determination of the term upon cessation or determination of the Agreement PROVIDED ALWAYS

that this lease shall not be determined or forfeited otherwise than in accordance with the Agreement.

In this lease Lessee includes the successors and permitted assigns of the Lessee. If the Lessee be more than one the liability of the Lessee hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and to the regulations and bylaws for the time being in force thereunder.

FIRST SCHEDULE HAMERSLEY IRONYANDI PTY LIMITED ACN 009 181 793 a company incorporated in Western Australia and having its registered office at Level 22 Central Park 152 158 St. Georges Terrace Perth.

SECOND SCHEDULE The Agreement made between the State of Western Australia and Hamersley IronYandi Pty Limited and ratified by the Iron Ore Yandicoogina Agreement Act 1996. page 58 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement

THIRD SCHEDULE Description of land Locality Mineral Field Being the land delineated on Survey Diagram No. and recorded in the Department of Minerals and Energy Perth. Area etc.

FOURTH SCHEDULE All petroleum as defined in the Petroleum Act 1967 on or below the surface of the land the subject of this lease is reserved to the Crown in right of the State of Western Australia with the right of the Crown in right of the State of Western Australia and any person lawfully claiming thereunder or otherwise authorised to do so to have access to the land the subject of this lease for the purpose of searching for and for the operations of obtaining petroleum as so defined in any part of the land.

FIFTH SCHEDULE Date of commencement of the lease. Any further conditions or stipulations.

SIXTH SCHEDULE IN witness whereof the Minister for Mines has affixed his seal and set his hand hereto this day of 19 IN WITNESS WHEREOF this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore mentioned.

SIGNED by the said THE HONOURABLE RICHARD FAIRFAX COURT in the presence of R F Court W Ireland MINISTER FOR RESOURCES DEVELOPMENT Colin Barnett As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 59 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement

THE COMMON SEAL of HAMERSLEY IRONYANDI PTY LIMITED

was hereunto affixed by authority of the Directors in the presence of Director M Richmond Secretary L M Graefe THE COMMON SEAL of HAMERSLEY IRON PTY LIMITED was hereunto affixed by authority of the Directors in the presence of C.S. C.S. Director M Richmond Secretary L M Graefe

page 60 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 1 Agreement As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 61 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Schedule 2 First Variation Agreement [s. 3] [Heading inserted No. 61 of 2010 s. 25.] 2010 THE HONOURABLE COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 AND HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 IRON ORE YANDICOOGINA AGREEMENT 1996 RATIFIED VARIATION AGREEMENT [Solicitors details] page 62 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement THIS AGREEMENT is made this 17th day of November 2010 BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western Australia acting for and on behalf of the said State and its instrumentalities from time to time State AND HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 of Level 22 Central Park 152158 St Georges Terrace Perth Western Australia Company AND HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 of Level 22 Central Park 152 158 St Georges Terrace Perth Western Australia Hamersley. RECITALS A. The State the Company and Hamersley are the parties to the agreement dated 22 October 1996 ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 and which as subsequently added to varied is referred to in this Agreement as the Principal Agreement. B. The State the Company and Hamersley wish to vary the Principal Agreement. THE PARTIES AGREE AS FOLLOWS 1. 2. Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. The State shall sponsor a Bill in the Parliament of Western Australia to ratify this Agreement and shall endeavour to secure its passage as an Act prior to 31

December 2010 or such later date as the parties may agree. 3. a Clause 4 does not come into operation unless or until an Act passed in accordance with clause 2 ratifies this Agreement. b If by 30 June 2011 or such later date as may be agreed pursuant to clause 2 clause 4 has not come into operation then unless the As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 63 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement parties hereto otherwise agree this Agreement shall cease and determine and none of the parties shall have any claim against the other parties with respect to any matter or thing arising out of or done or performed or omitted to be done or performed under this Agreement. 4. The Principal Agreement is hereby varied as follows 1 in clause 1 a by deleting the existing definitions of beneficiated ore fine ore loading port lump ore and metallised agglomerates; b by inserting in the appropriate alphabetical positions the following new definitions associated company means a any company notified in writing by the Company to the Minister which is incorporated in the United Kingdom the United States of America or Australia and which is i ii the Company within a subsidiary of the meaning of the term subsidiary in section 46 of 2001 the Commonwealth; Corporations Act promoted by the Company for all or any of the purposes of this Agreement and in which the Company holds not less than 2000000 of the issued ordinary capital; iii a company in which the Company holds not less than 20 of the issued ordinary share capital; iv a related body corporate within the meaning of the term related body corporate in section 9 2001 of Commonwealth of the Company or of any company in which the Company holds not less Corporations Act the page 64 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement than 20 of the issued ordinary share capital; and b any other company approved in writing by the Minister for the purpose of this Agreement which is associated directly or indirectly with the Company in its business or operations under this Agreement; iron ore beneficiated ore means that has been concentrated or upgraded otherwise than solely by crushing screening separating by hydrocycloning or a similar technology which uses primarily size as a criterion washing scrubbing trommelling or drying or by a combination

of 2 or more of those processes by the Company in a plant constructed pursuant to proposal approved pursuant to an Integration Agreement or such other plant as is approved by the Minister after consultation with the Minister for Mines and beneficiation and beneficiate have corresponding meanings; fine ore means iron ore not being beneficiated ore or pisolite fine ore which is screened and will pass through a 6.3 millimetre mesh screen; Government agreement has the meaning given in the Government Agreements Act 1979 WA; Integration Agreement means a b c the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act 1963 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Robe River Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Hamersley Range Agreement Act Amendment Act 1968 as from time to time added to varied or amended; or As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 65 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement d e f g h i j k the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Hope Downs Agreement Act 1992 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Mount Newman Agreement Act 1964 as from time to time added to varied or amended; or the agreement approved by and scheduled to the Iron Ore Mount Goldsworthy Agreement Act 1964 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore GoldsworthyNimingarra Agreement Act 1972 as from time to time added to varied or amended; or the agreement authorised by as scheduled to the Iron Ore McCameys Monster Agreement Authorisation Act 1972 as from time to time added to varied or amended; or the agreement ratified by and scheduled to the Iron Ore Marillana Creek Agreement Act 1991 as from time to time added to varied or amended; Integration Proponent means in relation to an Integration Agreement the Company or the Joint Venturers as the

case may be as defined in and for the purpose of that Integration Agreement; loading port means a the Port of Dampier; or b Port Walcott; or c the Port of Port Hedland; or page 66 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement d e any other port constructed after the variation date under an Integration Agreement; or such other port approved by the Minister at the request of the Company from time to time for the shipment of iron ore from the mining lease; lump ore means iron ore not being beneficiated ore or pisolite fine ore which is screened and will not pass through a 6.3 millimetre mesh screen; metallised agglomerates means products resulting from the reduction of iron ore by any method whatsoever and having an iron of not less than 85; pisolite fine ore means iron ore not being beneficiated ore derived from channel iron deposits that appear to be chemically precipitated sedimentary deposits comprised of a pisolitic texture of hematite grains rimmed with goethite in a goethitic matrix and a having a product grade loss on ignition of 8.5 or greater; and b which is screened and will pass through an 9.5 millimetre mesh screen; Related Entity means a company in which a as at 21 June 2010; and b after 21 June 2010 with the approval of the Minister a direct or through a subsidiary or subsidiaries within the meaning of the Corporations Act 2001 Commonwealth indirect shareholding of 20 or more is held by c Rio Tinto Limited ABN 96 004 458 404; or d BHP Billiton Limited ABN 49 004 028 077; or e those companies referred to in paragraphs c and d in aggregate; variation date means the date on which clause 4 of the variation agreement made on or about 17 November 2010 As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 67 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement between the State the Company and Hamersley comes into operation; c d in the definition of iron ore by inserting without limitation after includes; in the definition of mining lease by inserting and includes any areas added to it pursuant to clause 118; 2 by inserting after clause 23 the following new subclause 4 Nothing in this Agreement shall be construed to exempt the Company from compliance with the provisions of the Aboriginal Heritage Act 1972 WA.; 3 in clause 91 by a deleting If and substituting Subject to clause 10 if; and b inserting other than under clause 12C after

pursuant to this Agreement; 4 by deleting subclause 2 of clause 9 and substituting the following new subclauses 2 A proposal may with the consent of the Minister except in relation to an Integration Agreement and that of any parties concerned being in respect of an Integration Agreement the Integration Proponent for that agreement provide for the use by the Company of any works installations or facilities constructed or established under a Government agreement. 3 Each of the proposals pursuant to subclause 1 may with the approval of the Minister or shall if so required by the Minister be submitted separately and in any order as to any matter or matters in respect of which such proposals are required to be submitted. 4 At the time when the Company submits the said proposals it shall submit to the Minister details of any services including any elements of the project investigations design and management and any works materials plant equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. 5 The Company may withdraw its proposals pursuant to subclause 1 at any time before approval thereof or where any decision in respect thereof is referred to arbitration as referred to in clause 9A within 3 months after the award by notice to the Minister that it shall not be proceeding with the same.; 5 by inserting after clause 9 the following new clauses Consideration of Companys proposals under clause 9 9A. 1 In respect of each proposal pursuant to subclause 1 of clause 9 the Minister shall a b c d subject to the limitations set out below refuse to approve the proposal whether it requests the grant of new tenure or not if the Minister is satisfied on reasonable grounds that it is not in the public interest for the proposal to be approved; or approve of the proposal without qualification or reservation; or defer consideration of or decision upon the same until such time as the Company submits a further proposal or proposals in respect of some other of the matters mentioned in clause 91 not covered by the said proposal; or require as a condition precedent to the giving of his approval to the said proposal that the Company make such alteration

thereto or comply with such conditions in respect thereto as he thinks reasonable and in such a case the Minister shall disclose his reasons for such conditions As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 69 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement PROVIDED ALWAYS that where implementation of any proposals hereunder has been approved pursuant to the EP Act subject to conditions or procedures any approval or decision of the Minister under this clause shall if the case so requires incorporate a requirement that the Company make such alterations to the proposals as may be necessary to make them accord with those conditions or procedures. In considering whether to refuse to approve a proposal the Minister is to assess whether or not the implementation of the proposal by itself or together with any one or more of the other submitted proposals will i affect orderly detrimentally development in the said State including without limitation infrastructure development in the said State; or economic and ii be contrary to or inconsistent with the planning and development policies and objectives of the State; or iii detrimentally affect the rights and interests of third parties; or iv detrimentally affect access to and use by others of the lands the subject of any grant or proposed grant to the Company. The right to refuse to approve a proposal conferred by paragraph a may only be exercised in respect of a proposal where the Minister is satisfied on reasonable grounds that a purpose of the proposal is the integrated use of works installations or facilities as defined in subclause 7 of clause 12A for the purpose of that clause as contemplated by clause 12A. It may not be so exercised in respect of a proposal if pursuant to clause 9B5 the Minister prior to the submission of the proposal advised the Company in writing that the Minister has no public interest concerns as defined in that clause with the single preferred development as referred to in clause 9B5a the subject of the submitted proposals and those proposals are consistent as to their substantive scope and with the information provided page 70 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement to the Minister pursuant to clause 9B5 in respect of that single preferred development. 2 The Minister shall within 2 months after receipt of proposals pursuant to clause 91

give notice to the Company of his decision in respect to the proposals PROVIDED THAT where a proposal is to be assessed under Part IV of the EP Act the Minister shall only give notice to the Company of his decision in respect to the proposal within 2 months after service on him of an authority under section 457 of the EP Act. 3 4 If the decision of the Minister is as mentioned in either of paragraphs a c or d of subclause 1 the Minister shall afford the Company full opportunity to consult with him and should it so desire to submit new or revised proposals either generally or in respect to some particular matter. If the decision of the Minister is as mentioned in either of paragraphs c or d of subclause 1 and the Company considers that the decision is unreasonable the Company within 2 months after receipt of the notice mentioned in subclause 2 may elect to refer to arbitration in the manner hereinafter provided the question of the reasonableness of the decision PROVIDED THAT any requirement of the Minister pursuant to the proviso to subclause 1 shall not be referable to arbitration hereunder. A decision of the Minister under paragraph a of subclause 1 shall not be referable to arbitration under this Agreement. 5 If by the award made on the arbitration pursuant to subclause 4 the dispute is decided in favour of the Company the decision shall take effect as a notice by the Minister that he is so satisfied with and approves the matter or matters the subject of the arbitration. 6 The Company shall implement accordance with the terms thereof. the approved proposals in 7 Notwithstanding clause 33 the implementation of approved proposals approve variations to those proposals. the Minister may during As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 71 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Notification of possible proposals 9B. 1 If the Company upon completion of a prefeasibility study in respect of any matter that would require the submission and approval of proposals pursuant to this Agreement being proposals which will have as their purpose the integrated use of works installations or facilities as contemplated by clause 12A for the matter to be undertaken intends to further consider the matter with a view to possibly submitting such proposals it shall promptly notify the Minister in writing giving reasonable particulars of the relevant matter. 2 Within one 1 month after receiving the notification the Minister may if the Minister so wishes inform

the Company of the Ministers views of the matter at that stage. 3 If the Company is informed of the Ministers views it shall take them into account in deciding whether or not to proceed with its consideration of the matter and the submission of proposals. 4 Neither the Ministers response nor the Minister choosing not to respond shall in any way limit prejudice or otherwise affect the exercise by the Minister of the Ministers powers or the performance of the Ministers obligations under this Agreement or otherwise under the laws from time to time of the said State. 5 a This subclause applies where the Company has settled upon a single preferred development a purpose of which is the integrated use of works installations or facilities as defined in subclause 7 of clause 12A for the purpose of that clause as contemplated by clause 12A. b For the purpose of this subclause public interest concerns means any concern that implementation of the single preferred development or any part of it will i detrimentally affect economic and orderly including development the said State in page 72 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement without limitation infrastructure development in the said State; or ii be contrary to or inconsistent with the planning and development policies and objectives of the State; or iii detrimentally affect the rights and interests of third parties; or iv detrimentally affect access to and use by others of lands the subject of any grant or proposed grant to the Company. c At any time prior to submission of proposals the Company may give to the Minister notice of its single preferred development and request the Minister to confirm that the Minister has no public interest concerns with that single preferred development. d The Company shall furnish to the Minister with its notice reasonable particulars of the single preferred development including without limitation i ii iii as to the matters that would be required to be addressed in submitted proposals; and its progress in undertaking any feasibility or other studies or matters to be completed before submission of proposals; and its timetable for obtaining required statutory and other approvals the to submission and approval of proposals; and relation in iv its tenure requirements. e If so required by the Minister the Company will provide to the Minister such further information regarding the single preferred development as the Minister may require from time

to time for the purpose of considering the Companys request and also consult with the Minister or representatives or As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 73 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement officers of the State in regard to the single preferred development. f Within 2 months after receiving the notice or if the Minister requests further information within 2 months after the provision of that information the Minister must advise the Company i ii the Minister has no public the single that concerns with development; or interest preferred that he is not then in a position to advise that he has no public interest concerns with the single preferred development and the Ministers reasons in that regard. g If the Minister gives the advice mentioned in paragraph fii the Company may should it so desire give a further request to the Minister in respect of a revised or alternate single preferred development and the provisions of this subclause shall apply mutatis mutandis thereto.; 6 in clause 104b by deleting subclause 2 of Clause 9 and substituting clauses 92 to 5 and 9A; 7 in clause 118 by a b c inserting after total area of the mining lease the words any land that may be included in the mining lease pursuant to this Agreement and of any other mining lease granted under or pursuant to this Agreement as aggregated; inserting by endorsement after thereof in the mining lease; and by inserting the following sentence at the end of the clause The Minister may approve upon application by the Company from time to time for the total area referred page 74 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement to in this subclause to be increased up to a limit not exceeding 1000 square kilometres;; 8 9 in clause 1110 by inserting or clause 10 as the case may be before the full stop; by inserting after subclause 11 of clause 11 the following new subclauses Blending of iron ore 12 a The Company may blend iron ore mined from the mining lease with any i ii iron ore mined from a mining tenement or other mining title granted under or pursuant to an Integration Agreement; or iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant a held to Government agreement; or under or iii with the prior

approval of the Minister iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding an Integration Agreement; or iv with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by an Integration Proponent from the third party. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 75 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement b to for the and controls The authority given under paragraph a is subject the Minister being reasonably satisfied that there are in place adequate systems correct apportionment of the quantities of iron ore being blended as between each of the sources referred to in paragraph a which systems and controls monitor production processing transportation stockpiling and shipping of all such iron ore. If at any time the Minister ceases to be so satisfied he may after consulting the Company and provided the Company has not within three 3 months after the commencement of such consultation addressed the Minister to his satisfaction by notice in writing to the Company suspend the above authority in respect of the relevant blending arrangements until he is again satisfied in terms of this paragraph b. the matters of concern to c If any blending of iron ore occurs as contemplated by this subclause then for the purposes of clauses 122 and 3a a portion of the iron ore so blended being equal to the proportion that the amount of iron ore from the mining lease used in the admixture of iron ore bears to the total amount of iron ore so blended shall be deemed to be produced from the mining lease. Shipment of and price for iron ore 13 The Company shall during the continuance of this Agreement ship or procure the shipment of all iron ore mined from the mining lease and sold a from a wharf in a loading port which has been constructed under an Integration Agreement; or b with the Ministers approval given before submission of proposals in that regard from page 76 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement any other wharf in a loading port which wharf another has been Government the Integration Agreements constructed agreement under excluding and use its best endeavours to obtain for all iron ore from

the mining lease the best price possible having regard to market conditions from time to time prevailing provided that iron ore from the mining lease may be sold by the Company prior to or at the time of the shipment under this Agreement at a price equal to the production costs in respect of that iron ore up to the point of sale if i ii iii the Minister is notified before the time of shipment that the sale is to be made at cost providing details of the proposed sale; and the Minister is notified of the proposed arms length purchaser in the relevant international seaborne iron ore market of the iron ore the subject of the proposed sale at cost; and there is included in the return lodged pursuant to clause 123a particulars of the transaction in which the ore sold at cost was subsequently purchased in the relevant international seaborne iron ore market by an arms length purchaser specifying the purchaser the seller the price and the date when the sale was agreed between the arms length purchaser and the seller; and iv the arms length purchaser referred to in iii above is not then a designated purchaser as referred to below. If required by notice in writing from the Minister the Company must provide the Minister within 30 days after receiving the notice with evidence that the transaction as included in the return pursuant to paragraph iii of the proviso above was a sale in the relevant international seaborne iron ore market to an independent participant in that market. If no evidence As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 77 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement is provided or the Minister is not so satisfied on the evidence provided or other information obtained the Minister may by notice to the Company designate the purchaser to be a designated purchaser and that designation will remain in force unless and until lifted by further notice from the Minister to the Company. For the avoidance of doubt the parties acknowledge that marketing entities forming part of the corporate group including the Company or part of the parallel corporate group if the Company is part of a duallisted corporate structure are not independent participants for the purposes of this subclause.; 10 in clause 121 by a in the definition of agreed or determined i if requested by the inserting following Company consultation with the Company and its consultants thereto after regard determined by the Minister; in ii deleting assessed at and

substituting assessed on; and iii deleting all the words after shall have regard to and substituting a colon followed by i in the case of iron ore initially sold at cost pursuant to the proviso to clause 1113 the prices for that type of iron ore prevailing at the time the price for such iron ore was agreed between the arms length purchaser referred to in paragraph iii of that proviso and the seller in relation to the type of sale and the relevant international seaborne iron ore market into which such iron ore was the sold and where prices beyond deemed f.o.b. point are being considered the deductions mentioned the definition of f.o.b. value; and in page 78 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement ii in any other case the prices for that type of iron ore prevailing at the time the price for such iron ore was agreed between the Company and the purchaser in relation to the type of sale and the market into which such iron ore was sold and where prices beyond the deemed f.o.b. point are being considered the the deductions mentioned definition of f.o.b. value;; in b in the definition of deemed f.o.b. point by inserting relevant before loading port; c in the definition of f.o.b. value by i in paragraph i A B C inserting subject to paragraph ii before in the case of; deleting assessed at and substituting assess on; and inserting reference to loading port; relevant before each ii renumbering paragraph ii as paragraph iii; and iii inserting after paragraph i the following new paragraph ii the arms in the case of iron ore initially sold at cost pursuant to the proviso to clause 1113 the price which is payable for the iron ore by length purchaser as referred to in paragraph iii of the Minister considers following advice from the appropriate Government department that the price payable in respect of the iron ore does not represent a fair and reasonable market value for that type of that proviso or where As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 79 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement iron ore assessed on an arms length basis in the relevant international seaborne iron ore market such amount as is agreed or determined as representing such a fair and reasonable market value less all duties taxes costs and charges referred to in paragraph i above;; 11 after clause 121 by deleting the heading period to 31 December 2010; 12 in clause 122 by a b

deleting a for the period ending on 31 December 2010; inserting in paragraph i and on fine ore and pisolite fine ore where such fine ore and pisolite fine ore is not sold or shipped separately as such after lump ore; c inserting in paragraph ii and on pisolite fine ore sold or shipped separately as such after fine ore; d deleting paragraphs b; and c; and e f deleting paragraphs PROVIDED HOWEVER; and a and b of after inserting after paragraph d the following new paragraphs e Where beneficiated ore is produced from an admixture of iron ore from the mining lease and iron ore from elsewhere a portion and a portion only of the beneficiated ore so produced being equal to the proportion that the amount of the iron in the iron ore from the mining lease used in the production of that beneficiated ore bears to the total amount of iron in the iron ore so used shall be deemed to be produced from iron ore from the mining lease. page 80 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement f Where for the purpose of determining f.o.b. value it is necessary to convert an amount or price to Australian currency the conversion is to be calculated using a rate excluding forward hedge or similar contract rates that has been approved by the Minister at the request of the Company and in the absence of such request as determined by the Minister to be a reasonable rate for the purpose. g The provisions of regulations 85AA Effect of GST etc. on the Mining Regulations 1981 WA shall apply mutatis mutandis to the calculation of royalties under this clause.; royalties of 13 in clause 123 by a in paragraph a i inserting and also showing such other information in relation to the abovementioned iron ore as the Minister may from time to time reasonably require in regard to and to assist in verifying in accordance with subclause 2 after the due date of the return; and the calculation of royalties ii deleting all the words after calculated on the basis of and substituting a colon followed by i ii in the case of iron ore initially sold at cost pursuant to the proviso to clause 1113 at the price notified pursuant to paragraph iii of that proviso; cases any other the Company in invoices or provisional invoices as the case may be rendered by the purchaser which invoices the Company shall delay simultaneously furnishing copies thereof to the Minister of such iron ore or on without render to As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page

81 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement the basis of estimates as agreed or determined and shall from time to time in the next following appropriate return and payment make by return and by cash all such necessary adjustments and give to the Minister full details thereof when the f.o.b. value shall have been finally calculated agreed or determined;; b in paragraph b by i ii iii deleting books of account and records of the Company including contracts relative and substituting accounts documents including contracts data and information of the Company stored by any means relating; and records books inserting in whatever form after copies or extracts; inserting the subject of royalty before each reference to hereunder; and c by inserting after paragraph b the following new paragraph ba The Company shall cause to be produced in Perth in the said State all books records accounts documents including contracts data and information of the kind referred to in paragraph b to enable the exercise of rights by the Minister or the Ministers nominee under paragraph b regardless of the location in which or by whom those books records accounts documents including contracts data and information are stored from time to time.; and 14 by inserting after clause 12 the following new clauses Integrated use of works installations or facilities under the Integration Agreements page 82 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement 12A. Subject to subclauses 2 to 7 of this 1 clause and to the other provisions of this Agreement the Company may during the continuance of this Agreement a use any existing or new works installations or facilities constructed or held i under this Agreement; or ii any other under Integration Agreement which are made available for such use and during the such of continuance Integration Agreement; or iii with the approval of the Minister under a Government agreement excluding Integration an Agreement which are made available for such use and during that the agreement continuance of wholly or in part in the activities of the Company carried on by it pursuant to this Agreement including without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing so including without limitation blending permitted by clause 1112 of A iron ore mined from a Mining

Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding granted any mining lease As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 83 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement pursuant to or held under a Government agreement; B with the prior approval of the Minister iron ore mined in or proximate to the Pilbara region said State under a of the agreement Government excluding Integration Agreement; an C with the prior approval of the Minister iron ore mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by the Company from the third party; D ore mined iron Integration Agreement; under an during b make any existing or new works installations or facilities constructed or held under this Agreement available for use wholly or partly by another Integration the Proponent continuance of its Integration Agreement in the activities of that Integration Proponent carried on by it pursuant to its Integration including Agreement without limitation as part of those activities transporting by railway and shipping from a loading port and undertaking any ancillary and inental activities in doing so including without limitation blending permitted by that Integration Agreement of page 84 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement i iron ore mined from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining granted pursuant to or held under a Government agreement; lease in ii with the prior approval of the Minister that as defined Integration Agreement iron ore mined in or proximate to the Pilbara region of the said State under a Government agreement excluding Integration an Agreement; as defined iii with the prior approval of the Minister in that ore Integration Agreement mined by a third party from a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State excluding under a Government agreement which has been purchased by Integration Proponent from the third party; that iv ore mined iron Integration Agreement; under an c make any existing or

new works installations or facilities constructed or held under this Agreement available for use wholly or partly in connection with operations under i a Mining Act 1978 mining lease located in or proximate to the As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 85 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Pilbara region of the said State for iron ore which is held by a Related Entity alone or with a third party or parties excluding granted any mining pursuant to or held under a Government agreement; or lease ii with the approval of the Minister a Government agreement other than an Integration Agreement for the mining of iron ore in or proximate to the Pilbara region of the said State; d e subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c connect any existing or new works installations or facilities constructed or held under this Agreement to any existing or new works facilities constructed or held under another Integration Agreement; installations or subject to subclause 2 under this Agreement and for the purpose of any use or making available for use referred to in paragraph a b or c or making of any connection in paragraph d construct new works installations or facilities and expand modify or otherwise vary any existing and new works installations or facilities constructed this Agreement; referred under held or to f allow a railway or rail spur line not being a railway or rail spur line constructed or held under an Integration Agreement to be connected to a railway page 86 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement rail spur this Agreement for line or other works or installations or facilities constructed or held under the delivery of iron ore to an Integration Proponent for transport by railway and shipping from a loading port together with any ancillary and inental activities in doing so as part of its Integration activities Agreement; and under its g allow an electricity transmission line not being an electricity transmission line constructed or held under an Integration Agreement to be connected line to an electricity constructed this Agreement for the supply of electricity permitted to be made under an Integration Agreement. transmission under held or to or referred a A connection referred to in clause 1d or construction expansion modification or

other variation in subclause 1e by the Company shall to the extent not already authorised under this Agreement as at the variation date be regarded as a significant modification other expansion variation of the Companys activities carried on by this Agreement and may only be made in accordance with proposals submitted and approved or determined under this Agreement in accordance with clauses 9 and 9A or clauses 10 or 12C as the case may in and compliance with the provisions of this Agreement and the laws from time to time of the said State. For the avoidance of doubt the parties acknowledge that it pursuant otherwise require to 2 As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 87 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement any use or making available for use contemplated by subclause 1a 1b or 1c shall not otherwise than as required by this paragraph a require the submission and approval of further proposals under this Agreement. b The Company shall not be entitled to i ii submit proposals to construct any port or to establish harbour or port works or facilities; or installations otherwise generate and supply power take and supply water or dispose of water in accordance with the other clauses of this Agreement and subject to any in restrictions contained those clauses; or than to make iii without limiting subparagraphs i and to ii submit proposals construct or establish works installations or facilities of a type expansions or modifications or other variations of works installations or facilities of a type which in the Ministers reasonable this Agreement immediately before the variation date did not permit the Company or contemplate constructing or making as the case may be otherwise than for integration use as contemplated by subclauses 1a 1b or 1c or as permitted by clause 12C; or establishing opinion page 88 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement iv v vi to as referred referred to make a submit proposals connection as in subclause 1d or a construction expansion modification or other in variation subclause 1e otherwise than on tenure granted under or pursuant to this Agreement from time to time or held pursuant to this Agreement from time to time; or to if in to as referred referred submit proposals to make a in connection to subclause 1d or a construction expansion modification

or other variation in subclause 1e for the purpose of use as contemplated by the 1ci subclause the opinion reasonable Minister the activity which is the subject of the proposals would give to the holder or holders of the relevant Mining Act 1978 mining lease the benefit of rights or powers the Company under this Agreement over and above the right of access to and use of the relevant works installations or facilities; or granted of to to referred submit proposals to make a in connection as subclause 1d or a construction expansion modification or other variation in subclause 1e for the purpose of use as contemplated by subclause 1c and involving the referred as to As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 89 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement grant of tenure without the prior approval of the Minister; or vii to submit proposals assign sublet transfer or dispose of any works installations or facilities constructed or held under this Agreement leases licences easements or other titles this to under or pursuant Agreement any purpose referred to in this clause. any for or c or the provisions of Notwithstanding clauses 9A 10 and 12C the Minister may defer consideration of or a decision upon a proposal submitted by the Company for a connection as referred to in subclause 1d or a construction expansion modification other variation as referred to in subclause 1e for the purpose of use or making available for use as referred to in subclauses 1a or 1b until relevant corresponding proposals under the relevant Integration Agreement have been submitted and those proposals can Integration be approved under the Agreement concurrently with this approval Ministers Agreement of the Companys proposal. under that 3 Any use or making available for use as referred to in subclause 1 or submission of proposals as referred to in subclause 2 in respect of a Related Entity shall be subject to the Company first confirming with the Minister that the Minister is satisfied that the relevant company is a Related Entity. 4 The Company shall give the Minister prior written notice of any significant change other page 90 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement than a temporary one for maintenance or to respond to an emergency proposed in its use or in for use works installations or facilities as referred to in this clause it making available a b from that

Agreement variation date; and authorised under immediately before this the subsequently notified to subclause from the Minister under that previously this as soon as practicable before such change occurs. The Company shall also keep the Minister fully to any proposed informed with connection as referred to in subclause 1f or 1 g or request of the Company for such connection to be allowed.

respect 5 Nothing in this Agreement shall be construed to a b exempt another Integration Proponent from complying with or the application of the provisions of its Integration Agreement; or restrict clause 32. the Companys rights under For the avoidance of doubt the approval of proposals under this Agreement shall not be construed as authorising another Integration Proponent to undertake any activities under this Agreement or under another Integration Agreement. 6 Nothing in this clause shall be construed to exempt the Company from complying with or the application of the other provisions of this As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 91 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Agreement including without limitation clause 32 and of relevant laws from time to time of the said State. 7 the purpose of For installations or facilities means any this clause works a b c d e f g h i j k harbour or port works installations or facilities including without limitation stockpiles reclaimers conveyors and wharves; railway and rail spur lines; track structures and systems associated with the operation and maintenance of a railway including without limitation sidings train control and signalling systems maintenance workshops and terminal yards; loading and unloading works train installations or facilities; conveyors; private roads; mine aerodrome aerodrome works facilities; and associated installations and iron ore mining crushing screening beneficiation or other processing works installations or facilities; mine administration buildings including without limitation offices workshops and medical facilities; borrow pits; accommodation and ancillary facilities including limitation without construction camps and in townsites page 92 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement I constructed pursuant to and held under any Integration Agreement; water sewerage electricity gas and telecommunications works installations including without and

limitation pipelines transmission lines and cables; and facilities in any other works installations or facilities approved of by the Minister for the purpose of this clause. Transfer of rights to shared works installations or facilities

12B. 1 For the purposes of this clause Relevant Infrastructure means

a any works installations or facilities as defined in clause 12A7 a constructed or held under another Integration Agreement; b which the Company is using in its activities pursuant to this Agreement; c which the Minister is satisfied after consulting with the Company and the Integration Proponent that other Integration Agreement for i to are no longer required by that other Integration Proponent to carry on its activities pursuant its Integration Agreement because of the cessation of the Integration Proponents mining operations in respect of which such Relevant Infrastructure was constructed or held or because of any other reason acceptable to the Minister; and As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 93 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement ii are required by the Company to continue to carry on its activities pursuant to this Agreement; and d in respect of which that other Integration Proponent has notified the Minister it consents the Company submitting proposals as referred to in subclause 2. to 2 The Company may as an additional proposal pursuant to clause 9 propose a b that it be granted a lease licence or other the Relevant Infrastructure title over pursuant to this Agreement subject to and conditional upon the other Integration Proponent surrendering wholly or in part and upon such terms as the Minister considers any variation address terms environmental issues its lease licence or Relevant other Infrastructure; or reasonable of including to over title the to transferred that the other Integration Proponents lease licence or other title not being a mineral lease mining lease or other right to mine title granted under a Government agreement the Mining Act 1904 or the the Relevant Mining Act 1978 Infrastructure be this to Agreement to be held by the Company pursuant to this Agreement with such surrender of land from it and variations of its the Minister considers reasonable for that title to be held under this Agreement including without to address environmental limitation issues and outstanding obligations of that other Integration Proponent under its Integration Agreement in respect of that Relevant Infrastructure. terms as page

94 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement The provisions of clause 9A shall mutatis mutandis apply to any such additional proposal. In addition the Company acknowledges that the Minister may require variations of the other Integration Agreement and or proposals under it or of this Agreement in order to give effect to the matters contemplated by this clause. 3 This clause shall cease to apply in the event the State gives any notice of default to the Company pursuant to clause 38l and while such notice remains unsatisfied. Miscellaneous Licences for Railways 12C. 1 In this clause subject to the context Additional Infrastructure means a b c Train Loading Infrastructure; Train Unloading Infrastructure; a conveyor train unloading and other infrastructure necessary for the transport of iron ore freight goods or other products from the Railway directly or indirectly to port facilities within a loading port in each case located outside a Port; LAA means the Land Administration Act 1997 WA; Lateral Access Roads has the meaning given in subclause 3aiv; licence granted pursuant Lateral Access Road Licence means a miscellaneous to subclause 6a ii or subclause 6b as the case may be and according to the requirements of the context describes the area of land from time to time the subject of that licence; As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 95 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Port means any port the subject of the Port Authorities Act 1999 WA or the Shipping and Pilotage Act 1967 WA; Private Roads means Lateral Access Roads and the Companys access roads within a Railway Corridor; Rail Safety Act means the Rail Safety Act 1998 WA; Railway means a standard gauge heavy haul railway or railway spur line located or to be located as the case may be in or proximate to the Pilbara region of the said State but outside the boundaries of a Port for the transport of iron ore freight goods and other products together with all railway track associated track structures including sidings turning loops over or under track structures supports including supports for equipment or items associated with the use of a railway tunnels bridges train control systems signalling systems switch and other gear communication traction systems excluding office infrastructure buildings centres and buildings

workshops and associated plant machinery and equipment stock including maintenance facilities terminal yards depots culverts and weigh bridges which railway is or is to be as the case may be the subject of approved proposals under subclause 4 and includes any expansion or extension thereof outside a Port which is the subject of additional proposals accordance with subclause 5; approved housing electric freight rolling and in Railway Corridor means prior to the grant of a Special Railway Licence the land for the route of the Railway the subject of that licence access roads other than Lateral Access Roads areas from which stone sand clay and gravel may be page 96 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement taken temporary accommodation facilities for the railway workforce water bores and Additional Infrastructure if any which is the subject of a subsisting agreement pursuant to subclause 3a and after the grant of the Special Railway Licence the land from time to time the subject of that Special Railway Licence; Railway Operation means the construction and operation under this Agreement of the relevant Railway and associated access roads and Additional Infrastructure if any within the relevant Railway Corridor and of the associated in accordance with Lateral Access Roads approved proposals; Railway spur line means a standard gauge heavy haul railway spur line located or to be located in or proximate to the Pilbara region of the said State but outside a Port connecting to a Railway for the transport of iron ore freight goods and other products upon the Railway to directly or indirectly a loading port; Railway Operation Date means the date of the first carriage of iron ore freight goods or other products over the relevant Railway other than for construction or commissioning purposes; Railway spur line Operation Date means the date of the first carriage of iron ore freight goods or other products over the relevant Railway spur line other than for construction or commissioning purposes; for railway and Special Railway Licence means the relevant if miscellaneous licence applicable other purposes granted the Company pursuant to subclause 6ai as varied in accordance with subclause 6h or subclause the requirements of the context describes the area of according 6i and to to As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 97 Iron Ore Yandicoogina

Agreement Act 1996 Schedule 2 First Variation Agreement land from time to time the subject of that licence; Train Loading Infrastructure means conveyors stockpile areas blending and screening facilities stackers reclaimers and other infrastructure reasonably required for the loading of iron ore freight goods or other products onto the relevant Railway for transport directly or indirectly to a loading port; and Train Unloading Infrastructure means train unloading infrastructure reasonably required for the unloading of iron ore from the Railway to be processed or blended with other iron ore at processing or blending facilities in the vicinity of that train unloading infrastructure and with the resulting iron ore products then loaded on to the Railway for transport directly or indirectly to a loading port. Company to obtain prior Ministerial inprinciple approval 2 a b If the Company wishes from time to time during the continuance of this Agreement to proceed under this clause with a plan to develop a Railway it shall give notice thereof to the Minister and furnish to the Minister with that notice an outline of its plan. The Minister shall within one month of a notice under paragraph a advise the Company whether or not he approves inprinciple the proposed plan. The Minister shall afford the Company full opportunity to consult with him in respect of any this decision of paragraph. the Minister under c The Ministers inprinciple approval in respect of a proposed plan shall lapse if

page 98 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement the Company has not submitted detailed proposals to the Minister in respect of that plan in accordance with this clause within 18 months of the Ministers inprinciple approval. Railway Corridor 3 a If the Minister gives inprinciple approval to a plan of the Company to develop a Railway it shall consult with the Minister to seek the agreement of the Minister as to i ii iii iv where the Railway will begin and end; and a route for the Railway access roads to be within the Railway Corridor and the land required for that route as well as Additional Infrastructure if any including from without which stone sand clay and gravel may temporary taken accommodation facilities for the railway workforce and water bores; and limitation areas be of respect in Additional Infrastructure if any the nature and capacity of such Additional Infrastructure; and the routes of and the land required for roads outside the Railway

Corridor and also outside a Port for access to it to construct the Railway such roads as agreed being Lateral Access Roads. In seeking such agreement regard shall be had to achieving a balance between As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 99 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement the engineering matters including costs the nature and use of any lands concerned and interests therein and the costs of acquiring the land all of which shall be borne by the Company. The parties acknowledge the intention is for the Company to construct the Railway the access roads for the construction and maintenance of the Railway which are to be within the Railway Corridor and relevant Additional Infrastructure if any along the centreline of the Railway Corridor subject to changes in that alignment to the extent necessary to avoid heritage environmental or poor ground conditions that are not identified during preliminary investigation work and recognise the width of the Railway Corridor may need to vary along its route to accommodate Additional Infrastructure if any access roads areas from which stone sand clay and gravel may be taken temporary accommodation facilities for the railway workforce and water bores. The provisions of clause 37 shall not apply to this subclause. If the date by which the Company must submit detailed proposals under subclause 4a as referred to in subclause 2c is extended or varied by the Minister pursuant to clause 35 any agreement made pursuant to paragraph a before such date is extended or varied shall unless the Minister notifies the Company otherwise be deemed to be at an end and neither party shall have any claim against the other in respect of it. b c The Company acknowledges that it shall be responsible for liaising with every title page 100 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement to holder in respect of the land affected and for obtaining in a form and substance acceptable all unconditional and irrevocable consents of each such title holder to and all statutory consents required in respect of the land affected for the Minister i ii for the grant of the Special Railway construction the Licence operation and maintenance within the the Railway Corridor of Railway and access Additional Infrastructure if any to be within the Railway Corridor; and roads the grant of Lateral Access Road

Licences for the construction use and maintenance of Lateral Access Roads over the routes for the Lateral Access Roads agreed pursuant to paragraph a; and iii the inclusion of additional land in the Special Railway Licence as referred to in subclause 6h or subclause 6i in accordance with this clause. For the purposes of this subclause 3c title holder means a management body as defined in the LAA in respect of any part of the affected land a person who holds a mining petroleum or geothermal energy right as defined in the LAA in respect of any part of the affected land a person who holds a lease or licence under the LAA in respect of any part of the affected land a person who holds any other title a granted under or pursuant to As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 101 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Government agreement in respect of any part of the affected land a person who holds a lease or licence in respect of any part of the affected land under any other Act applying in the said State and a person in whom any part of the affected land is vested immediately before the provision of such consents to the Minister as referred to in subclause 4eii including as applying pursuant to subclause 5d. Company to submit proposals for Railway 4 a its practicable including The Company shall subject to the EP Act the provisions of this Agreement agreement at that time subsisting in respect of the matters required to be agreed pursuant to subclause 3a submit to the Minister by the latest date applying under subclause 2c to the fullest extent detailed reasonably proposals plans where practicable and specifications where reasonably required by the Minister and any other details normally required by a local government in whose area any works are to be situated with respect to the undertaking of the relevant Railway Operation which proposals shall include layout design area the location the time program for materials and commencement of completion and construction or the provision as the case may be of each of the following matters namely i the Railway including fencing if any and crossing places within the Railway Corridor; page 102 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement ii Additional Infrastructure if any within the Railway Corridor; iii accommodation temporary and ancillary temporary facilities for

the railway workforce on or in the vicinity of the Railway Corridor and housing and other appropriate facilities the elsewhere Companys workforce; for iv water supply; v energy supplies; vi access roads within the Railway Corridor and Lateral Access Roads both along the routes for those roads agreed between the Minister and to the Company pursuant subclause 3a; vii any other works services or facilities desired by the Company; and viii use of local labour professional services manufacturers suppliers contractors and materials and measures to be taken with respect to the engagement and training of employees by the Company its agents and contractors. Proposals pursuant to paragraph a must specify the matters agreed for the purpose pursuant to subclause 3a and must not be contrary to or inconsistent with such agreed matters. the proposals pursuant Each of to paragraph a may with the approval of the Minister or must if so required by the Minister be submitted separately and in b c As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 103 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement in or more any order as to the matter or matters mentioned of one subparagraphs i to viii of paragraph a and until all of its proposals under this the subclause have been approved Company may withdraw and may resubmit any proposal but the withdrawal of any proposal shall not affect the obligations of the Company to submit a proposal under this subclause in respect of the subject matter of the withdrawn proposal. d The Company shall whenever any of the following matters referred to in this subclause are proposed by the Company whether before or during the submission of proposals under this subclause submit to the Minister details of any services including any elements of the project investigations design and management and plant any works materials equipment and supplies that it proposes to consider obtaining from or having carried out or permitting to be obtained from or carried out outside Australia together with its reasons therefor and shall if required by the Minister consult with the Minister with respect thereto. e At the time when the Company submits the last of the said proposals pursuant to this subclause it shall i of evidence furnish to the Ministers reasonable satisfaction all accreditations under the Rail Safety Act which are required to be held by the Company or any other person for the construction of the Railway; and page 104

Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement ii furnish to the Minister the written consents referred to in subclause 3ci and 3cii. f The provisions of clause 9A shall apply mutatis mutandis to detailed proposals submitted under this subclause. Additional Railway Proposals 5 a b If the Company at any time during the currency of a Special Railway Licence desires to construct a Railway spur line connecting to the Railway the subject of that Special Railway Licence or desires to significantly modify expand or otherwise vary its activities within the land the subject of the Special Railway Licence that are the subject of this Agreement and that may be carried on by it pursuant to this Agreement other than by the construction of a Railway spur line beyond those activities specified in any approved proposals for that Railway it shall give notice of such desire to the Minister and furnish to the Minister with that notice an outline of its proposals in respect including without limitation such matters mentioned in subclause 4a as are relevant or as the Minister otherwise requires. thereto If the notice relates to a Railway spur line or to the construction of Train Loading Infrastructure or Train Unloading Infrastructure on land outside the then Railway Corridor the Minister shall within one month of receipt of such notice advise the Company whether or not he approves proposed construction of such spur line Train Train Loading Infrastructure in principle the or As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 105 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Unloading Infrastructure. If the Minister gives in principle approval the Company may but not otherwise submit detailed proposals in respect thereof provided that the provisions of subclause 3 shall to mutatis mutandis prior submission of detailed proposals in respect thereof. apply c 3a referred to be agreed pursuant to Subject to the EP Act the provisions of this Agreement and agreement at that time subsisting in respect of any matters required to in as subclause paragraph b the Company shall submit to the Minister within a reasonable timeframe as determined by the Minister after receipt of the notice referred to in paragraph a or in the case of a notice referred to in paragraph b the giving of the Ministers in principle consent as referred to in that paragraph detailed proposals in respect of the

proposed construction of such Railway spur line Infrastructure Train Train Loading Unloading other Infrastructure proposed modification expansion or variation of its activities including such of the matters mentioned in subclause 4a as the Minister may require. or d The provisions of subclause 4 with the date for submission of proposals being read as the date or time determined by the Minister under paragraph c and the 4eii in reference to subclause subclause read as a 3ci being reference to subclause 3ciii and of clause 9A shall mutatis mutandis apply to detailed proposals submitted pursuant to this subclause. page 106 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Grant of Tenure 6 a On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 months after all its proposals submitted pursuant to subclause 4a have been approved or deemed to be approved and the Company has complied with the provisions of subclause 4e the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company i operation a miscellaneous licence to conduct within the Railway Corridor and in accordance with its approved proposals all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction and commissioning maintenance within the Railway Corridor of the Railway access roads and Additional Infrastructure if any the Special Railway to be Licence such granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Second Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at a rental calculated in accordance with the Mining Act 1978 licence As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 107 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement A B to the Railway prior Operation Date as if the width the Railway Corridor were 100 metres; and of on and from the Railway Operation Date at the rentals from time to time prescribed under the Mining Act 1978; and ii a miscellaneous licence or licences to allow the construction use and maintenance

of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a each a Lateral Access Road Licence each such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Third Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. b On application made by the Company to the Minister in such manner as the Minister may determine not later than 3 its proposals submitted months after pursuant the construction of Lateral Access Roads for to access construct a Railway spur line have been approved or deemed to be approved and the Company has complied with the as provisions of to subclause 5a for the Railway Corridor subclause 4e to page 108 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement applying pursuant to subclause 5d the State notwithstanding the Mining Act 1978 shall cause to be granted to the Company a miscellaneous licence or licences to allow the construction use and maintenance of Lateral Access Roads within the routes agreed for those Lateral Access Roads under subclause 3a as applying pursuant to subclause 5b each a Lateral Access Road Licence each such licence to be granted under and subject to except as otherwise provided in this Agreement the Mining Act 1978 in the form of the Fourth Schedule hereto and subject to such terms and conditions as the Minister for Mines may from time to time consider reasonable and at the rentals from time to time prescribed under the Mining Act 1978. c Notwithstanding the Mining Act 1978 the term of the Special Railway Licence shall subject to the sooner determination thereof on the cessation or sooner determination of this Agreement be for a period of 50 years commencing on the date of grant thereof. d Notwithstanding the Mining Act 1978 the term of any Lateral Access Road Licence shall subject the sooner determination thereof on the cessation or sooner determination of this Agreement be for a period of 4 years commencing on the date of grant thereof. to e Notwithstanding the Mining Act 1978 and except as required to do so by the terms of the Special Railway Licence the Company to surrender the Special Railway Licence or any Lateral

Access Road Licence or any shall not be entitled As at 15 Dec 2011 Version 01c005 Published on
www.legislation.wa.gov.au page 109 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First
Variation Agreement part or parts of them without the prior consent of the Minister. f i The Company
may in accordance with approved proposals take stone sand clay and gravel from the the Railway
Corridor construction and maintenance the Railway of constructed within or approved for
construction within the Railway Corridor. operation for ii Notwithstanding the Mining Act 1978 no
royalty shall be payable under the Mining Act in respect of stone sand clay and gravel which is
permitted by the Company subparagraph i to obtain from the land the subject of the Special Railway
Licence. limiting For the purposes of this Agreement and without the operation of paragraphs a to f
inclusive above the application of the Mining Act 1978 and the regulations made thereunder are
specifically modified; i in section 911 by g A B deleting mining the registrar or the warden in
accordance with section 42 as read with section 92 and the substituting Minister; deleting any
person and substituting the Company as defined in the agreement ratified by and scheduled to the
Iron Ore Yandicoogina page 110 Version 01c005 Published on www.legislation.wa.gov.au As at 15
Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement
Agreement Act 1996 as from time to time added to varied or amended; C of deleting for any one or
purposes the more prescribed and substituting for the purpose specified in clause 12C6ai clause
clause 12C6aii 12C6b of the agreement ratified by and scheduled to the Iron Ore Yandicoogina
Agreement Act 1996 as from time to time added to varied or amended; or ii in section 913a by
deleting prescribed form and substituting form required by the agreement ratified by and scheduled
to the Yandicoogina Iron Agreement Act 1996 as from time to to varied or amended; time added Ore
iii by deleting sections 916 919 9110 and 91B; iv in section 92 by deleting Sections 41 42 44 46 46A
47 and 52 apply and inserting Section 46A excluding in subsection 2a the mining registrar the
warden or applies and by deleting in those provisions and inserting in that provision; v by deleting
the full stop at the end of the section 941 and inserting except to the extent otherwise provided in or
to the extent that As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page

111 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement terms and conditions are such inconsistent with the agreement ratified by and scheduled to the Iron Yandicoogina Agreement Act 1996 as from time to time varied or amended; time added Ore vi by deleting sections 942 3 and 4; vii in section 961 by inserting after miscellaneous licence the words not being a miscellaneous licence granted pursuant to the agreement ratified by and scheduled to the Iron Yandicoogina Agreement Act 1996 as from time to time varied or amended; time added Ore viii by deleting mining regulations 372 373 42 and 42A; and ix subject by inserting at the beginning of mining regulations 41c and f the the words to by agreement and scheduled Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended. ratified the to

h If additional proposals are approved in accordance with subclause 5 for the construction of a Railway spur line outside the then Railway Corridor the Minister for Mines shall include the area of land within which such construction is to occur in the Special Railway Licence by endorsement. The area of such land may be included notwithstanding that the page 112 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. i j Train infrastructure If additional proposals are approved in accordance with subclause 5 for the of construction Loading Infrastructure or Train Unloading Infrastructure outside the then Railway Corridor the Minister for Mines shall include the area of such land within which such for is approved the Special Railway construction Licence by endorsement. The area of such included may notwithstanding that the survey of the land has not been completed but subject to correction to accord with the survey when completed at the Companys expense. land be in The provisions of this subclause shall not operate so as to require the State to cause a Special Railway Licence or a Lateral Access Road Licence to be granted or any land included in the Special Railway Licence as mentioned above until all processes necessary under any laws relating to native title to enable that grant or inclusion of land to proceed have been completed. Construction and operation of Railway 7 a to and Subject in

accordance with approved proposals the Rail Safety Act and the grant of the relevant Special Railway Licence and any associated the Lateral Access Road Licences Company and a proper in workmanlike manner and in accordance shall As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 113 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement sidings with recognised standards for railways of a similar nature operating under similar conditions construct the Railway and associated Additional Infrastructure and access roads within the Railway Corridor and shall also construct inter alia any necessary points bridges signalling switches and other works and appurtenances and provide for crossings and where appropriate and required by the Minister grade separation or other protective devices including flashing lights and boom gates at places where the Railway crosses or intersects with major roads or existing railways.

b The Company shall while the holder of a Special Railway Licence i ii keep the Railway the subject of that licence in an operable state; and ensure that the Railway the subject of that licence is operated in a safe and proper manner in compliance with all applicable laws from time to time; and iii without limiting subparagraph ii ensure that the obligations imposed under the Rail Safety Act on an owner and an operator as those therein defined are terms are complied with in connection with the Railway the subject of that licence. in this Agreement shall be Nothing construed to exempt the Company or any other person from compliance with the Rail Safety Act or limit its application to page 114 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement the Companys operations generally except as otherwise may be provided in that Act or regulations made under it.

c The Company shall provide crossings for livestock and also for any roads other railways conveyors pipelines and other utilities which exist at the date of grant of the relevant Special Railway Licence or in respect of land subsequently included in it at the date of such inclusion and the Company shall on reasonable terms and conditions allow such crossings for roads railways conveyors pipelines and other utilities which may be constructed for future needs and which may be required to cross a Railway constructed pursuant to this clause.

d Subject to clause 12B the

Company shall at all times be the holder of Special Railway Licences and Lateral Access Road Licences granted pursuant to this clause and without limiting clause 26 but subject to clause 12B shall at all times own manage and control the use of each Railway the subject of a Special Railway Licence held by the Company. e The Company shall not be entitled to exclusive possession of the land the subject of a Special Railway Licence or Lateral Access Road Licence granted pursuant to this clause to the intent that the State the Minister the Minister for Mines and any persons authorised by any of them from time to time shall be entitled to enter upon the land or any part of it at all reasonable times and on reasonable notice with all necessary vehicles plant and equipment and for purposes related to this Agreement or such other purposes as As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 115 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement they think fit but in doing so shall be subject to the reasonable directions of the Company so as not to unreasonably interfere with the Companys operations. f The Companys ownership of a Railway constructed pursuant to this clause shall not give land underlying it. interest it an the in g The Company shall not at any time without the prior consent of the Minister dismantle sell or otherwise dispose of any part or parts of any Railway constructed pursuant to this clause or permit this to occur other than for the purpose of maintenance repair upgrade or renewal. h The Company shall subject to and in accordance with approved proposals in a and workmanlike manner proper construct any Additional Infrastructure access roads Lateral Access Roads and other works approved for construction under this clause. i The Company shall while the holder of a Special Railway Licence at all times keep and maintain in good repair and working order and condition which obligation includes where necessary replacing or renewing all parts which are worn out or in need of replacement or renewal due to their age or condition the Railway access roads and Additional Infrastructure if any the subject of that licence and all installations plant such other works machinery and equipment for the time being the subject of this Agreement and used in connection with the operation use and maintenance of that Railway access page 116 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996

Schedule 2 First Variation Agreement roads and Additional Infrastructure if any. j Subject to clause 12B the Company shall i ii iii be responsible for the cost of construction and maintenance of all Private Roads constructed pursuant to this clause; and at its own cost erect signposts and take other steps that may be reasonable in the circumstances to prevent any persons and vehicles other than those engaged upon the Companys its activities invitees and licensees from using the Private Roads; and and at any place where any Private Roads are constructed by the Company so as to cross any railways or public roads provide at its cost such reasonable protection and signposting as may be required by the Commissioner of Main Roads or the Public Transport Authority as the case may be. k The provisions of clauses 203 and 4 shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to this clause except that the Company shall not be obliged to transport passengers upon any such Railway or Railway spur line. Aboriginal Heritage Act 1972 WA 8 For the purposes of this clause the Aboriginal Heritage Act 1972 WA applies as if it were modified by As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 117 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement a the insertion before the full stop at the end of section 181 of the words in and the expression the Company means the persons from time to time their comprising the Company capacity as such under the agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the use or proposed use of land pursuant to clause 12C of that agreement after and in accordance with approved proposals under clause 12C of that agreement and in relation to the use of that land before any such approval of proposals where the Company has the requisite authority to enter upon and so use the land; in relation to b c the insertion in sections 182 184 185 and 187 of the words or the Company as the case may be after the words owner of any land; the insertion in section 183 of the words or the Company as the case may be after the words the owner; d the insertion of the following sentences at the end of section 183 In relation to a notice from the Company the conditions that the Minister may specify can as appropriate include among other conditions a condition restricting the Companys use of the relevant

land to after the approval or deemed approval as the the abovementioned agreement of all of the
Companys submitted initial proposals thereunder for the Railway Operation as case may under be
page 118 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore
Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement in clause 12C1 of the
defined abovementioned agreement or in the case of additional proposals submitted or to be
submitted by the Company to after the approval or deemed approval under that additional proposals
and to the extent so approved. ; and agreement of such e the insertion in sections 182 and 185 of
the words or it as the case may be after the word he. The Company acknowledges that nothing in
this subclause 8 nor the granting of any consents under section 18 of the Aboriginal Heritage Act
1972 WA will constitute or is to be construed as constituting the approval of any proposals submitted
or to be submitted by the Company under this Agreement or as the grant or promise of this land
Agreement. the purposes of tenure for Taking of land for the purposes of this clause 9 a in the
opinion of The State is hereby empowered as and for a public work under Parts 9 and 10 of the LAA
to take for the purposes of this clause any land other than any part of a the Port which Company is
necessary for the relevant Railway Operation and which the Minister determines is appropriate to be
taken for the relevant Railway Operation except any land the taking of which would be contrary to
the provisions of a Government agreement entered into before the submission of the proposals
relating to the proposed taking and notwithstanding any other provisions of that Act may license that
land to the Company. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au
page 119 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement b In
applying Parts 9 and 10 of the LAA for the purposes of this clause i ii iii land in that Act includes a
legal or equitable estate or interest in land; sections 170 171 172 173 174 175 and 184 of that Act
do not apply; and that Act applies as if it were modified in section 1772 by inserting A after railway
the following land is being taken or pursuant to a Government agreement as defined in section 2 of
the Government 1979 Agreements WA; and Act B that Act after following the or that Agreement as
the case may be. c The Company shall pay to the State on demand the costs of or inental to any

land taken at the request of and on behalf of the Company including but not limited to any compensation payable to any holder of native title or of native title rights and interests in the land.

Notification of Railway Operation Date 10 a The Company shall the date occurring 6 months before the date for completion of construction of a Railway from page 120 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement specified in its time program for the commencement of and construction of that Railway submitted under subclause 4a keep the Minister fully informed as to completion i the progress of that construction and likely completion and commissioning; and its ii the likely Railway Operation Date. The Company shall on the Railway Operation Date notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over the Railway other than for construction or commissioning purposes has occurred. from The Company shall the date occurring 6 months before the date for completion of construction of a Railway spur line specified in its time program for the commencement and completion of construction of that spur line submitted under subclause 5c keep the Minister fully informed as to i the progress of that construction and likely completion and commissioning; and its ii in respect of it the likely Railway spur line Operation Date. The Company shall on the Railway spur line Operation Date in respect of any Railway spur line notify the Minister that the first carriage of iron ore freight goods or other products as the case may be over such spur line other than for construction or has occurred.; commissioning purposes b c d As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 121 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement 15 In clause 17 by deleting the full stop at the end of paragraph b substituting ; and and the following new paragraph c for the purpose of supply to i ii the Company or Joint Venturers as the case may be as defined in and for the purpose of an Integration Agreement for its or their purposes thereunder; the holders from time to time of a Mining Act 1978 mining lease located in or proximate to the Pilbara region of the said State which is held by a Related Entity alone or with a third party or parties excluding any mining lease granted pursuant to or held under a Government agreement for the purpose of their

iron ore mining operations on that mining lease; and iii with the prior approval of the Minister the Company or the Joint Venturers as the case may be as defined in and for the purpose of a Government an Integration Agreement for the mining of iron ore in or proximate to the Pilbara region of the said State for the purpose of its or their operations under that agreement excluding agreement and to the extent determined by the Minister generate transmit and supply electricity.; 16 deleting clause 205; 17 by inserting after subclause 2 of clause 21 the following new subclause 2a The provisions of subclause 1 of this clause shall not operate to require the State to grant or vary or cause to be granted or varied any lease licence or other right or title until all processes required by laws relating to native title to enable that grant or variation to proceed have been completed.; page 122 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement 18 by deleting subclause 7 of clause 23 and substituting the following new subclause 7 For the purposes of subclause 6 alternate project means a b c a project to establish and operate within the said State plant for the production of metallised agglomerates; a project to establish and operate within the said State plant which processes and adds value to minerals mined in the said State; or any other project within the said State which the Minister approves as providing as equivalent benefits to the State to a project to establish and operate within the said State plant for the production of metallised agglomerates to be undertaken by d e f g the Company excluding a project referred to in paragraph a or a related body corporate or related bodies corporate the Corporations Act 2001 Cwth of the Company solely or in conjunction with the Company; or the meaning of within a joint venture in which the Company or its related body corporate has a majority participating interest; or any other third person or persons which the Company and the Minister accept as having the requisite financial and technical capacity and expertise to undertake solely or in conjunction with the Company the relevant project referred to in paragraph a b or c.; 19 by inserting the following sentence at the end of clause 31 As a separate independent indemnity the Company will indemnify and keep indemnified the State and its servants As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 123 Iron

Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement agents and contractors in respect of all actions suits claims demands or costs of third parties arising out of or in connection with any use making available for use or other activities of the Company as referred to in clause 12A.; 20 21 22 23 24 25 in clause 323a by inserting or held pursuant to this Agreement after under or pursuant to this Agreement; in clause 331 by inserting or held pursuant hereto after under or pursuant to this Agreement; in clause 381ai by inserting granted under or pursuant to this Agreement or held pursuant to this Agreement after easement or other title; in clause 384 by deleting occupied by the Company and substituting the subject of any lease licence on other title granted under or pursuant to this Agreement or held pursuant to the Agreement; in clause 391a by inserting or held pursuant hereto after granted hereunder or pursuant hereto; in clause 392 by inserting or held pursuant hereto after made under or pursuant to this Agreement; and 25 by inserting after the Schedule the following new schedules SECOND SCHEDULE WESTERN AUSTRALIA IRON ORE YANDICOOGINA AGREEMENT ACT 1996 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A RAILWAY AND OTHER PURPOSES No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction operation and maintenance of a page 124 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement Railway as defined in clause 12C1 of the Agreement and otherwise as provided in the Agreement and if applicable other purposes AND WHEREAS the Company pursuant to clause 12C6a of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the Company is hereby granted by this licence authority to conduct on the land the subject of this licence as more particularly delineated and described from

time to time in the Schedule hereto all activities including the taking of stone sand clay and gravel the provision of temporary accommodation facilities for the railway workforce in accordance with the Agreement and subject to the Rights in Water and Irrigation Act 1914 WA the operation of water bores necessary for the planning design construction commissioning operation and maintenance on the land the subject of this licence of the Railway and Additional Infrastructure as defined in clause 12C1 of the Agreement and access roads to be located on the land the subject of this licence in accordance with the provisions of the Agreement and proposals approved under the Agreement for the term of 50 years from the date hereof subject to the sooner determination of the term upon the determination of the Agreement and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 12C6ai of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 125 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement The terms approved proposals Railway Railway Operation Date and Railway spur line have the meanings given in the Agreement. ENDORSEMENTS AND CONDITIONS Endorsements 1. 2. 3. 4. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. The Company is permitted to in accordance with approved proposals take stone sand clay and gravel from the land the subject of this licence for the construction operation and maintenance of the Railway including any Railway

spur line constructed within or approved for construction within the area of land the subject of this licence. Notwithstanding the Mining Act 1978 no royalty shall be payable under the Mining Act 1978 in respect of stone sand clay and gravel which the Company is permitted by the Agreement to obtain from the land the subject of this licence. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions 1. a Except as provided in paragraph b the Company shall within 2 years after the Railway Operation Date surrender in accordance with the provisions of the Mining Act 1978 the area of this licence down to a maximum of 100 metres width or as otherwise approved by the Minister as defined in the Agreement for the safe operation of the Railway then constructed or approved for construction under approved proposals. b Paragraph a shall not apply to land the subject of this licence that was included in this licence pursuant to clause 12C6h or clause 12C6i of the Agreement. page 126 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement 2. 3. The Company shall as soon as possible after the construction of a Railway spur line or of an expansion or extension thereof as the case may be surrender in accordance with the Mining Act 1978 the land the subject of this licence that was included in this licence pursuant to clause 12C6h of the Agreement for the purpose of such construction down to a maximum of 100 metres in width or as otherwise approved by the Minister as defined in the Agreement for the safe operation of that Railway spur line or expansion or extension thereof as the case may be then constructed or approved for construction under approved proposals. [Any further conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] SCHEDULE Land description Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES THIRD SCHEDULE WESTERN AUSTRALIA IRON ORE YANDICOOGINA AGREEMENT ACT 1996 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement

hereinafter called the Agreement ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 127 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement miscellaneous licence for the construction use and maintenance of a Lateral Access Road as defined in the Agreement AND WHEREAS the Company pursuant to clause 12C6aii of the Agreement has made application for the said licence; NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the Company is hereby authorised to construct use and maintain a road on the land more particularly delineated and described from time to time in the Schedule hereto in accordance with the provisions of the Agreement and proposals approved under the Agreement for a term of 4 years commencing on the date hereof subject to the sooner determination of the term upon the cessation or determination of the Agreement and for the purposes and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 12C6aii of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended. ENDORSEMENTS AND CONDITIONS Endorsements 1. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. page 128

Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement 2. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.] Conditions [Such conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including during the term of the Agreement.] SCHEDULE Description of land Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES FOURTH SCHEDULE WESTERN AUSTRALIA IRON ORE YANDICOOGINA AGREEMENT ACT 1996 MINING ACT 1978 MISCELLANEOUS LICENCE FOR A LATERAL ACCESS ROAD No. MISCELLANEOUS LICENCE [] WHEREAS by the Agreement hereinafter called the Agreement ratified by and scheduled tithe Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the State agreed to grant to [] hereinafter with its successors and permitted assigns called the Company a miscellaneous licence for the construction use and maintenance of a Lateral Access Road as defined in the Agreement AND WHEREAS the Company pursuant to clause 12C6b of the Agreement has made application for the said licence; As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 129 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement NOW in consideration of the rents reserved by and the provisions of the Agreement and in pursuance of the Iron Ore Yandicoogina Agreement Act 1996 as from time to time added to varied or amended the Company is hereby authorised to construct use and maintain a road on the land more particularly delineated and described from time to time in the Schedule hereto in accordance with the provisions of the Agreement and proposals approved under the Agreement for a term of 4 years commencing on the date hereof subject to the sooner determination of the term upon the cessation or determination of the Agreement and for the purposes and upon and subject to the terms covenants and conditions set out in the Agreement and the Mining Act 1978 as it applies to this licence and any amendments to the Agreement and the Mining Act 1978 from time to time and to

the terms and conditions if any now or hereafter endorsed hereon and the payment of rentals in respect of this licence in accordance with clause 12C6b of the Agreement PROVIDED ALWAYS that this licence shall not be determined or forfeited otherwise than in accordance with the Agreement. In this licence If the Company be more than one the liability of the Company hereunder shall be joint and several. Reference to an Act includes all amendments to that Act for the time being in force and also any Act passed in substitution therefore or in lieu thereof and to the regulations and bylaws of the time being in force thereunder. Reference to the Agreement means such agreement as from time to time added to varied or amended.

ENDORSEMENTS AND CONDITIONS

Endorsements

1.

2. This licence is granted in accordance with proposals submitted on [] and approved by the Minister as defined in the Agreement on [] under the Agreement. [Any further endorsement which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of this licence including during the term of the Agreement.]

Conditions

page 130 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement [Such conditions which the Minister for Mines may consistent with the provisions of the Agreement determines and thereafter impose in respect of the licence including during the term of the Agreement.]

SCHEDULE

Description of land Locality Mineral Field Area DATED at Perth this day of . MINISTER FOR MINES

. 5. Hamersley confirms that its guarantee in favour of the State as contained in clause 43 of the Principal Agreement shall continue notwithstanding the abovementioned variations to the Principal Agreement. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 131 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement

EXECUTED as a deed. SIGNED by THE HONOURABLE COLIN JAMES BARNETT in the presence of [Signature] STEPHEN WOOD THE COMMON SEAL of HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 was hereunto affixed by authority of the Directors in the presence of [Signature] [C.S.] [Signature] Director [Signature] Secretary ALAN DAVIES HELEN FERNIHOUGH THE COMMON SEAL of HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 was hereunto affixed by authority of

the Directors in the presence of [C.S.] [Signature] Director [Signature] Secretary page 132 ALAN DAVIES HELEN FERNIHOUGH Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 2 First Variation Agreement [Schedule 2 inserted No. 61 of 2010 s. 25.] As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 133 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement Schedule 3 Second Variation Agreement [s. 3] [Heading inserted No. 61 of 2011 s. 22.] 2011 THE HONOURABLE COLIN JAMES BARNETT PREMIER OF THE STATE OF WESTERN AUSTRALIA AND HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 AND HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 IRON ORE YANDICOOGINA AGREEMENT 1996 RATIFIED VARIATION AGREEMENT [Solicitors details] page 134 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement THIS AGREEMENT is made this 7th day of November 2011 BETWEEN THE HONOURABLE COLIN JAMES BARNETT MLA. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time State AND HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 of Level 22 Central Park 152158 St Georges Terrace Perth Western Australia Company AND HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 of Level 22 Central Park 152158 St Georges Terrace Perth Western Australia Hamersley. RECITALS A. B. The State the Company and Hamersley are the parties to the agreement dated 22 October 1996 ratified by and scheduled to the Iron Ore Yandicoogina Agreement Act 1996 and which as subsequently added to varied or amended is referred to in this Agreement as the Principal Agreement. The State the Company and Hamersley wish to vary the Principal Agreement. THE PARTIES AGREE AS FOLLOWS 1. Interpretation Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purpose of the Principal Agreement. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 135 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement 2. Ratification and Operation 1 The

State shall introduce and sponsor a Bill in the State Parliament of Western Australia prior to 31 December 2011 or such later date as may be agreed between the parties hereto to ratify this Agreement. The State shall endeavour to secure the timely passage of such Bill as an Act. 2 The provisions of this Agreement other than this clause and clause 1 will not come into operation until the day after the day on which the Bill referred to in subclause 1 has been passed by the State Parliament of Western Australia and commences to operate as an Act. 3 If by 30 June 2012 the said Bill has not commenced to operate as an Act then unless the parties hereto otherwise agree this Agreement will then cease and determine and no party hereto will have any claim against any other party hereto with respect to any matter or thing arising out of done performed or omitted to be done or performed under this Agreement. 4 On the day after the day on which the said Bill commences to operate as an Act all the provisions of this Agreement will operate and take effect despite any enactment or other law.

3. Variation of Principal Agreement The Principal Agreement is varied as follows

1 in clause 1 by inserting in the appropriate alphabetical positions the following new definitions

Eligible Existing Tenure means a i a miscellaneous licence or general purpose lease granted to the Company under the Mining Act; or ii a lease or easement granted to the Company under the LAA and not clearly to the satisfaction of the Minister granted under or pursuant to or held pursuant to this Agreement; or b an application by the Company for the grant to it of a tenement referred to in paragraph ai which application has not clearly to the satisfaction of the Minister been made

page 136 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement under or pursuant to this Agreement and as the context requires the tenement granted pursuant to such an application where that tenure was granted or that application was made as the case may be on or before 1 October 2011; LAA means the Land Administration Act 1997 WA; Mount Bruce Agreement means the agreement ratified by and scheduled to the Iron Ore Mount Bruce Agreement Act 1972 as from time to time added to varied or amended; Mount Bruce Agreement Minister means the Minister in the Government of the State for the time being responsible for the Iron Ore Mount Bruce Agreement

Act 1972; Relevant Land in relation to Eligible Existing Tenure or Special Advance Tenure means the land which is the subject of that Eligible Existing Tenure or Special Advance Tenure as the case may be; second variation date means the date on which clause 3 of the variation agreement made on or about 7 November 2011 between the State the Company and Hamersley comes into operation; Special Advance Tenure means a a miscellaneous licence or general purpose lease requested under clause 212b to be granted to the Company under the Mining Act; or b an easement or a lease requested under clause 212b to be granted to the Company under the LAA and as the context requires such tenure if granted; 2 in clause 21 by inserting after and the regulations for the time being in force thereunder in paragraph f and for the avoidance of doubt this principle subject to the context and without limitation to its application to other Acts may apply in respect of references to the Land Act notwithstanding references in this Agreement to the LAA; 3 by inserting after clause 9B the following new clauses As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 137 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement Community development plan 9C. 1 In this clause the term community and social benefits includes a b assistance with skills development and training opportunities to promote work readiness and employment for persons living in the Pilbara region of the said State; regional development activities the Pilbara region of the said State including partnerships and sponsorships; in c contribution to any community projects town services or facilities; and d a regionally based workforce. 2 The Company acknowledges the need for community and social benefits flowing from this Agreement. 3 The Company agrees that a b proposed it shall prepare a plan which describes the Companys for achieving community and social benefits in connection with its activities under this Agreement; and strategies the Company shall not later than 3 months after the second variation date submit to the Minister the plan prepared under paragraph a and confer with the Minister in respect of the plan. 4 The Minister shall within 2 months after receipt of a plan submitted under subclause 3b either notify the Company that the Minister approves the plan as submitted or notify the Company of changes which the Minister requires be made to the plan. If the

Company is unwilling to accept the changes which the Minister requires it shall notify the Minister to that effect and either party may refer to arbitration page 138 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement hereunder the question of the reasonableness of the changes required by the Minister. 5 The effect of an award made on an arbitration pursuant to subclause 4 shall be that the relevant to plan submitted by subclause 3b shall with such changes required by the Minister under subclause 4 as the arbitrator determines to be reasonable with or without modification by the arbitrator be deemed to be the plan approved by the Minister under this clause. the Company pursuant 6 At least 3 months before the anticipated submission of proposals relating to a proposed development pursuant to any of clauses 9 10 12C or 23 the Company must unless the Minister otherwise requires give to the Minister information about how the proposed development may affect the plan approved or deemed to be approved by the Minister under this clause. This obligation operates in relation to all proposals submitted on or after the date that is 4 months after the date when a plan is first approved or deemed to be approved under this clause. 7 The Company shall at least annually report to the Minister about the Companys implementation of the plan approved or deemed to be approved by the Minister under this clause. 8 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan approved or deemed to be approved by the Minister under this clause and may agree to amendment of the plan or adoption of a new plan. Any such amended plan or new plan will be deemed to be the plan approved by the Minister under this clause in respect of the development to which it relates. 9 During the currency of this Agreement the Company shall implement the plan approved or deemed to be approved by the Minister under this clause. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 139 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement Local participation plan 9D. 1 In this clause the term local industry participation benefits means a b c the use and training of labour available within the said State; the use of the services of engineers surveyors architects and other

professional consultants experts specialists project managers and contractors available within the said State; and the procurement of works materials plant equipment and supplies from Western Australian suppliers manufacturers and contractors. 2 The Company acknowledges the need for local industry participation benefits flowing from this Agreement. 3 The Company agrees that it shall not later than 3 months after the second variation date prepare and provide to the Minister a plan which contains a b a clear statement on the strategies which the Company will use and require a third party as referred to in subclause 7 to use to maximise the uses and procurement referred to in subclause 1; detailed information on the procurement practices the Company will adopt and require a third party as referred to in subclause 7 to adopt in calling for tenders and letting contracts for works materials plant equipment and supplies stages in relation to a proposed development and how such practices will provide fair and reasonable suitably qualified Western Australian suppliers manufacturers and contractors to tender or opportunity for page 140 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement c d quote equipment and supplies; for works materials plant detailed information on the methods the Company will use and require a third party as referred to in subclause 7 to use to have their respective procurement officers promptly introduced to Western Australian suppliers manufacturers and contractors seeking such introduction; and details of the communication strategies the Company will use and require a third party as referred to in subclause 7 to use to alert Western Australian engineers surveyors architects and other professional consultants experts specialists project managers and consultants and Western Australian suppliers manufacturers and contractors to services opportunities and procurement opportunities respectively as referred to in subclause 1. It is acknowledged by the Company that the strategies of the Company referred to in subclause 3a will include strategies of the Company in relation to supply of services labour works materials plant equipment or supplies for the purposes of this Agreement. 4 At the request of either of them made at any time and from time to time the Minister and the Company shall confer as to any amendments desired to any plan provided under this clause and may agree to

the amendment of the plan or the provision of a new plan in substitution for the one previously provided. 5 At least 6 months before the anticipated submission of proposals relating to a proposed development pursuant to any of clauses 9 10 12C or 23 the Company must unless the Minister otherwise requires give to the Minister information about the As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 141 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement implementation of the plan provided under this clause in relation to the proposed development. This obligation operates in relation to all proposals submitted on or after the date that is 7 months after the date when a plan is first provided under this clause. 6 During the currency of this Agreement the Company shall implement the plan provided under this clause. 7 The Company shall a the in every contract entered into with a third third party has an party where obligation or right to procure the supply of services labour works materials plant equipment or supplies for or in connection with a proposed development ensure that the contract contains appropriate provisions requiring to undertake third party procurement activities in accordance with the plan provided under this clause; and the b use reasonable endeavours to ensure that the those third party complies with provisions.; 4 in clause 122 by deleting subparagraph ii and substituting the following subparagraph ii on fine ore and on pisolite fine ore sold or shipped separately as such at the rate of A B 5.625 of the f.o.b. value for ore shipped prior to or on 30 June 2012; 6.5 of the f.o.b. value for ore shipped during the period from 1 July 2012 to 30 June 2013 inclusive of both dates; and C 7.5 of the f.o.b. value for ore shipped on or after 1 July 2013;; 5 in clause 12C by page 142 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement a deleting Administration Act 1997 WA;; subclause 1 in LAA means the Land b inserting after subclause 3c the following new paragraph d Without limiting subclause 9 the Minister may waive the requirement under this clause for the Company to obtain and to furnish the consent of a title holder if the title holder has refused to give the required consent and the Minister is satisfied that i ii the title holders affected land is or was subject to a miscellaneous licence granted under the Mining Act 1978 for the purpose of a railway to

be constructed and operated in accordance with this Agreement; and in the Ministers opinion the title holders refusal to give the required consent is not reasonable circumstances the in including having regard to all A the rights of the Company in relation to the affected land as the holders of the miscellaneous licence relative to their rights as the holders of the sought Special Railway Licence or Lateral Access Road Licence as the case may be; and B the terms of any agreement between the Company and the title holder.; c deleting in subclause 4a the comma after the provisions of this Agreement and substituting and; d in subclause 7 i deleting all words in paragraph c after at the date of such inclusion; and As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 143 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement ii inserting after paragraph k paragraph the following new l The provisions of clause 202a shall apply mutatis mutandis to any Railway or Railway spur line constructed pursuant to this clause. 6 in clause 20 by a in subclause 2 deleting all words in the subclause after and other railways which now exist; and b inserting after subclause 2 the following new subclause Crossings over Railway 2a For the purposes of livestock and infrastructure such as roads railways conveyors pipelines transmission lines and other utilities proposed to cross the land the subject of the railway the Company shall a b its consent if applicable give to or otherwise facilitate the grant by the State or instrumentality or other any agency authority of the State of any lease licence or other title over land the subject of the railway so long as such grant does not in the Ministers opinion unduly prejudice or interfere with the activities of the Company under this Agreement; and on reasonable terms and conditions allow access for the construction and operation of such associated infrastructure crossings and provided that in forming his opinion under this clause the Company.; the Minister must consult with 7 at the end of clause 211 by inserting the following new paragraph Notwithstanding clause 12A2biv detailed proposals may refer to activities on tenure which is proposed to be granted pursuant to this subclause 1 as if that tenure was granted pursuant to this Agreement page 144 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement but this does not limit the powers or discretions of

the Minister under this Agreement or the Minister responsible for the administration of any relevant Act with respect to the grant of the tenure.; 8 in the last paragraph of clause 212 by inserting and subclauses 2a and 2b after The provisions of this subclause; 9 in clause 21 by a renumbering subclause 2a as subclause 2d and inserting the following new subclauses before the renumbered subclause 2d Application for Eligible Existing Tenure to be held pursuant to this Agreement 2a to sees limitation the Minister a The Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Eligible Existing Tenure becoming held this Agreement on such pursuant fit conditions as and including without notwithstanding the Mining Act and the LAA as to the surrender of land the submission of detailed proposals and the variation of the terms and conditions of the Eligible Existing Tenure including for the Eligible Existing Tenure to be held pursuant to this Agreement and for the more efficient use of the Relevant Land and the Minister may from time to time vary such conditions in order to extend any specified time for the doing of any thing or the otherwise with Company. the agreement of b Eligible Existing Tenure the subject of an this approval by subclause will be held by the Company pursuant to this Agreement the Minister under As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 145 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement i if the Ministers approval was not given subject to conditions on and from the date of the Ministers notice of approval; ii unless paragraph iii applies if the Ministers approval was given subject to conditions on the date on which all such conditions have been satisfied; and iii to of that subject implement the Ministers approval was if given to a condition requiring that the Company submit detailed proposals in accordance with this Agreement on the later of the date on which the Minister approves proposals submitted in discharge specified condition and the date upon which all other specified conditions have been satisfied but the Company is authorised any approved proposal to the extent such implementation is consistent with the then terms and conditions of the Eligible Existing Tenure pending the satisfaction of any conditions relating to the variation of the terms or conditions of the Eligible Existing Tenure. Where this paragraph iii applies prior to any approval of proposals and

satisfaction of other conditions the relevant tenure will be treated for but only for the purposes of clause 12A2biv as tenure held pursuant to this Agreement. page 146 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement Application for Special Advance Tenure to be granted pursuant to this Agreement 2b The Minister may at the request of the Company from time to time made during the continuance of this Agreement approve Special Advance Tenure being granted to the Company pursuant to this Agreement if a b the Company proposes to submit detailed proposals under this Agreement other than under clause 12C to construct works installations or facilities on the Relevant Land and the Companys request is so far as is practicable made unless the Minister approves otherwise no less than 6 months before the submission of those detailed proposals; and the Minister is satisfied that it is necessary and appropriate that Special Advance Tenure rather than tenure granted under or pursuant to the other provisions of this Agreement be used for the purposes of the proposed works installations or facilities on the Relevant Land and if the Minister does so approve c d the authority notwithstanding the Mining Act or the or appropriate LAA instrumentality of the State shall obtain the consent of the Minister to the form and substance of the Special Advance Tenure prior to its grant which for the avoidance of doubt neither the State nor the Minister is obliged to cause to the Company; and if the Company does not submit detailed proposals relating to construction of the relevant works installations or facilities on the Relevant Land within 24 months after the date of the Ministers approval or such As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 147 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement later time subsequently allowed by the Minister or if submitted the Minister does not approve such detailed proposals the Special Advance Tenure if then granted shall be surrendered at the request of the Minister. 2c of decisions the Minister The under subclauses 2a and 2b shall not be referable to arbitration and any approval of the Minister under this clause shall not in any way limit prejudice or otherwise affect the exercise by the Minister of the Ministers powers or the performance of the Ministers obligations under this Agreement or otherwise under the laws

from time to time of the said State.; b in the renumbered subclause 2d deleting subclause 1 and substituting subclauses 1 2a and 2b; and 10 in clause 23 by a in the first line of subclause 2 deleting The and substituting Subject to subclause 8 the; and b inserting after subclause 7 the following new subclause Capacity to defer obligations of the Company under subclause 2 if alternative project is approved under the Mount Bruce Agreement 8 a Subject to paragraph b in the event that the Mount Bruce Agreement Minister approves in accordance with clause 41A5 of the Mount Bruce Agreement that the carrying out of an alternative project as defined in clause 41A6 of that agreement be accepted by the State in lieu of all of the obligations of the Company as defined in the in that establishment of plant for the production of that steel pursuant agree agreement the Minister may to clause 41A of respect of agreement page 148 Version 01c005 Published on www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement the Company including prior to and conditional upon such approval being given by the Mount Bruce Agreement Minister to postpone the obligation of to submit detailed proposals as contemplated by subclause 2 for a maximum period of 10 years from the third anniversary of the m.a. date immediately following the date on the Mount Bruce Agreement which Minister so approves. b If any approved alternative project referred to paragraph a is not implemented in the Mount Bruce accordance with Agreement Ministers approval and the default is not remedied in accordance with clause 21 of the Mount Bruce Agreement to the subclause 3 submit detailed proposals in accordance with subclause 2 within 12 months of the Mount Bruce Agreement Minister notifying the Company as defined in the Mount Bruce Agreement of its failure to remedy the default. Company subject shall c For the purposes of this clause i ii the date of expiry of any period of postponement by paragraph a of this subclause shall be deemed to be the next third anniversary of the m.a. date; and contemplated the date of expiry of the 12 month period referred to in paragraph b of this subclause shall be deemed to be the next third anniversary of the m.a. date.. As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 149 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation Agreement EXECUTED as a

deed. SIGNED by the HONOURABLE COLIN JAMES BARNETT in the presence of [Signature]
[Signature] Signature of witness Stephen Bombardieri Name of witness THE COMMON SEAL of
HAMERSLEY IRONYANDI PTY. LIMITED ACN 009 181 793 was hereunto affixed by authority of
the Directors in the presence of [C.S.] [Signature] Director [Signature] Secretary Robert Paul
Shannon Helen Fernihough page 150 Version 01c005 Published on www.legislation.wa.gov.au As
at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Schedule 3 Second Variation
Agreement THE COMMON SEAL of HAMERSLEY IRON PTY. LIMITED ACN 004 558 276 was
hereunto affixed by authority of the Directors in the presence of [C.S.] [Signature] Director
[Signature] Secretary Robert Paul Shannon Helen Fernihough [Schedule 3 inserted No. 61 of 2011
s. 22.] As at 15 Dec 2011 Version 01c005 Published on www.legislation.wa.gov.au page 151 Iron
Ore Yandicoogina Agreement Act 1996 Notes 1 This is a compilation of the Iron Ore Yandicoogina
Agreement Act 1996 and includes the amendments made by the other written laws referred to in the
following table. The table also contains information about any reprint. Compilation table Short title
Number and year Assent Commencement 65 of 1996 11 Nov 1996 11 Nov 1996 see s. 2 Iron Ore
Yandicoogina Agreement Act 1996 Reprint 1 The Iron Ore Yandicoogina Agreement Act 1996 as at
7 May 2004 Iron Ore Agreements Legislation Amendment Act No. 2 2010 Pt. 6 Iron Ore
Agreements Legislation Amendment Act 2011 Pt. 6 10 Dec 2010 11 Dec 2010 see s. 2c 14 Dec
2011 15 Dec 2011 see s. 2b 61 of 2010 61 of 2011 page 152 Version 01c005 Published on
www.legislation.wa.gov.au As at 15 Dec 2011 Iron Ore Yandicoogina Agreement Act 1996 Defined
terms Defined terms [This is a list of terms defined and the provisions where they are defined. The
list is not part of the law.] Defined term Provisions Agreement
..... 3 the First Variation
Agreement 3 the Second Variation Agreement
..... 3 As at 15 Dec 2011 Version 01c005 Published on
www.legislation.wa.gov.au page 153 It PETROLEUM PRODUCTION LICENCE THIS
DEED IS MADE this 30th September 2020 between Honourable VickramBharrat the Minister of

Natural Resources being the Minister Responsible for Petroleum of the Cooperative Republic of Guyana hereinafter referred to as the Minister of the one part; And Esso Exploration and Production Guyana Limited a company incorporated in the Bahamas and registered in Guyana as an external company pursuant to the Companies Act 1991 with a registered office at 99 New Market Street Georgetown Guyana hereinafter referred to as Esso CNOOC Petroleum Guyana Limited a company incorporated in Barbados and registered in Guyana as an external company pursuant to the Companies Act 1991 with a registered office at 62 Hadfield And Cross Streets Werken Rust Georgetown Guyana and Hess Guyana Exploration Limited a company incorporated in Bermuda and registered in Guyana as an external company pursuant to the Companies Act 1991 with a registered office at 62 Hadfield And Cross Streets Werken Rust Georgetown Guyana all together hereinafter referred to as the Joint Venture Licensees or the Licensee as appropriate of the other part. WHEREAS pursuant to the Petroleum Exploration and Production Act No. 3 of 1986 hereinafter referred to as the Act and the Regulations made thereunder the Licensee has applied to the Minister for the grant of a Petroleum Production Licence in respect of the block or blocks constituting the production area described and identified in the Schedule hereto and shown on the map in the said Schedule; AND WHEREAS the area so described and identified in the License application for the grant of a Petroleum Production Licence includes parts which are also within the production area described and identified in a Petroleum Production Licence No. 9712017 dated 15th day of June 2017 Petroleum Production Licence granted to the Joint Venture Licensees Petroleum Production Licence Page 1 of 20 20200925 . I Y Stabroek Block Liza Production Area the Liza Production Area such parts of reservoirs being further described identified and shown on the map in the Schedule hereto the Cross Licence Reservoirs; AND WHEREAS Section 44 of the Act allows for the coordination of operations for the recovery of petroleum being carried on or to be carried on in a production area in which part of the reservoir is located with operations for the recovery of petroleum being carried on or to be carried on in any other area in which another part of the same reservoir is located; AND WHEREAS for the purpose of securing more effective recovery of petroleum from

such Cross Licence Reservoirs the Licensee desires to coordinate operations for the recovery of petroleum being carried on or to be carried on in the Payara Production Area with operations for the recovery of petroleum being carried on or to be carried on in the Liza Production Area; AND WHEREAS the Licensee has included with the said application the Licensees detailed proposals for the construction establishment and operation of certain facilities and services for and inental to the recovery processing storage and transportation of petroleum from the Payara Production Area and the Liza Production Area which proposals constitute the proposed Development Plan Payara Project document number GYPYBPFDP000001 Rev 1 dated 20 July 2020 as such plan may hereafter be amended from time to time with the approval of the Minister the Development Plan; AND WHEREAS after conducting due examination of the details and data contained in the Licensees said application for the grant of a Petroleum Production Licence over an area that includes the Cross Licence Reservoirs such details and data being in keeping with the provisions of the Act and the Regulations made thereunder and contained in the Payara Project Field Development Plan GYPYBPFDP000001 Rev 1 dated 20 July 2020 and in furtherance of the Government of the Cooperative Republic of Guyanas responsibility to prudently manage Guyanas petroleum resources for the benefit of all Guyanese present and future through the employmen international oilfield practices the Minister is satisfied that the Cr Reservoirs may be better developed in keeping with the said application for more fully set out and described in the Development Plan. Petroleum Production Licence Page I 2 of 20 20200925 ..f Jt4 AND WHEREAS by virtue of all the foregoing the said application by the Licensee for the grant of Petroleum Production Licence over an area that includes the Cross Licence Reservoirs is duly made pursuant to the Act and the Regulations made thereunder; AND WHEREAS the Minister has approved the Development Plan pursuant to the notice issued to Licensee dated 25 September 2020; NOW THEREFORE in exercise of the powers conferred upon the Minister by section 351 of the Act I Honourable Vickram Bharrat Minister of Natural Resources and the Minister Responsible for Petroleum do hereby grant to the Joint Venture Licensees for a period of twenty 20 years next after the date hereof this petroleum production licence the Licence in

respect of the block or blocks constituting the production area the Area described and identified and shown on the map in the Schedule hereto conferring on the Licensee subject to the said Act and the Regulations and conditions specified hereunder or to which the Licence is otherwise subject exclusive rights a to carry on prospecting and production operations in the production area; b to sell or otherwise dispose of petroleum recovered; and c to carry on such operations and execute such works in the production area as are necessary for or in connection with any matter referred to in paragraph a or b above. 2. This Petroleum Production Licence is granted subject to the following conditions a The Licensee shall give effect to the Petroleum Agreement entered into by the Licensee for a licence such Petroleum Agreement being executed on the 27th day of June 2016 and effective as of the 7th day of October 2016. b Subject to the Petroleum Agreement the Licensee shall supply petroleum or petroleum products to the extent specified by the Minister from time to time to meet the requirements of Guyana. Petroleum Production Licence Page 3 of 20 20200925 5lt.4 . . . c Subject to the Petroleum Agreement the Licensee shall comply with such orders as may be made by the Minister from time to time with respect to the refining disposal or sale of petroleum which may be recovered in the production area. d The Licensee shall before commencing any production operations in the said production area furnish to the Chief Inspector the name and address of the Manager resident in the locality of the said area under whose supervision such operations are to be carried on. Any notice which the Minister or any person authorised by him is in conformity with this Licence required or entitled to serve upon the Licensee shall be sufficiently served if the same shall be delivered or sent by post to such Manager at such address. e The Licensee shall not remove petroleum from the area from which it has been obtained to any other area or dispose of in any manner without the written consent of the Minister or the Chief Inspector. f Licensee Conditions i Any obligations which are to be observed and performed by the Licensee under this Licence shall be joint and several obligations. ii The Operator shall be Essa Exploration and Production Guyana Limited which Operator may only be changed by the Licensee to another party not comprising the Licensee as of the date of this Licence with the written consent of the Minister. g Unit Development

In respect of each petroleum reservoir in this Petroleum Production Licence where the recovery of petroleum is to occur and where part of such reservoir is included in the Payara licence area and part in the Liza licence area a Cross Licence Reservoir the Licensee shall carry out unit development petroleum operations for the development of such Cross Licence Reservoirs for the purposes of a securing more effective recovery of petroleum from such Cr Reservoirs; and b attaining the most efficient and beneficial management dev operation as a single consolidated reservoir for the preven the promotion of conservation and increasing the recovery of Petroleum Production Licence Page I 4 of 20 20200925 h Work Commitments i ii The Licensee shall adhere in all material respects to the Development Plan and the tenets thereof which shall constitute the Licensees work commitments for the licensed area. The Development Plan including all its modifications amendments replacements substitutions or conditions shall constitute an Attachment to this Licence and shall form part of the Licence. iii The Licensee shall not carry out any other development plan either in the licensed Area or elsewhere except with the consent in writing of the Minister or in accordance with the Development Plan which the Minister has approved. i Liza Deep i The Licensee shall conduct a study to evaluate appraisal and development planning options for Liza Deep as outlined in Appendix D of the Development Plan. Within thirty 30 days from the date of the Licence the Licensee shall submit the terms of reference of the study for the approval of the Minister. The report for the study will be due within nine 9 months from the approval date of the terms of reference. The Minister will review the report and dee to approve the report or grant the Licensee an additional six 6 months to resubmit a revised report for approval. Based on the final report and the Guyana Geology and Mines Commissions assessment of the findings in the final report along with any other related matters the Licensee and the Minister shall discuss and seek to reach agreement on such further designation in respect of Liza Deep as may be appropriate. G Additional Studies i The Licensee shall also conduct the studies outlined in Appe Development Plan. Within sixty 60 days from the date of th Licensee shall submit the terms of reference of such st approval of the Minister. The report for the studies will b Petroleum Production Licence Page I 5 of

20 20200925 twelve 12 months from the approval date of the terms of reference. The report related to such studies shall not be final until approved by the Minister taking into account whether the report meets the terms of reference and all related best practice technical standards. k Cost Estimates i Within ninety 90 days from the date of the Licence the Licensee shall submit reports in the format and degree of detail no less than that as set out in Schedules X1 Development Costs Estimates and X2 Operating Costs Estimates as follows a. Schedule X1 Development Cost Estimates for Payara; b. Schedule X2 Operating Cost Estimates for Payara; ii Within one hundred and eighty 180 days from the date of the Licence the Licensee shall submit a report in the format and degree of detail no less than that as set out in Schedule X2 Operating Costs Estimates as follows Schedule X2 Breakdown of Actual Operating Costs for the first year or such shorter period as has completed as of the date of the report of operation of Liza Phase 1; 1 Royalty The Licensee shall provide for the payment of royalties in accordance with i the Act the regulations made thereunder this Licence or such other applicable law as amended from time to time and ii the Petroleum Agreement as amended from time to time. m Measurements i The Licensee shall measure and weigh the measurements the volume quality and composition of all petroleum won and saved f subject to the License using the measurement appliances a in accordance with good international oilfield practices the Plan and as from time to time approved by the Minister. ti.4 . .

Petroleum Production Licence Page I 6 of 20 20200925 u.... t I o..... ii The Licensee shall provide to the Minister reasonable notice of the conducting of and an opportunity to attend the measurements or to have a representative attend on his behalf. iii The Licensee shall provide to the Minister reasonable and written notice and the opportunity to be present either in person or through a representatives when an equipment or appliance for measuring or weighing crude oil or gas is being calibrated recalibrated tested compared measured or weighed against a standard in accordance with good international oilfield practices and as approved in writing by the Minister; and any such calibration shall be in accordance with accepted methods and procedures previously approved in writing by the Minister. iv The Licensee shall not make any alteration in the method or

methods of the measurements used by him or in any equipment or appliances used for the purpose without the prior consent in writing of the Minister and the Minister may in any case require that no alteration shall be made save in the presence of a person authorised by him. The Licensee shall be responsible for the payment of such fees and expenses for tests and examinations of any measuring or weighing appliance tested or examined in such manner upon such occasions or at such intervals and by such means in any case as may be specified as directed by the Minister.

v n

Production Statement Conditions i ii The Licensee shall submit daily production statements to the Minister in respect of Stabroek Block production including such particulars as the Minister may from time to time direct. The production statements required to be submitted by the Licensee to the Minister in keeping with the Act Regulations and Petroleum Agreement shall include such other particulars as the Minister may from time to time direct. iii The Minister may serve notice in writing on the Licensee determining any iv other manner in which any quantity of petroleum or any qua form of petroleum is to be expressed in production stat manner to be in keeping with good international oilfield prac Production statements shall state separately in the case of in the form of gas the specific gravity of the petroleum and i Petroleum Production Licence Page I 7 of 20 20200925 4 . .

substantially different specific gravities has been won and saved the respective quantities of petroleum of each specific gravity. o Local and Participation i ii iii iv v Not less than sixty 60 days prior to the beginning of each year the Licensee shall submit to the Minister a yearly Local Plan which shall detail Licensees objectives utilisation levels activities and programs aimed at compliance with its obligations under the Petroleum Agreement applicable law and government policy. Following the submission of the plan the Contractor shall meet with the Minister to discuss and consider the effectiveness of the plan. Within twentyone 21 days of receipt from the Minister of any proposed modifications to the Local Plan the Licensee shall submit to the Minister a final Local Plan for approval inclusive of any agreed modifications. The Minister shall determine final approval of the Local Plan. The Licensee shall gather information on progress in achieving the objectives utilisation levels activities and programs described in their yearly Local Plan sufficient to inform halfyear and

endofyear Local Reports to the Minister. This information shall be retained by the Licensee in sufficient detail to facilitate verification for a period of five 5 years. The Licensee shall provide to the Minister at a minimum halfyear and endofyear Local Reports submitted within thirty 30 days of the end of each half calendar year detailing and quantifying its achievements in respect of the objectives utilisation levels activities and programs described in its yearly Local Plan. The Licensee shall permit an agent designated by the Minister to access records of the Licensee and its primary contractors for the purpose of assessment and verification of the information provided in Licensees Local Plans and Local Reports. The Licensee shall include the necessary provisions in contractual arrangements with primary contractors to enable such assessment and verification by the Min1iJ i;.Qt..... hisher agent. ofif tIATuThe Licensee shall identify all opportunities available for loc J9 e the fabrication requirements of the Payara Development e subsurface facilities and supporting services. The Licensee t Petroleum Production Licence Page I 8 of 20 20200925 . .J 4 g components of fabrication that can be performed using local and detail plans for the Licensee to develop the capacity for such local . p Health Safety and the Environment i ii The Licensee shall abide by the Environmental Protection Act 1996 Regulations made thereunder and the terms and conditions of the Environmental Permit issued by the Environmental Protection Agency Reference No. 20181204PPOIX and dated 24 September 2020. The Licensee shall abide by Occupational Health and Safety Act 1997 Regulations made thereunder and all applicable laws and regulations of Guyana relating to occupational health and safety in effect from time to time as amended enacted and augmented. iii The Licensee shall at all times maintain adequate expert personnel and equipment to prevent and or respond to any spillage of petroleum into the marine environment. iv The Licensee shall ensure that standards in keeping with the laws and regulations of Guyana and good international oilfield practices are implemented upgraded from time to time and continuously adhered to so as to ensure the safety of all personnel and ensure the protection of the marine environment. q Dispersants i Within ninety 90 days from the date of the Licence the Licensee shall provide a report calculating the appropriate volume of dispersants sufficient for immediate

deployment for any Tier 3 event. The report shall not be deemed final until approved by the Minister. Thereafter the Licensee shall maintain throughout the Licence term such volume of dispersants and the required deployment equipment so as to sufficiently and effectively deal with any Tier 3 event. ii r Capping Stack i The Licensee shall maintain access to one or more subscription necessary to allow mobilization of a Capping Stack to the Pa Petroleum Production Licence Page I 9 of 20 20200925 V.TU . ii iii iv v vi I location within five 5 days or less of an uncontrolled well event consistent with the Capping Stack Report. Within thirty 30 days of the date of the Environmental Permit the Licensee shall submit to the Minister and EPA for approval terms of reference for a study detailing the implementation of a system that allows for deployment of a Capping Stack and Debris Removal Systems within three 3 days and four 4 days of an uncontrolled well event including the costs timing feasibility and benefits of implementing each such system. The Licensee shall within three 3 months of the date of Licence supplement its incountry First Response Toolkit to include all elements of the Essential First Response Toolkit as outlined in the Capping Stack Report excluding those elements requiring longer manufacturing times or otherwise not readily available. Such longerlead elements will be identified within thirty 30 days of the date of the Licence and shall be promptly completed and delivered to Guyana but in no event shall delivery be later than nine 9 months from the date of the Licence. Within one hundred and eighty 180 days of the date of the Ministers approval of the terms of reference the Licensee shall complete the studys final report. During the pendency of the study the Licensee shall meet with the Minister andor his representatives no less than every thirty 30 days or more frequently on request to provide an update on the progress of the study discuss the issues raised by the study and come to agreement on resolution of issues andor concerns regarding the study. Thirty 30 days before completion of the study the Licensee will issue a draft final report to enable the Minister to input into the final report. The final report shall not be deemed final until approved by the Minister takine into account whP.thP.r thP. rP.port mP.P.ts the terms of reforenr.e and all related best practice technical standards. s Flaring i Routine flaring of gas by the Licensee is strictly prohibi approval. Flaring is only permissible under the following c defined in the Licensees

Commissioning and Startup the Licensee shall not exceed sixty 60 days of flaring during Startup; and Special Circumstances including i Emergencies; ii Maintenance; and iii Restart or as allowed under the Environmental Permit or approved by the Environmental Protection Agency. ii Flaring to maintain oil production should any part of the gas handling system have failed will not be permitted save and except where approval has been obtained to flare from the Environmental Protection Agency. iii Within thirty 30 days of the date of Licence the Licensee shall submit to the Minister for approval terms of reference for such study that will show in detail how the objective described above will be achieved whilst maintaining to the extent practical currently predicted project production profiles. v iv During the pendency of the study the Licensee shall meet with the Minister and or his representatives no less than every thirty 30 days or more frequently on request to provide an update on the progress of the study discuss the issues raised by the study and come to agreement on resolution of issues and or concerns regarding the study. Thirty 30 days before completion of the study the Licensee will issue a draft final report to enable the Minister to input into the final report. Within one hundred and eighty 180 days of the date of approval of the terms of reference the Licensee shall submit the studys final report to the Minister. The final report shall not be deemed final until approved by the Minister. vi The Licensee shall report to the Minister within twentyfour 24 hours all inences of gas flaring whether within or without the parameters set forth herein and the reasons for such flaring. vii The Licensee shall pay all fines imposed in respect of flaring in violation of the Environmental Permit Petroleum Production Licence Page | 11 of 20 20200925 1U4 J ;; . .

l..... a. bylaw; b. by the EPA; and c. in accordance with the terms of a framework to be established by the Minister to compensate the Government. The fine shall be calculated by applying the Governments profit gas and royalty percentage share for a given month to the flared volumes multiplied by the lower of the following i the Inside FERC Henry Hub Index price as published by Platts each month or ii the sales price agreed for gas from the Stabroek block such price netted for the cost of pipeline transportation to shore per thousand standard cubic feet of gas. t Produced

Water i The Licensee shall update its base design for the Project to include i tie in points and ii space for produced water injection equipment. ii Within thirty 30 days of the date of Environmental Permit the Licensee shall submit to the Minister and EPA for approval terms of reference for a study detailing a. the costs benefits and feasibility of implementing a system for the re injection of produced water save and except in defined unavoidable situations as the primary disposal method; and b. the minimization of the effects of discharging produced water into the ocean in keeping with accepted international standards. Within one hundred and eighty 180 days of the date of the Ministers approval of the terms of reference the Licensee shall complete the studys final report. iii During the pendency of the study the Licensee shall meet with the Minister and or his representatives no less than every thirty 30 days or more frequently on request to provide an update on the progress of the study discuss the issues raised by the study and come to agreement on resolution of issues and or concerns regarding the study. iv Thirty 30 days before completion of the study the Licens draft final report to enable the Minister to provide input report. The final report shall not be deemed final until ap Petroleum Production Licence Page I 12 of 20 20200925 otu. 1...;c G Minister taking into account whether the report meets the terms of reference and all related best practice technical standards. u Formation Integrity i ii Except for periods where fracture tests are conducted on injection wells to estimate formation fracture pressures injection well pressures must be targeted to operate at least fifty 50 psi below the most recently estimated formation fracture pressure as periodically estimated through injection tests or other surveillance techniques. The Licensee shall within ninety 90 Days of the date of the Licence provide a plan to conduct the fracture tests and to implement this in its operations. iii The plan shall not be deemed final until approved by the Minister taking into account whether the report meets the terms of reference and all related best practice technical standards. v Block Seismic Activity i Licensee shall complete an analysis of natural seismic activity and magnitude from events such as earthquakes volcanoes etc. The analysis must consider the potential impact of the injection of fluids on such activities. ii Within thirty 30 days from the date of the Licence the Licensee will propose for approval by the Minister terms of

reference for a study to investigate and analyse seismic activity including events such as earthquakes volcanoes etc. such study to include the potential contributory impact of the injection of fluids on the triggering of such P.VP.nts. Snrh stncly shall also inrlule assessments of geology engineering environment cost and economics. iii Within one hundred and eighty days 180 days of the approval of the terms of reference the Licensee will complete the studys final report. iv During the execution of the study the Licensee will meet with the 1.a.... andor his representatives at least once in each thirty 30 da more frequently as requested to provide an update on the p study discuss the issues raised by the study and come to a resolution of issues and or concerns regarding the study. Petroleum Production Licence Page I 13 of 20 20200925 5 v Thirty 30 days before completion of the study the Licensee will issue a draft final report to enable the Minister to input into the final report. The report shall not be deemed final until approved by the Minister taking into account whether the report meets the terms of reference and all related best practice technical standards. w Abandonment Agreement Programme; Decommissioning Security i Within thirty 30 days of the date of the Licence the Minister and or his representatives and the Licensee shall meet to discuss and determine the key principles to be addressed in the Stabroek Block Decommissioning Security Agreement. ii Within thirty 30 days from the conclusion of the discussions described in subparagraph i above the Licensee shall submit to the Minister for review and further development a draft Stabroek Block Decommissioning Security Agreement such draft to contemplate timely posting of security for anticipated decommissioning costs following the methodology and approach contained in the United Kingdom Industry Model Form Decommissioning Security Agreement NonPRT October 2015 or consistent with other similar international best practice standards. iii Within thirty 30 days of the Minister providing comments on the draft Stabroek Block Decommissioning Security Agreement the Licensee and the Minister and or his representatives shall meet for further discussions such discussions to be had through meetings which may include a workshop discussion forum. iv Within nine 9 months of the date of completion of the further discussions the Joint Venture Licensees shall use reasonable commercial efforts to

agree and no later than 31st March 2022 shall agree on a final version of the Stabroek Block Decommissioning Security Agreement which shall contemplate timely posting of security for anticipated decommissioning costs the methodology and approach contained in United Kingdom Industry Model Form Decommissyi ... Security Agreement NonPRT October 2015 or consistent. similar international best practice standards and they will later than the said 31st March 2022 the mutually accepta t . Block Decommissioning Security Agreement to the Minister io . 4. . . . following . Petroleum Production Licence Page I 14 of 20 20200925 U C . . . t 5 prior to signing by the Joint Venture Licensees and the Agreement shall be signed by the Licensees no later than twenty 21 days after the Minister indicates completion of his review. x Licence Transfer i ii This Licence shall not be transferred without the written consent of the Minister. Further the Licensee shall furnish all details of any proposed transfer at the time of making the application for the transfer. The Licensee may apply to the Minister for the transfer of this Licence in accordance with requirements set forth by the Minister by the Act by Regulation and the Petroleum Agreement and shall fulfill any other financial obligations andor requirements under the laws of Guyana. iii The Licensee shall in a timely manner submit all documentation and make available such information as the Minister shall reasonably require to enable the Minister to dispose of the application. iv The Minister may refuse the application for the transfer of this Licence if in his opinion the person to whom the Licence is proposed to be transferred does not meet the same qualifications and capability to do the work as the Licensee if there has been a failure or refusal to furnish documents and information as requested or for such other reason as the Minister shall determine. v Where the Minister approves the transfer of this License the person to whom the Licence is transferred the Transferee shall be required to comply with the provisions of the Act Regulations this Licence the Petroleum Agreement the Development Plan and any other instrument to which this Licence may be subject as though the Transferee was the original Licensee. y Insurance Licensee shall effect at all times during the term of this Licence insurance as required by and in accordance with Article 20.3 of the Petroleum Agree Petroleum Production Licence Page I 15 of 20 20200925 z Duties of the Licensee i ii The Licensee

undertakes to and shall carry out all activities under this Licence in compliance with the provisions of the Act Regulations this Licence the Petroleum Agreement the Development Plan any other law and or instrument and or agreement with the Government to which this Licence may be subject as may be amended enacted or modified from time to time and in keeping with good international oilfield practice. The Licensee may with the written approval of the Minister amend the Development Plan with respect to work and expenditure contained in the Development Plan but the amendment shall not have effect so as to reduce any minimum requirements.

aa Independent Audit i The Licensee shall facilitate and fully cooperate with annual audits of Safety Critical Drilling and Production Operations including waste management and compliance conducted by the Chief Inspector pursuant to Section 61 of the Act. ii Within thirty 30 days of this Licence and annually on such date thereafter for a total of five 5 consecutive years the Licensee shall pay to an account held and controlled by the Government the amount of four hundred thousand USD USD400000.00 to be used by the Government for procurement of third party auditors to supplement the Chief Inspectors resources and develop institutional capacity for the ongoing conduct of audits under this paragraph. The Licensee shall verify such account and the Minister agrees to cooperate assist and provide the Licensee any information it requires to conduct such verification. iii The first such audit shall be targeted to conduct an assessment for calendar year 2020 and shall be conducted annually thereafter. iv The Licensee shall meet with the Chief Inspector at his request to ensure any issues concerns andor recommendations arising out of the aud complied with and or addressed in a manner satisfactory to the i as being in keeping with good international oilfield practices.

f 6 . 1 Petroleum Production Licence Page I 16 of 20 r.. u tq . r 4 0. ... 20200925 Z. ;. i. bb Reserves Reporting ii i Within twelve 12 months the Licensee shall submit to the Minister the necessary data and information in the Licensees possession required for the Government to utilize in its own PRMS. The Minister shall request more data or information to support such effort as he deems necessary. The Licensee agrees to cooperate with the Chief Inspector andor the Chief Inspectors procured reserves assessor in developing the Governments independent assessment of reserves. This

cooperation shall include providing reasonable access to the required petroleum data in the Licensees possession necessary to the Chief Inspector and/or the Chief Inspectors procured reserves assessors evaluation and/or reports. iii The Licensee shall no less frequently than biannually review its development planning activities with the Minister. cc Legal Conditions i ii iii iv v vi The Licensee shall comply with the terms of the Petroleum Agreement in all material respects; The Licensee shall comply with all lawful orders and decisions of the Minister and such other officers and functionaries of the Government with applicable authority; This Licence and all activities of the Licensee are subject to the laws and regulations of the Cooperative Republic of Guyana in force at any given time. Accordingly the Licence does not limit the general right of the state to impose taxes nor the authority of the state to propose general provisions in respect of specific aspects of petroleum activities. The Licence does not exempt the Licensee from obtaining other licences permits and approvals which are necessary according to the Act or other applicable laws. The Licensee shall abide by all applicable laws and regulations of the Cooperative Republic of Guyana. This Licence and its conditions shall be interpreted and applied .. 1il it..q manner that is consistent with and gives effect to the terms and of the Petroleum Agreement. Petroleum Production Licence Page I 17 of 20 20200925 Q0 . V VI 0 C ; i o . l .. . oc.. t 3. 1 The Licensee shall pay to the Government within the period specified therefor by the Chief Inspector royalty in respect of petroleum obtained by him in the production area to which this Licence relates at the rate of two 2 per centum of the production won and saved from the production area or where arrangements are made in the Petroleum Agreement for payment of royalty in kind wholly or in part by making such payment and or deliveries in accordance with aforesaid arrangements. 2 Subject to the provisions of the Petroleum Agreement all petroleum that is proved to the satisfaction of the Minister to have been used by the Licensee within the production area for fuel or transportation in petroleum operations shall be free of royalty. 4. The annual licence rental charge referenced in Article 10 of the Petroleum Agreement includes and satisfies the rental charge payable in respect of the production area to which this Licence relates. 5. Unless the context otherwise requires the terms and expressions used

in this Licence shall have the same meaning as in the Act and Regulations and if not therein defined in the Petroleum Agreement. [Remainder of Page Intentionally Blank] Petroleum Production Licence

Page I 18 of 20 20200925 IN WITNESS WHEREOF I Honourable Vickram Bharrat Minister of Natural Resources and the Minister Responsible for Petroleum have granted this Licence and set my hand and affixed the seal and the Licensee has set his hand and seal the day month and year first herein above written. Signed by Witnesses The Minister Responsible for Petroleum Representing the Government of the Cooperative Republic of Guyana

Honourable.Vic Minister of Natural Minister Responsi Name Joa a E. Simmons Ministry of Natural Resources 11 w Jv 20.f.J. Name Paul R. Wills Esso Exploration and Production Guyana Limited Signed By Witnesses Esso Exploration and Production Guyana Limited ;

..... . Designation President 1 Name Joanna E. Simmons Ministry of Natural Resources fJJ fl wJI 2 u.i.. . .fame Paul R. Wills . . 0E Exploration and Production GuyanaA 9.. ; ooHeo rl;. .. oTAR Amited r 1 r .f. Puaue i . e S ;;1f IJVA.;IY Petroleum PrcrcttfcUon Licence Page I 19 of 20 20200925 Signed By Witnesses CNOOC Petroleum Guyana Limited d.t.1J.II.... . . Name Anand Gohil Designat ...

ed Signatory Q ;o ; .7 Name Joann E. Simmons Ministry of Natural Resources 2 t. .. n .. 1.JJ.. .. . Name Paul R. Wills Esso Exploration and Production Guyana Limited Signed By Witnesses Hess Guyana Exploration Limited Ministry of Natural Resources f lwJI 21. Name Paul R. Wills Esso Exploration and Production Guyana Limited Petroleum Production Licence Page I 20 of 20 20200925 SCHEDULE Description and map of the block or blocks in the production area Identification of the block or blocks within the production area P.TU . .

ii 0 C SCHEDULE DESCRIPTION OF PAYARA PETROLEUM PRODUCTION LICENCE AREA Description of area to be granted under Petroleum Production Licence pursuant to the Petroleum Exploration and Production Act. No. 3 of 1986 The area comprises approximately 279.6 square kilometers described herein consisting of graticular blocks identified herein and shown on Block Reference Map attached. Latitude and Longitude Measurements are North and West respectively.

Point No. Latitude 1 2 3 4 8 09 58.52448 N 8 20 27.49200 N 8 20 27.47700 N 8 14 00.62628 N

Longitude 057 01 4948284 w 057 03 39.04200 w 056 55 01.67100 w 056 52 03.35892 w

SCHEDULE DESCRIPTION OF PAYARA PETROLEUM PRODUCTION LICENCE AREA Cont. The

following five 5 by five 5 minute square graticular blocks describe the area. These blocks are shown

on the block reference map attached. BlockK BlockL 85 86 97 98 109 110 denotes part block p.TU

.JJ ;; 0 C ANNEXB MAP OF CONTRACT AREA STABROEK BLOCK PAYARA

PRODUCTION AREA 59350N W250W 59150W 5150W 5850V SitlOW S8150VI 58250W S0150.

5fl5V S7550Vo 57 s01 51 350II 572svw 57 150Y 57UW 5955IIW 59450W 5SI 50W .620W 5e150W

5flSOY Coordinate Reference System ms 1984Un.1Zone21N Proectlon TransverseMercator Fal

seEastllg 500000.0 FalseNorthing 0.0 CentralMeridian .S7.0 ScaleFactor 0.9996 Latitude010righn O

O Linear Unit Meler 1.0 Datum OYVGS1984 Prime Meridian Greenwich 0.0 10WN OVN 500N 250N

I Stabroek Block I .. 2.. I Kilometers 50 25 3 t J6 .lv .. ; . 11 a NON .. r svN r... r35VN N Jr.

rOON r2SON 150N 1000N ISVN ii S 40N 91 .. 7 500N 5a50 SOW 51 150W SQSOW 58550W

58450W 58ISOW SI250W 581SOW 58SOW 5755rw 5745VW Sr36VW 572Sr.tW SF ISDW 51 51rW

565SOW 58 450W 583SON se2SOW 5815GVI SCHEDULE CROSS LICENCE RESERVOIRS THE

PARTS OF RESERVOIRS WITHIN THE PAYARA PETROLEUM PRODUCTION LICENCE AREA

AND ALSO WITHIN THE PRODUCTION AREA DESCRIBED AND IDENTIFIED IN AND SUBJECT

TO PETROLEUM PRODUCTION LICENCE NO. 9712017 DATED 15TH JUNE 2017 THE LIZA

PRODUCTION LICENCE GRANTED FOR THE STABROEK BLOCK LIZA PRODUCTION AREA

THE LIZA PRODUCTION AREA the CROSS LICENCE RESERVOIRS SHOWN HERE ARE

ILLUSTRATIVE AND THE RESERVOIR BOUNDARIES ARE NOT DEFINITIVE. CJPayara PL Area

. Liu NOC Laa Filld NOC 4 a.a nclldel PayaraFOP SooMm ex9111 or Lila fIDC are soma

Legend Payara. Pacora. and Liza Deep Reservoirs Liza Field UC I .. I SCHEDULE CROSS

LICENCE RESERVOIRS THE PARTS OF RESERVOIRS WITHIN THE PAYARA PETROLEUM

PRODUCTION LICENCE AREA AND ALSO WITHIN THE PRODUCTION AREA DESCRIBED AND

IDENTIFIED IN AND SUBJECT TO PETROLEUM PRODUCTION LICENCE NO. 9712017 DATED

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CROSS LICENCE RESERVOIRS SHOWN HERE ARE ILLUSTRATIVE AND THE RESERVOIR BOUNDARIES ARE NOT DEFINITIVE Cont. I cJPayara PL Arta I 1 Legend Payara Pacora and Liza Deep Reservoirs Liza Field I I f SCHEDULE XI Development Cost Estimates X2 Operating Cost Estimates X1 DEVELOPMENT COST ESTIMATES FEED PreFID SURF FEED FPSOFEED Offshore Campaign Geotech EBS Sampling Drill String Removal Subproject Costs FPSO and SURF FPSO EPC1 FPSO Purchase Start of Yr 2 Hull Marine Vessel Tanker Marine Systems Riser Balcony Mooring Porch Moorings Fluid Offloading Lines Engineering Project Management Construction Management Topsides Bulks Material Equipment Fabrication Yard Integration and Commissioning Engineering Project Management Construction Management OtherEPC FPSO Transportation FPSO Offshore Installation Mobilization Demobilization Offshore Hookup and Commissioning Contractor Other Contingency Risk Overhead Insurance Construction Financing Bank Guarantee FPSO 1yr Lease Debt Financing FPSO Lump Sum Payments FPSO CAPEX Spend Provisional Sums Allowances Options Contractor PreSU Ops RFO Contract SURF Subsea Systems EPC2 Goods Lump Sum Costs Subsea Tree System Equipment Production Tree System Injection Tree System Smart Gas Injection Tree System Tree and THS Handling and Installation Tools Tree System ROV Tools ROVBased Workover Control System Manifold Systems Production Manifold System including Foundation Water Alternating Gas Manifold System Foundation including Manifold System ROV Tools Manifold Installation Tooling i; u lli XI DEVELOPMENT COST Well Jumpers Production Well Jumpers Water Injection Well Jumpers Gas Injection Well Jumpers Well Jumper Tools Flowline Jumper Connectors and FLET PLET Equipment Production Flowline Jumpers Gas Injection Pipeline Jumpers Water Injection Pipeline Jumpers FlowlinePipeline Jumper Tools FlowlinePipeline Structure Items FlowlinePipeline Structure Tools Subsea Controls System Tree Controls Manifold Controls Topside Controls Umbilical Termination Assemblies Subsea Distribution Units Flying Leeds Controls System Tools Services Estimate Lump Sum SRTs in Guyana Reimbursable Estimate Field Support Services Offshore Installation HUC SU Assist EPC4 Offshore HUC Support Guyana Base Facility Fee Other Costs Provisional Sums

Allowances Options Risers Flowlines EPC3 Goods Goods Lump Sum Costs 12 10 Production System Prod Jumpers Flowlines ITAs and FLETs Risers Riser Flowline seamless line pipe Wet Insulation coating 12 Gas Injection System GI Jumper Flowlines FLET Riser Riser Flowline seamless line pipe Water Injection System WI 12 Jumpers 16 Flowline FLETs 12 Risers Riser Flowline seamless line pipe Early Works Contract PMT Engineering Other Costs Provisional Sums Allowances Optio p. TU R4 Flexible Flowlines EPC4 ftO . VI .to . 0 I C .r f .. ; . XI DEVELOPMENT CO Goods Lump Sum Costs Flexible Risers Risers Ancillaries Itube extensions FES bend stiffener connector bend restrictors etc. Subsea Mating Flanges Buoyancy Modules Lazy Wave Lump Sum Storage 3 Months Equipment for Loadout Sheathing Repair Kits Other Costs Provisional Sums Allowances Options UmbilicalEngrMFP01 Lump Sum Costs Dynamic Umbilicals Detailed Engineering QualificationVerification Testing Procurement Fabrication Construction Testing Including equipment Spares and Consumables Infield Static Umbilicals Detailed Engineering QualificationVerification Testing if applicable Procurement Fabrication Construction Testing Including equipment Spares and Consumables Reel Rental for 20 days 2 off 114m reel 4 off 9.2 mobdemob upon return Spreader Bar Rigging Rental for 20 days 2 off spreader bars 4 off sets of rigging and mobdemob upon return Other Costs Provisional Sums Allowances Options Riser Hangoff System FleJoints P03 Lump Sum Costs Other Costs Provisional Sums Allowances Options LLI Large Bore Valves P05 Lump Sum Costs Other Costs Provisional Sums Allowances Options SURF Tieback Installation Services EPC3 Services Lump Sum Costs 1210 Production System Prod Jumpers Flowlines ITAs and FLETs Risers Riser Flowline seamless line pipe Wet insulation coating 12 Gas Injection System GI Jumper Flow lines FLET Riser Riser Flowline seamless line pipe Water Injection System WI 12 Jumpers 16 Flowline FLETs 12 Risers Riser Flowline seamless line pipe Subsea TI Manifolds SDU UTA Piles Flying Leads Umbilicals Well Jumpers Other Costs Provisional Sums Allowances Options Logistics Marine Aviation Shorebase Warehouse Services Offshore Facilities Fuel Waste Management Services Projects Berth Hanger Digital Infrastructure Down Hole Fiber Optic DFHO Interrogators PO6 Halliburton Fiber Optic Cable to Liza Ph2 hub DHFO Wells

EquipQua. DHFO Wells Equipment Qualification Digital Strategies Growth Allowance Owners Cost
PMT PMT NonPMT 3P WO for FPSO 3P WO for SURF EM PreSU Ops SSHE 3rd Party 3rd Party
Inspection Vessel Management Team Third Party Miscellaneous Affiliate Support Intercompany
EEPGL allocation CAR Insurance SURF only Subsea Chemicals 1st Fills Project Risk Allowance
Development Drilling Costs XI DEVELOPMENT COM X2 OPERATING COST ESTIMATES Total
Operations Operations Labour EMExpat EM National SBMExpat SBM National Other 3P Contractor
NonLabour Operating Costs EM Engineering Support Materials Topside Subsea Chemicals
Chemicals Rental Equipment Personnel Insurance Contingency Maintenance Repair Inspection
Labour EMExpat EM National SBMExpat SBM National NonLabour Maintenance Repair Inspection
EM SURF Maintenance Repair and Inspection SBM 3P Contracts Materials Other Maintenance
Repair Inspection Contingency Logistics Logistics Operations Expat Logistics Operations National
Marine Support AHTS Marine Support MPV Marine Supply Vessel PSV Marine Supply Vessel PSV
Marine Fuel Helicopter Fixed Wing Shorebase and Warehouse Ops Waste Management Other
Logistics Contingency Well Work Asphaltene scale remediation Well intervention workovers
Reservoir data acquisition PVT tracer etc. Contingency Cost Above Field Affiliate Technical Support
Subsurface Ops Team Surface Technical Ops Team Operations Management NonOperations
Management Global Technical Support Maintenance Reliability Integrity Support Reservoir and
Geoscience Support ..R4 0 tJ ... LJJ .. J 0 C ;o X2 OPERATING COSTE . Affiliate Business Support
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Exhibit 10.1[CHEVRON LOGO] North America Upstream Gulf of Mexico Land Division 935 Gravier
Street New Orleans LA 70112 Tel 5045926751 Fax 5045927110September 5 2007Ridgewood
Energy Corporation Marlin Coastal L.L.C.11700 Old Katy Road 3861 Ambassador Caffery
ParkwaySuite 280 Suite 600Houston TX 77079 Lafayette LA 70503Attention Mr. W. Greg Tabor
Attention Mike LipariHelis Oil and Gas Company LLC Houston Energy L.P.228 St. Charles Ave.

1415 Louisiana Street Suite 912 Suite 2400 New Orleans LA 70130 Houston TX 77002 Attention
Doug St. Clair Attention Allen White Participation Agreement El Toro Prospect West Cameron Block
57 OCSG 21534 No. 3 Offshore Gulf of Mexico Gentlemen This Participation Agreement PA when
executed by each of the Parties hereto being Chevron Midcontinent L.P. formerly named Pure
Resources L.P. Pure Marlin Coastal L.L.C. Marlin Helis Oil and Gas Company LLC Helis Houston
Energy L.P. Houston Energy hereinafter Pure Marlin Helis and Houston Energy being referred as the
Coowners and Ridgewood Energy Corporation Ridgewood all inclusive parties sometimes
hereinafter referred to as the Parties will evidence the agreement between the Parties to
explore develop and operate certain rights in the Contract Area as defined below. The Parties hereby
agree to the following terms and conditions 1. CONTRACT AREA. The Contract Area is the
leasehold acreage that covers the following described property West Cameron Block 57 OCSG
21534 as said lease covers depths from the surface of the earth down to the base of the Cris R2
sand at a depth of 15500 vertical subsea or to the base of the stratigraphic equivalent of the Cris R2
sand as seen in the Stone West Cameron Block 45 OCS 299 20 By Pass 1 whichever is the deeper
but limited to the following acreage aliquots hereinafter referred to as the Contract Area. Page 1 of
16 Ridgewood El Toro PA September 5 2007

It is the intent of the Parties that the Contract Area shall be divided into four equal parts as follows: N2 NW4 SW4; S2 SW4 NW4; NE4 SW4 NW4; SW4 SE4 NW4; SW4 NW4 NE4; S2 NE4 NW4; SE4 NW4 NW4; N2 SE4 NW4; The Coowners leasehold and that certain Joint Operating Agreement between IPPetroleum Company Inc. as Operator and The William G. Helis Company L.L.C. et al as NonOperators covering West Cameron Area Block 57 dated July 12 2000 OA attached hereto as Exhibit B being both the Coowners leasehold and the OA interest in the Contract Area to the best of our information and belief is set out as shown in Exhibit A attached hereto and the Contract Area is hereinafter referred to as the El Toro Prospect. The division of interest in Exhibit A shall control in any conflict between this agreement and Exhibit A. The Working Interest w Leverage Percentage column as shown under the Division of Interest on said Exhibit A sets forth the promoted interest to be borne by Ridgewood and the leveraged interests to be borne by the Coowners as described in the rights and obligations

of Article 3 and Article 4 herein below. It is stipulated by all Parties that the interest of Houston Energy in the El Toro Prospect has been committed to and assumed by the parties such that Houston Energy will be deemed to participate in the exploration of such prospect through the delivery of its interest in such prospect and in the Contract Area to the Parties for its Working Interest After Leverage Percentage rights and interests but will not participate in and will not be obligated for the costs or risk of the well for the El Toro Prospect until Ridgewood has earned an interest in the Contract Area pursuant to this PA and the Working Interest After Leverage Percentages apply. In the event this PA terminates without an earning or Ridgewood does not earn and this PA expires the Co-owners' interests in the Contract Area will revert to the OA working interests shown on Exhibit A. The Working Interest After Leverage Percentage column shown under the Division of Interest on said Exhibit A sets forth the interest of the Parties in the well and the Contract Area once and if Ridgewood has earned an interest in the Contract Area pursuant to this PA. Subject to Article 6 herein below, Ridgewood shall be provided access to land records and files at the offices of Pure or Marlin during business hours for its own independent review of the title materials related to the interest of the Co-owners and to any unrestricted geologic and geophysical data for its own independent review and analysis. Ridgewood may withdraw from this PA for material title defects which cannot be timely cured or which Co-owners decline to cure at any time prior to Marlin accepting a turnkey bid proposal from Applied Drilling Technology Inc. ADTI for the drilling of the well contemplated hereunder. Any Ridgewood withdrawal shall terminate this Agreement as to and among all Co-owners. Ridgewood shall supply each of the Co-owners a copy free of cost to the Co-owners of any Contract Area title analysis conducted by Ridgewood. Page 2 of 16 Ridgewood El Toro PA September 5 2007

2. INITIAL WELL AND OBJECTIVE. Subject to the other terms hereof as well as weather delays delivery of materials e.g. pipe rig availability and obtaining all requisite permits Marlin as the designated drilling operator shall use reasonable businesslike efforts to commence or cause to be commenced on or before November 1 2007 the drilling of the West Cameron Block 57 OCSG 21534 No. 3 well hereinafter sometimes referred to as the Initial Well.

Except as otherwise provided herein and after execution of this PA the Parties hereby obligate themselves to participate in or support in the case of Houston Energy the drilling of the Initial Well for the exploration and production of oil and gas according to the terms and conditions of this PA. The Initial Well will be drilled and logged with due diligence and in accordance with good oilfield practice as per the final executed and approved Marlin Authority for Expenditure AFE and well plan as attached hereto as Exhibit C within the Contract Area on West Cameron Block 57 OCSG 21534. The Initial Well will be drilled and logged at a surface and bottomhole location 6215 FNL and 2684 FWL at the target location of LAS NAD27 State Plane Coordinates X1290829 Y358059 of West Cameron Area Block 57 to a depth of 15500 vertical subsea or the base of the stratigraphic equivalent of the CrisR2 sand formation where this sand top is expected to occur between 14600 and 14900 vertical subsea elevation as seen in the Stone West Cameron Block 45 OCS299 20 ByPassI whichever depth is lesser hereinafter referred to as the Objective. Until that time the Initial Well has reached the Objective and all logging testing and evaluation contemplated in the AFE has been completed and a recommendation has been made by Marlin Ridgewood does not have the right to propose any operation but will hold a voting rights interest for its Working Interest w Leverage Percentage in operations proposed by others. Upon reaching the Objective and when all logging testing and evaluation contemplated in the AFE has been completed and a recommendation has been made by Marlin any recommendation or proposals by the Parties will be subject to all appropriate terms and conditions of the OA regarding subsequent operations priority of operations voting rights and penalties. After earning Ridgewood will become a rights holder under the OA for its Working Interest After Leverage Percentage and operations conducted after that earning shall be subject to the OA provisions including nonconsent voting rights and penalty. For any Party including Ridgewood electing not to participate in any proposed operation after reaching the Objective and completion of all logging testing and evaluation its Working Interest After Leverage Percentage will be subject to the OA penalty for any exploratory well and its working interest only after satisfaction of the OAs nonconsent conditions and penalties will be that as set out in Exhibit A of this PA Division

of Interest in the column labeled Working Interest After Leverage Percentage. Unless otherwise agreed by the Parties each Party electing to participate in the operation after reaching the Objective may but is not obligated to elect to participate in any operations and bear that portion of the costs and risks attributable to the interests of the Nonparticipating Party in the ratio that the Participating Party's interest listed in the column labeled Working Interest After Leverage Percentage in Exhibit A bears to the total interest of all participating Parties under the same column. Such nonconsent operation shall not proceed unless 100 of the costs and risks of that operation are assumed by the participating Parties and any penalty recoupment shall inure only to the participating Parties in proportion to its or their participation. As between the Parties the Initial Well is proposed as an exploratory well as to financial penalties of the Contract Area during any recoupment period Page 3 of 16 Ridgewood El Toro PA September 5 2007It;PAGEgt; and is to be drilled and logged pursuant to the terms and conditions of the AFE and OA. Such limited rights grant is not intended to vest ownership in the Contract Area in Ridgewood until such vesting of ownership to Ridgewood is earned as set out in Article 5 below. Upon earning an interest in the Contract Area pursuant to this PA Ridgewood agrees to adopt and ratify the OA effective as of the date of earning. The terms and provisions of the OA are incorporated herein as if set forth in full are not by that incorporation intended to create any operating rights area in which Ridgewood owns an interest in the Contract Area and apply prior to any earning by Ridgewood but solely to recognize the rights privileges and protections of Marlin as the drilling operator and each of the non operating Coowners and for preearning notices and election periods and access by Ridgewood to the rig floor but not otherwise.3. PROSPECT WELL COST SHARING. Marlin has proposed and each of the Coowners and Ridgewood have approved and agreed to participate for a share of the costs for or support in the case of Houston Energy the drilling and logging of the Initial Well in the Contract Area as set forth in the attached Exhibit C AFE. By executing this PA and obligating itself to participate in the Initial Well Ridgewood holds the right to earn 33.4917 of 100 working interest of the Coowners interest in the Contract Area upon meeting the obligations herein and in particular those set forth in

Article 5 below for the Initial Well or Substitute Well by paying 50.2375 its Working Interest w Leverage percentage of the costs to the extent applicable under this PA of drilling and logging to the Objective andor plugging and abandoning as a dry hole if applicable of the Initial Well or Substitute Well up to seventeen million two hundred thousand dollars 17200000.00 gross of the dry hole costs without regard to the AFE amount. If the Initial Wells actual costs of drilling and logging to the Objective andor plugging and abandoning as a dry hole if applicable exceeds the amount of seventeen million two hundred thousand dollars 17200000.00 gross or upon reaching the Objective whichever occurs first Ridgewood will thereafter pay and bear 33.4917 its Working Interest After Leverage Percentage of the costs and risks of all subsequent operations in such well for further drilling andor plugging and abandoning operations. Ridgewood will not hold the right to assume sole ownership of the Initial Well or become a sole participating party until it earns as set out in Article 5. Marlin as drilling operator shall conduct any Ridgewood sole account operations. The Parties agree that should a Substitute Well as specified in Article 10 below be approved by the Parties and commenced Ridgewoods obligation to pay 50.2375 of the AFE costs will cease at the point in time that the actual costs of drilling and logging to the objective andor plugging and abandoning as a dry hole if applicable incurred in the Initial Well plus the actual costs incurred in the Substitute Well combined equal seventeen million two hundred thousand dollars 17200000.00 gross; provided however once the aggregate costs of the Initial Well and Substitute Well equal seventeen million two hundred thousand dollars 17200000.00 gross Ridgewoods share of all subsequent drilling and logging costs will be 33.4917 subject to further rights elections and provisions of this PA or the OA as applicable. Effective upon and after reaching the Objective but not before the right to nonconsent further or subsequent drilling or logging operations provided by the overexpenditure provision of the OA shall apply to subsequent operations. Prior to reaching the Objective the Parties remain Page 4 of 16 Ridgewood El Toro PA September 5 2007lt;PAGEgt; bound to the obligations of the PA subject to the other terms of Article 2. It is the intention of the Parties subject to this Article 3 and Article 4 below that the 1.51 promote borne by Ridgewood in favor of the Coowners under the PA

for the costs and risk of drilling and logging operations conducted under the PA shall end upon the earlier of earning as detailed in Article 5 below or the aggregate expenditure of seventeen million two hundred thousand dollars 17200000.00.

4. ADDITIONAL PROMOTE. The Parties further agree that unless Ridgewood conducts sole account operations in the Initial Well under its Article 3 right then otherwise if the Initial Well or Substitute Well is completed for production as a successful well that Ridgewood agrees to pay an additional promote by paying 50.2375 its Working Interest w Leverage Percentage of the costs to the extent applicable under this PA of completion tieback flowback and hookup up to ten million four hundred thousand dollars 10400000.00 gross costs of the completion tieback flowback and hookup costs. If the completion tieback flowback and hookup actual cost exceeds the amount of ten million four hundred thousand dollars 10400000.00 gross Ridgewood will thereafter pay and bear 33.4917 its Working Interest After Leverage Percentage of the costs and risks of all subsequent operations in such well over such completion tieback flowback and hookup costs for further operations.

5. EARNING ASSIGNMENT TIMING amp; INTEREST TRANSFERRED. Ridgewood shall earn Pure shall prepare and the Coowners shall timely deliver a mutually acceptable Assignment of Operating Rights Assignment in the form attached hereto as Exhibit F in the Contract Area to Ridgewood if and only if a the Initial Well or Substitute Well is drilled and logged to the Objective as described in Article 2 above or b if the Initial Well or its Substitute Well either fails to reach the Objective or reaches the Objective but the Parties have expended at least seventeen million two hundred thousand dollars 17200000.00 whether such well is completed or not then Ridgewood will be entitled to an Assignment of the Coowners operating rights for its Working Interest After Leverage Percentage as set forth on Exhibit A as provided for herein and c Ridgewood complies with all of the terms of this PA. Within thirty 30 days of satisfying a and c or b and c of the above referenced events the Coowners will assign without warranty of title express or implied and effective as of the date of its earning to Ridgewood 33.4917 of 88ths gross and 26.1235 of 88ths net of the Coowners operating rights within the Contract Area from the surface of the earth to the sub sea true vertical depth of 15500 or to the stratigraphic equivalent of the base

of the CrisR2 sand as seen in the Stone West Cameron Block 45 OCS299 20 ByPassI whichever is the lesser depth. Such interest is further subject to and burdened by all of the contracts agreements and dedications recited herein or of public record and lessors royalty and the overriding royalty interests as set out on Exhibit A or in this PA. Notwithstanding a and b above but if the Initial Well or Substitute Well fails to reach the Objective but encounters as mutually agreed by all Parties a zones or formations capable of producing in paying Page 5 of 16 Ridgewood El Toro PA September 5 2007It;PAGEgt; quantities above the Objective that is within the Contract Area and is completed for production under the PA where Ridgewood participates and the Coowners mutually agree to cease further drilling operations prior to reaching the Objective Ridgewood will thereafter be entitled to an Assignment of operating rights within the Contract Area for its Working Interest After Leverage Percentage but limited to the total depth drilled and logged plus 100 feet. Rights under the OA in the event of an election by any of the Coowners to nonconsent to operations above Objective where the Initial Well has not reached Objective or the Parties have not expended at least seventeen million two hundred thousand dollars 17200000.00 are reserved solely to and among the Coowners. That is Ridgewood shall not hold any right to penalty recoupment.6. WARRANTY. The transfer of any interest in the Contract Area pursuant to this PA to Ridgewood shall be made by the Coowners without express or implied warranty of any kind. The Coowners shall grant and convey to Ridgewood full subrogation and substitution to all the Coowners rights in warranty against the predecessors in interest of the Coowners and its affiliates or merged entities. The Coowners shall subject to Article 1 provide Ridgewood full access to the Coowners files and records related to the Contract Area for independent review and analysis by Ridgewood. Such files and records are not warranted as complete or accurate but were maintained as business records upon which the Coowners relied. Any reliance by Ridgewood is at its own risk.7. NO NEW LEASE BURDENS. Until Ridgewood earns an interest under this PA or until the right to earn a portion of the Coowners interest in the Contract Area pursuant to this PA terminates Ridgewood and the Coowners except as specified in Article 15 agree that they have not and will not create any additional lease burdens or

dedications on the Contract Area. No mortgage or pledge or financing arrangement by Ridgewood of this PA or any interest earned whether before or after any such interest is earned or assigned is ever permitted without the prior written consent of each of the Coowners which consent shall not be unreasonably withheld. Such condition shall be made express in any Assignment of earned area made to Ridgewood.

8. TRANSFER SUBJECT TO APPLICABLE APPROVALS. In the event that the transfer of any interest in and to the Contract Area requires approval of the lessor or of any federal agency having jurisdiction the obligation to obtain such pertinent approval shall be Ridgewood's at its cost and risk. The Coowners agree to assist Ridgewood as necessary to help Ridgewood secure such approvals including but not limited to the preparation of mutually agreeable assignments or conveyance instruments appropriate for filing and recordation purposes with the MMS and/or applicable parish records. Notwithstanding anything to the contrary but excluding any lessor consent or approval the Coowners represent to Ridgewood that any consent to assign requirements that may effect a transfer of interest into Ridgewood upon its earning will be the responsibility of the Coowners to effectuate on behalf of Ridgewood.

9. ACCOUNTING MATTERS. As to the Contract Area all costs and expenses which are accrued or incurred pursuant to this PA and under any transfer of interest in the Contract Area executed pursuant hereto if any shall be determined and accounted for in accordance with the Accounting Procedure which is in Exhibit C of the OA attached hereto as Exhibit B.

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10. SUBSTITUTE WELL. If the Initial Well is drilled and prior to reaching the Objective Marlin encounters mechanical difficulties gulf coast conditions or other conditions which render further drilling impractical or if the Parties agree per Article 5 above to complete the Initial Well above but without reaching the Objective then without limiting the Parties rights pursuant to Article 5 then any of the Parties shall have the right to propose the drilling of another well to the Objective hereinafter referred to as a Substitute Well at and to any legal location in the Contract Area but such operations must commence within 180 days after the date the rig was released from the last operation on the Initial Well. If such well is proposed and Ridgewood participates and the Substitute Well is timely

and properly commenced and drilled in compliance with all terms and conditions provided herein for the Initial Well then such Substitute Well shall in all respects but in any event shall be subject to the Article 3 and Article 4 cumulative cost sharing limitation for the Initial Well and Substitute Well be considered as if it was the Initial Well and any references in this PA to the Initial Well shall also include any Substitute Well.

11. SUBSEQUENT OPERATIONS. Should Ridgewood earn hereunder as provided above and the Parties mutually agree to complete the Initial Well in the Objective or should the Parties mutually agree per Article 5 above to complete the Initial Well above but without reaching the Objective any such permitted wells and operations shall be conducted in accordance with the OA. Should Ridgewood earn hereunder and the Initial Well be deemed a dry hole a subsequent well may be proposed by any of the Parties at any time as a Substitute Well in accordance with the provisions of the OA but also subject to the other provisions of this PA bearing upon a Substitute Well.

12. DESIGNATIONS. The Parties agree to execute the necessary designation of operator forms and any other forms required by the MMS or other regulatory authorities to carry out their operations and to make Marlin the drilling operator under the PA if required and Pure the Operator under the OA with any earning by Ridgewood.

13. OPERATING AGREEMENT. Before any earning by Ridgewood under this PA and any ratification or execution of the Exhibit B OA after earning under the PA Ridgewood acknowledges the Coowners interest available to Ridgewood hereunder remains bound under this PA and the OA. Should Ridgewood earn hereunder Ridgewood shall formally ratify the OA attached hereto as Exhibit B only as it pertains to the Contract Area and earned rights. Notwithstanding any other provision of this PA that might indicate to the contrary if there is any conflict between any other provision of this PA and a provision of the OA the other provisions of this PA shall prevail as between the Parties prior to any earning.

14. TERM. This PA shall automatically terminate without liability or obligation in the event the Initial Well is not commenced on or before November 1 2007 subject only to weather delays delivery of materials e.g. pipe rig availability and obtaining all requisite permits.

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Ridgewood El Toro PA September 5 2007

in which Ridgewood participates and earns and which participation entitles Ridgewood to an Assignment as provided above in Article 5 those PA rights and obligations surviving the earning and the OA shall remain in effect as to such Contract Area so long as any obligations between the Parties remain unsatisfied. Unless otherwise provided the PA shall terminate with an earning by Ridgewood as a dry hole and the end of the right to propose a Substitute Well or with the completion tieback and flowback and hookup for a successful completion. Matters arising after either such event shall be governed by the OA with the exception that the Tax Partnership and all obligations not satisfied under the PA the Dispute Resolution as set out in Article 27 and Confidentiality Agreement and AMI as set out in Article 15.C 3 shall survive any such termination of this PA.15.

REPRESENTATIONS. The business records of the Coowners reflect with respect to the Contract Area and El Toro Prospect that A. The Contract Area is dedicated and committed to the following Contracts and Agreements; 1 Natural Gas Processing Agreement Gulf of Mexico between Chevron U.S.A. Inc. Texaco Exploration and Production Inc. predecessor in interest to Chevron U.S.A. Inc. and Dynegy Midstream Services Limited Partnership now called TARGA Midstream Services Limited Partnership as amended effective March 1 2002. 2 Reserve Dedication and Discount Commodity Rate Agreement between Stingray Pipeline Company L.L.C. and Pure Resources L.P. effective June 15 2003. 3 Amendment to Reserve Dedication and Discount Commodity Rate Agreement June 15 2003 between Pure Resources L.P. and Stingray Pipeline Company L.L.C. effective April 29 2005. 4 Reserve Dedication Agreement between Stingray Pipeline Company L.L.C. and Marlin Coastal LLC effective April 1 2006. B. All required filings have been made with the applicable regulatory authorities and Coowners are not aware of any notices pending or threatened violations of any applicable regulation. C. The Contract Area is subject to the following Contracts and Agreements 1 Oil and Gas Lease dated July 1 2000 from the U.S. Department of the Interior Minerals Management Service as Lessor to IP Petroleum Company Inc. The William G Helis Company L.L.C. and Houston Energy Inc. as Lessee being Serial Number OCSG 21534 covering All of Block 57 West Cameron Area OCS Leasing Map Louisiana Map No. 1 subject to; a.

Assignment of Overriding Royalty and Reversionary Interest in Oil and Gas Lease from IP Petroleum Company Inc. The William G Helis Company L.L.C. and Houston Energy Inc. to Louisiana Offshore Ventures II effective July 1 2000. b. Assignment of Record Title from IP Petroleum Company Inc. to Duke Energy Hydrocarbons LLC effective July 1 2000. Page 8 of 16 Ridgewood El Toro PA September 5 2007<it>PAGEgt; c. Assignment of Record Title from IP Petroleum Company Inc. to Pure Resources L.P. effective October 1 2000. d. Assignment of Record Title from The William G Helis Company L.L.C. to Pure Resources L.P. effective July 1 2001. e. Assignment of Record Title from Pure Resources L.P. to Houston Energy L.P. effective July 1 2001. f. Assignment of Record Title from Marlin Energy Offshore L.L.C. to Marlin Coastal L.L.C. effective April 1 2005. 2 Joint Operating Agreement between IP Petroleum Company Inc. as Operator and The William G Helis Company L.L.C. et al as NonOperators covering West Cameron Area Block 57 dated July 1 2000 as amended May 30 2001 Memorandum of Joint Operating Agreement to which has been recorded under File Number 267001 Conveyance Book 918 Mortgage Book 254 of the Official Public Records of Real Property of Cameron Parish Louisiana and under File Number 12267001 of the UCC records of the State of Louisiana and further amended by Amendment to Joint Operating Agreement Outer Continental ShelfGulf of Mexico dated December 17 2004. 3 MOPU Lease Agreement dated February 28 2003 between Union Oil of California and Blake Offshore L.L.C. as amended and extended. 4 Confidentiality Agreement and AML dated July 31 2007 between Pure Resources L.P. and Ridgewood Energy Corporation. 5 Counter Proposal to Ridgewoods Offer to Participate letter dated August 21 2007 as Parties agreed and accepted on August 21 2007. D. The Coowners represents to the best of its knowledge that with respect to that portion of the Lease the Coowners are contributing to the Contract Area that 1 The Coowners are in material compliance with the terms and conditions of the Lease. 2 The Lease is not subject to any royalty overriding royalty net profits interest or other similar burden on production except as referenced above or of public record and the lessors royalty. 3 There are no liens mortgages deeds of trust judgments or other encumbrances of any kind or nature on the Lease or the Coowners

working interest in the Lease. 4 There are no pending claims or litigation relative to the Lease. 5 There are no preferential purchase rights consents to assign or other restrictions on the Coowners ability to enter into this Agreement or they are waived by the execution of this PA by each of the Coowners. 6 There are no other owners of working interests in the Lease included within the Contract Area who are not a party to this PA.16. INTEGRATED AGREEMENT. Except as provided in Article 18 below this PA and the Exhibits attached hereto comprise the entire agreement between the Parties and supersedes all prior agreements and understandings relating to the subject matter hereof including the Counter Proposal to Ridgewoods Offer to Participate letter dated August 21 2007 between the Parties. Further excepting what is provided in Article 18 below in the event of any conflicts between the provosions of this PA and any other agreement including any operating Page 9 of 16 Ridgewood El Toro PA September 5 2007lt;PAGEgt; agreement or any agreement referenced herein as an exhibit or to be executed by the Parties hereafter the provisions of this PA shall control as between the Parties prior to any earning by Ridgewood.17. TAX PARTNERSHIP. The Parties understand and agree that the arrangement and undertakings evidenced by this PA taken together result in a partnership for purposes of Federal income taxation and for purposes of certain state income tax laws which incorporate or follow Federal income tax principles as to tax partnerships. Such partnership for tax purposes is hereinafter referred to as the Tax Partnership. For every other purpose of this PA however and notwithstanding any other provision of this PA express or implied to the contrary the Parties understand and agree that their legal relationship to each other under applicable state law with respect to all property subject to this PA is one of tenants in common or undivided interest owners or lesseesublessees and not one of partnership; that the liabilities of the Parties shall be several and not joint or collective; and that each Party shall be solely responsible for its own obligations. The Tax Partnership shall be governed by Exhibit D as attached to this PA. Except as provided in such Exhibit D the Parties agree not to elect to have the Tax Partnership excluded from the application of all or any part of Subchapter K of Chapter One of Subtitle A of the Internal Revenue Code of 1986 as amended the Code from any successor

provisions thereto under the Code or from any provisions of state income tax laws of substantially the same effect. The Parties agree that the election to be excluded from the application of Subchapter K of Chapter One of Subtitle A of the Code made in Article 20.1 of the OA is no longer operative for the El Toro Prospect Contract Area and that the provisions of Exhibit D will survive the termination of this PA.

18. AREA OF MUTUAL INTEREST. Notwithstanding any other agreement to the contrary and both prior to and after any Ridgewood earning of any interest in the Contract Area described herein in Article 1 the Confidentiality Agreement and AMI dated July 31 2007 between Pure Resources L.P. and Ridgewood Energy Corporation as referenced above in Article 15.C.3 shall survive and will control any AMI obligations between the Parties and the Parties further agree that the provisions of the referenced Confidentiality Agreement and AMI shall take precedence over the PA.

19. PRODUCTION HANDLING AGREEMENT. Whereas the Coowners may continue to utilize the MOPU under terms of agreement referenced above or install a permanent production facility to handle earned area production and others the Parties agree to handle and process Ridgewood production as set forth below. a It is recognized that the MOPU Lease requires at least 90 days notice of termination prior to March 3 2008. Pure for the Coowners will continue to utilize the MOPU to handle earned area production if any up until that time. Should it be deemed economic by the Coowners the Coowners may propose a permanent facility at the cost and risk of the Coowners solely and not Ridgewood or terminate the MOPU Lease as of March 3 2008 at the sole election of Pure with the consent of the Coowners. If warranted by the facts as of November 26 2007 and in the good faith opinion of Pure Pure for the Parties agrees to seek Page 10 of 16 Ridgewood El Toro PA September 5 2007It;PAGEgt; to negotiate a monthtomonth MOPU Lease extension or exercise its right to extend the MOPU Lease under its terms for an additional year. In the event of a dry hole under this PA the Coowners are freed from any obligations to Ridgewood for and Ridgewood releases any right to the MOPU Lease and its utilization. Pure and the Coowners make no representation and disclaim that any extension of the MOPU Lease beyond March 3 2008 is assured; and b In the event Ridgewood participates in a completion for production under this PA

and during any period Ridgewood production is handled by and at the MOPU Ridgewoods charges and expenses for the receipt handling and redelivery into a departing transportation pipeline at the MOPU host facility of its share of production will be calculated invoiced and paid on a throughput basis on its share of the allocated production from the West Cameron Block 57 OCSG 21534 No. 3 El Toro prospect well being the Initial Well or a Substitute Well at the Ridgewood after earning interest of 33.4917 in the production from and for such well as to all production handled at the MOPU under the Accounting Procedure attached to the Operating Agreement as and for facilities supplied by the operator. If Ridgewoods share of Contract Area production is handled by and at any permanent facility set by and the cost risk and expense of the Coowners Ridgewood will not be required to contribute capex towards such facility however Ridgewood shall enter into a mutually acceptable production handling agreement with the Coowners prior to first production handling into an permanent facility in which the following handling terms and fees shall be incorporated into the production handling agreement; 1 0.15 MCF gas 2 1.00bbl oil 3 1.00bbl water 4 0.05 per stage of compression 5 annual escalation of such production handling fees and any monthly minimum fee to adjust for inflation based on the Annual Wage Index Percentage Adjustment recommended each year by the Council of Petroleum Accountants Society COPAS 6 a monthly minimum fee of 5000.00 for any month the cumulative production handling fees are less than that dollar amount 7 an allocation of natural gas for fuel vent flare and loss borne in kind or alternatively at the cost of replacement if Ridgewood volumes are insufficient 8 a reservation by the CoOwners as owners of such permanent facility for renegotiation of the production handling fees for any unusual market condition materially increasing the costs bearing upon the materials or services provided under the PHA and 9 a unilateral indemnity and insurance obligation in favor of Coowners as processor for losses and claims arising from the receipt handling and redelivery of the production. Other generally accepted PHA terms shall be incorporated but as to financial matters Coowners shall be limited to the terms and fees above.20. REASSIGNMENT. Ridgewood agrees to reassign the interest assigned as per Article 5 above in the event that 1 Ridgewood has earned by reaching Objective or

expenditure of obligated funds but where no well drilled hereunder is mutually deemed as capable of producing in paying quantities from any portion of the Contract Area within 180 days from the lapse of the right to propose a Substitute Well under the PA or 2 at any time after production in paying quantities is established on and Ridgewood has earned in the Contract Area should there be a cessation of all production in paying quantities from the Contract Area Ridgewood will have one hundred eighty 180 days after cessation of production in which to commence additional Page 11 of 16 Ridgewood El Toro PA September 5 2007lt;PAGEgt; drilling completion or reworking operations and should operations fail to result in production in paying quantities attributable to any of the Contract Area the Coowners shall hold the right to elect that Ridgewood reassign to the Coowners holding an interest in the Lease and in proportion to that Lease ownership all of the Ridgewood interest in the Contract Area where Ridgewood retains all prior obligations until satisfied. This reassignment obligation due to cessation of operations or production as described above shall apply for so long as the Coowners their successors or assigns an interest in the Contract Area. In the event of any reassignment to the Coowners their successors or assigns the Contract Area or portion thereof shall be reassigned free from any overriding royalty lien encumbrance dedications or other burden placed thereon by Ridgewood. In addition reassignment shall not relieve Ridgewood of liability for obligations assumed which accrued prior to said reassignment including without limitation the obligation to plug and abandon any well in which Ridgewood participated in or on the Contract Area.21. GOVERNING LAW. This PA shall be governed by and in accordance with the laws of the State of Louisiana without regard to any choice of law or rule thereof that would direct the application of the laws of any other jurisdiction.22. INDIVIDUAL LIABILITY. The rights duties elections obligations and liabilities of the Parties shall be several and not joint or collective and nothing contained herein is intended to create nor shall it be construed as creating a partnership of any kind except the tax partnership specified in Article 17 above joint venture association or other business entity recognizable by law for any purpose. The Parties shall be individually responsible only for their own obligations except as herein described.23. NOTICES. All notices required

hereunder shall be in writing sent by certified mail or overnight mail delivery or by facsimile telecommunications to the addresses set forth below and shall be deemed effective when actually received by the addressee as follows Ridgewood Energy Corporation Chevron U.S.A. Inc. 11700 Old Katy Road Suite 280 935 Gravier Street Houston TX 77079 New Orleans LA 70112 Tel 281 2938449 Tel 504 5926356 Fax 281 2937705 Fax 504 5927110 Attn W. Greg Tabor Attn Gordon R. Cain Executive Vice President Land Manager Houston Energy L.P. Marlin Coastal L.L.C. 1415 Louisiana Street 3861 Ambassador Caffery Parkway Suite 2400 Suite 600 Houston TX 77002 Lafayette LA 70503 Tel 713 6508008 Tel 337 7694339 Fax 713 6508305 Fax 337 7694342 Attention Allen Wihite Attention Mike Lipari Page 12 of 16 Ridgewood El Toro PA September 5 2007lt;PAGEgt; Helis Oil and Gas Company LLC 228 St. Charles Ave. Suite 912 New Orleans LA 70130 Tel 504 6813321 Fax 504 5226486 Attention Doug St. Clair24. COUNTERPART EXECUTION. This PA may be executed by signing the original or a counterpart thereof with the same force and legal effect as if all executions were on one single instrument.25. SUCCESSORS AND ASSIGNS. This PA shall be binding upon and inure to the benefit of the Parties and their respective heirs representatives successors and assigns. Ridgewood shall not assign mortgage pledge transfer or exchange their rights or interests in this PA or any rights earned hereunder without the prior written consent of each of the Coowners which consent shall not be unreasonably withheld.26. INSURANCE. Ridgewood shall to the extent of its before earning interest independently acquire the coverage and amounts as shown on Exhibit B OA and provide evidence of such coverage to Pure prior to commencement of operations hereunder. Such coverage and limits shall not in any way limit any Ridgewood indemnity due the Coowners.27. DISPUTE RESOLUTION. Notwithstanding anything contained heretofore in this PA to the contrary the Parties specifically acknowledge and agree that any claim controversy or dispute arising out of relating to or in connection with this PA including the interpretation validity termination or breach thereof shall be resolved solely in accordance with the Dispute Resolution Procedure set forth in Exhibit E attached hereto and made a part hereof.28. INDEMNITY. A. Ridgewood to the full extent of its rights and

interests hereunder agrees to protect indemnify and save the Coowners its parents subsidiaries affiliates andor successors and the directors officers employees or agents of each Coowners Company Group free and harmless from all obligations business dealings liabilities debts charges claims damages demands costs including attorneys fees and court costs penalties and causes of action arising directly or indirectly out of any dealing with third parties Ridgewood has with regard to financing or the assignment of in whole or in part any rights under this PA and to relieve the Coowners Company Group from any and all liability exclusive of business debts and charges incurred as a result of such actions. The indemnities and covenants of this Article 28 shall be effective whether or not such obligations

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business dealings liabilities debts charges claims damages demands costs including attorneys fees and court costs penalties and causes of action aforesaid are caused wholly or partly by negligence attributed to the Coowners Company Group or by any other means excepting those occurrences involving the gross negligence or willful misconduct of the Coowners Company Group. B. The Coowners to the full extent of their rights and interests hereunder agree to protect indemnify and save Ridgewood its parent subsidiaries affiliates andor successors and the directors officers employees or agents of each Ridgewood Company Group free and harmless from all obligations business dealings liabilities debts charges claims damages demands costs including attorneys fees and court costs penalties and causes of action arising directly or indirectly out of any dealings with third parties the Coowners has with regard to financing or the assignment of in whole or in part any rights under this PA and to relieve the Ridgewood Company Group from any and all liability exclusive of business debts and charges incurred as a result of such actions. The indemnities and covenants of this Article 28 shall be effective whether or not such obligations business dealings liabilities debts charges claims damages demands costs including attorneys fees and court costs penalties and causes of action aforesaid are caused wholly or partly by negligence attributed to the Ridgewood Company Group or by any other means excepting those occurrences involving the gross negligence or willful misconduct of the Ridgewood Company Group. C. The

Coowners shall as between the Coowners remain solely liable for all liabilities costs and risks of any kind or nature arising out of its operations relating to the OA that are not related to this PA and in which Ridgewood does not participate including but not limited to the plugging and abandonment and remediation of all existing wells platforms and other facilities on the Contract Area if any.29.

DISCLAIMER OF WARRANTY. THIS PA IS MADE WITHOUT ANY WARRANTY OF TITLE. THE COOWNERS FURTHER DO NOT WARRANT EITHER EXPRESS STATUTORY OR IMPLIED AS TO TITLE MERCHANTABILITY CONDITION QUALITY OR FITNESS FOR A PARTICULAR PURPOSE AS TO THE LEASE IN THE CONTRACT AREA AND ALL OTHER PROPERTY COVERED BY THIS PA INCLUDING BUT NOT LIMITED TO THE WELL BORES EQUIPMENT AND FACILITIES UTILIZED BY THE PARTIES HEREUNDER OR ANY OTHER SORT OF WARRANTY AND IS WITHOUT RECOURSE AGAINST THE COOWNERS WHATSOEVER EVEN AS TO THE RETURN OF CONSIDERATION. THE COOWNERS MAKE NO REPRESENTATIONS OR WARRANTIES REGARDING RIDGEWOODS RIGHT OF INGRESS TO AND EGRESS FROM THE COOWNERS LEASE ACROSS ADJACENT OR ADJOINING LANDS. Page 14 of 16
Ridgewood El Toro PA September 5 2007lt;PAGEgt; THE COOWNERS SPECIFICALLY DISCLAIM AND RIDGEWOOD EXPRESSLY WAIVES ANY IMPLIED WARRANTY OF TITLE WITH RESPECT TO THE LEASE IN THE CONTRACT AREA. RIDGEWOOD ACKNOWLEDGES THAT THIS EXPRESS WAIVER SHALL BE CONSIDERED A MATERIAL AND INTEGRAL PART OF THIS PA AND PART OF THE CONSIDERATION GIVEN THEREFOR. RIDGEWOOD FURTHER ACKNOWLEDGES THAT THIS WAIVER HAS BEEN SPECIFICALLY BROUGHT TO RIDGEWOODS ATTENTION AND THAT RIDGEWOOD HAVE VOLUNTARILY AND KNOWINGLY CONSENTED TO THIS WAIVER. THE PARTIES AGREE THAT FOR THE PURPOSES OF THIS WAIVER OF THE IMPLIED WARRANTY OF TITLE COOWNERS SHALL BE CONSIDERED AS A SELLER. RIDGEWOOD ACKNOWLEDGES THAT i IT IS A SOPHISTICATED INVESTOR NONOPERATOR IN THE OIL AND GAS BUSINESS; ii IT UNDERSTANDS THE RISKS INVOLVED IN OIL AND GAS EXPLORATION AND DEVELOPMENT; AND iii IT UNDERSTANDS THAT

UNDER ITS PARTICIPATION RIDGEWOOD ASSUMES ALL OF THE RISKS ATTENDANT TO THE EXPLORATION AND PRODUCTION OPERATIONS CONTEMPLATED UNDER THIS PA AND THAT THE RIDGEWOOD INVESTMENT MADE HEREUNDER IN THOSE OPERATIONS CONDUCTED UNDER THIS PA IS FULLY AT RISK. Please indicate your agreement to the terms and conditions as set forth by executing this PA and the set of four 4 signature pages in the space provided and return to the attention of Ron Munn at the letterhead address on or before October 5 2007 and Pure will distribute original signature pages to all the parties. Page 15 of 16 Ridgewood El Toro PA September 5 2007

lt;PAGEgt; AGREED TO AND ACCEPTED this 26 day of Sept 2007. CHEVRON MIDCONTINENT L.P. By Chevron Midcontinent Operations Company Its General Partner By s Michael C. Smith Michael C. Smith Title Assistant Secretary AGREED TO AND ACCEPTED this day of 2007. HELIS OIL AND GAS COMPANY LLC By Title AGREED TO AND ACCEPTED this day of 2007. HOUSTON ENERGY L.P. By Title AGREED TO AND ACCEPTED this day of 2007. MARLIN COASTAL L.L.C. By Title AGREED TO AND ACCEPTED this 27th day of September 2007. RIDGEWOOD ENERGY CORPORATION By s W. A. Tabor W. Greg Tabor Title Executive Vice President Page 16 of 16 Ridgewood El Toro PA September 5 2007

lt;TEXTgt;lt;DOCUMENTgt; Co I . PETROLEUM PROSPECTING LICENCE This Deed made this ..1.... day of.... WQrC.. 1999 between the Minister responsible for Petroleum Her Excellency The President O f The Cooperative Republic O f Guyana Janet Jagan representing the Government o f the Cooperative Republic of Guyana hereinafter referred to as the Minister o f the One Part; and ESSO EXPLORATION AND PRODUCTION GUYANA LIM ITED hereinafter sometimes referred to as ESSO a company incorporated in the Commonwealth o f the Bahamas with its registered office at 233 Benmar Houston Texas 77060 United States o f America and registered in Guyana under section 259 o f the Companies Act 1991 chapter 8901 with registered office at 80 Cowan Street Kingston Georgetown Guyana o f the Other Part; WHEREAS in accordance with the Petroleum Exploration and Production Act 1986 Act No. 3 o f 1986 and the Regulations made thereunder hereinafter referred to as the Act the licensee has by application dated the .day

ofTslae...13.3.3.. applied to the Minister for the grant o f a petroleum prospecting licence in respect of the area constituted by the blocks described and identified in the First Schedule hereto and shown on the map thereto attached;WHEREAS under authority conferred by section 10 o f the Act the Minister has entered into an agreement o f even date herewith hereinafter referred to as the Petroleum Agreement with ESSO for the grant to ESSO o f a petroleum prospecting licence subject to the terms o f the Petroleum Agreement.NOW THEREFORE in exercise o f the powers conferred upon the Minister by section 10 and 21 o f the Act1. I the Minister do hereby grant to ESSO for a period o f four 4 years commencing six 6 months after the effective date o f the Petroleum Agreement this petroleum prospecting licence in respect o f the area constituted by the blocks described in the First Schedule hereto and identified and shown on the map attached thereto hereinafter referred to as the prospecting area conferring on Esso by subject to the Act and the Regulations made thereunder and to the conditions o f grant specified hereunder or to which Esso is otherwise subject under the Petroleum Agreement the exclusive right to explore in the prospecting area for petroleum and the right to carry on such operations and execute such works therein as are necessary for that purpose.2. This petroleum prospecting licence is granted subject to the following conditionsa In accordance with Article 4.1 o f the Petroleum Agreement during the term o f thispetroleum prospecting licence the licensee shall in or in relation to the prospecting area carry out the work in Article 4.1ai and 4.1aii o f the Petroleum Agreement.2i During phase 1 having a term o f two 2 years commencing from six 6 months from the effective date of the Petroleum Agreement the licensee shall complete a minimum work programme consisting o f the following during phase 1 acquire 2150 kilometres o f 2D seismic acquire potential field data conduct radar imagery and geological and geophysical studies.ii During phase 2 having a term o f two 2 years from the end o f phase 1 the licensee shall complete a minimum work programme consisting o f the following during phase 2 acquire three thousand 3000 kilometres o f 2D seismic; conduct a seabottom geochemical sampling study and conduct geological and geophysical studies.b Within sixty 60 days after the effective date o f the Petroleum Agreement the licensee shall submit to the Minister details o f a

work programme and budget on the basis of the minimum work programme specified in a above to be undertaken during the remaining portion of the calendar. Thereafter for so long as this petroleum prospecting licence remains in force the licensee shall submit an annual work programme and budget on the basis of the minimum work programme specified in a above not less than one 1 month prior to the beginning of the calendar year.3c Subject to the provisions of the Act and the Petroleum Agreement and other conditions of this petroleum prospecting licence the licensee shall conduct prospecting operations hereunder in accordance with the annual work programme and budget submitted pursuant to clause 2b herein.d The licensee shall before commencing any prospecting operations in the prospecting area furnish to the Minister the name and address of the manager who at the time of commencement of such prospecting operations shall have supervision over the prospecting operations to be carried out. Thereafter any change in name and/or address of the manager shall be forthwith notified to the Minister. Any notice which the Minister or any person authorized by the Minister is required or entitled to serve upon the licensee shall be sufficiently served if the same shall be delivered or sent by post to such manager at such address and served in accordance with Article 31 of the Petroleum Agreement.e The licensee shall observe and give effect to the terms of the Petroleum Agreement.3. Where during any period covered by this petroleum prospecting licence the obligations of the licensee under this petroleum prospecting license have been suspended by reason of force majeure the period of which this petroleum prospecting licence has been granted shall be extended as specified in Article 24 of the Petroleum Agreement.4The licensee shall pay to the Government during the term hereby granted an annual charge in respect of the prospecting area as specified in Article 10 of the Petroleum Agreement.The licensee shall be entitled to renew this petroleum prospecting licence as set forth in Article 3.1 b of the Petroleum Agreement.Unless the context otherwise requires terms and expressions used in this petroleum prospecting licence shall have the same meaning as in the Act or the Petroleum Agreement.5IN WITNESS WHEREOF the Minister do hereby grantthis petroleum prospecting licence and set my hand and affix the seal of the Cooperative

Republic of Guyana and the licensee have set their respective seals the month and year first herein above written. The common seal of the Government of the Cooperative Republic of Guyana was hereto affixed in the presence of the Minister Responsible For Petroleum. The seal of Esso Exploration And Production Guyana Limited was hereto affixed in the presence of Guyana Geology and Mines Commission 2x President Esso Exploration and Production Guyana Limited. Esso Exploration and Production Guyana LEON STEWART Pfr FOTt SWOk wVwK. I DS1C.t COMivnjio N K u. C U l i l j i j. Ali iDAVITSFIRST SCHEDULEDESCRIPTION OF CONTRACT AREADescription of area to be granted under petroleum prospecting licence pursuant to Article 3 of the Petroleum Agreement. The area comprising approximately 60000 square kilometres described herein consisting of graticular blocks identified herein and shown on the block reference map attached. Longitude and Latitude measurements are West and North respectively. PO IN T NO. LATITUDE LONGITUDE 12345678910111213141516171819202122239 30.00 N9 30.00 N9 25.00 N9 25.00 N9 20.00 N9 20.00 N9 15.00 N9 15.00 N9 10.00 N9 10.00 N9 05.00 N9 05.00 N9 00.00 N9 00.00 N8 55.00 N8 55.00 N8 50.00 N8 50.00 N8 45.00 N8 45.00 N8 40.00 N8 40.00 N8 35.00 N8 25.00 W58 20.00 W58 20.00 W58 15.00 W58 15.00 W57 30.00 W57 30.00 W57 25.00 W57 25.00 W57 20.00 W57 20.00 W57 15.00 W57 15.00 W57 00.00 W57 00.00 W56 50.00 W56 50.00 W56 40.00 W56 40.00 W56 30.00 W56 30.00 W56 10.00 W56 10.00 W2 42 52 62 72 82 98 3 5 . 0 0 N 8 3 0 . 0 0 N 8 3 0 . 0 0 N 8 2 5 . 0 0 N 8 2 5 . 0 0 N 8 2 0 . 0 0 N 5 6 0 0 . 0 0 W 5 6 0 0 . 0 0 W 5 5 0 0 . 0 0 W 5 5 5 0 . 0 0 W 5 5 4 5 . 0 0 W 5 5 4 5 . 0 0 W 3 0 at the Guyana Eastwards to Suriname Boundary then southwards along the Guyana Suriname Boundary to the intersection with the line drawn eastwards from 3 2 below at..... T 3 0 . 0 0 N 5 6 2 5 . 0 0 W to 313 23 33 43 53 63 73 83 94 04 14 24 34 44 54 64 74 84 95 05 15 25 37 3 0 . 0 0 N 7 3 5 . 0 0 N T 3 5 . 0 0 N T 3 0 . 0 0 N 7 3 0 . 0 0 N 7 3 5 . 0 0 N r 3 5 . 0 0 N T 4 0 . 0 0 N 7 4 0 . 0 0 N 7 4 5 . 0 0 N r 4 5 . 0 0 N 8 0 0 . 0 0 N 8 0 0 . 0 0 N r 0 5 . 0 0 N 8 0 5 . 0 0 N 8 1 5 . 0 0 N 8 1 5 . 0 0 N 8 2 0 . 0 0 N 8 2 0 . 0 0 N 8 2 5 . 0 0 N 8 2 5 . 0 0 N 8 3 0 . 0 0 N 5 6 2 5 . 0 0 W 5 6 2 5 . 0 0 W 5 6 3 5 . 0 0 W 5 6 3 5 . 0 0 W 5 6 4 5 . 0 0 W 5 6 4 5 . 0 0 W 5 6 5 5 . 0 0 W 5 6 5 5 . 0 0 W 5 7 1 5 . 0 0 W 5 7 1 5 . 0 0 W 5 7 2 0 . 0 0 W 5 7 2 0 . 0 0 W 5 7 2 5 . 0 0 W 5 7 2 5 . 0 0

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northwest through 59 at.....to intersect with the Guyana Venezuela boundaryalong the
GuyanaVenezuela boundary to intersect with the GuyanaTrinidad boundary atthe GuyanaTrinidad
boundary towith the line drawn north fromi1 which is at.....9 3 0 .0 0 N5 8 2 5 .0 0 WArticle 1
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Effective Date Article 31 Miscellaneous 96 98 Article 32 Stability of Agreement 99 Article 33 Notices
1 PETROLEUM AGREEMENT This Agreement is made on the Jf..day 1999 between the
Government of the Cooperative Republic of Guyana represented herein by the Minister hereinafter
referred to as the Minister or the Government as the case may be of the One Part and ESSO
EXPLORATION AND PRODUCTION GUYANA Ltd. hereinafter referred to as ESSO or Licensee a
Company incorporated in the Commonwealth of the Bahamas with its registered office at 233
Benmar Houston Texas 77060 United States of America and registered in Guyana under the

Companies Act 1991 with its registered address in Guyana situated at 80 Cowan Street Kingston Georgetown Guyana of the Other Part WHEREAS By virtue of the Petroleum Production Act Cap. 6505 petroleum existing in its natural condition in strata in Guyana is vested in the State; the Petroleum Exploration and Production Act No. 3 of 1986 hereinafter referred to as the Act and the Petroleum Exploration and Production Regulations 1986 hereinafter referred to as the Regulations make provision with respect to prospecting for and production of petroleum and for matters connected therewith. 2 The Guyana Geology and Mines Commission hereinafter referred to as GGMC a body corporate established under the Guyana Geology and Mines Commission Act No. 9 of 1979 has been seised with the responsibility inter alia of planning and securing the development exploitation and management of petroleum as defined in the Act in Guyana so as to ensure for the people of Guyana the maximum benefits therefrom and for doing such things in relation thereto; With respect to prospecting for and producing petroleum and for matters connected therewith the Act and Regulations subject to certain limitations and conditions contained therein authorize the Minister to grant petroleum prospecting licences and petroleum production licences; Section 10 of the Act authorises the Minister to enter into an agreement with any person with respect to inter alia the grant of a licence the conditions to be included in a licence the procedure to be followed by the Minister while exercising any discretion conferred upon her by or under the Act and the manner in which the discretion shall be exercised and any matter inental to or connected therewith; ESSO has submitted to the delegatee a proposal the Proposal for a Production Sharing Agreement and in respect of prospecting in a certain area offshore Guyana on terms and conditions specified in the Proposal. 3 GGMC has been authorised by the Minister to negotiate this Agreement subject to the provisions of the Act and Regulations and to the final written approval of the Minister of its and execution thereof and to assist in the administration and implementation thereof; ESSO will have or will acquire the financial resources the managerial technical and industrial competence and the experience to carry out petroleum operations and will provide an affiliate company guarantee in accordance with section 13 of the Act; Pursuant to the aforesaid recitals ESSO made an application

to the Minister for a petroleum prospecting licence in accordance with regulation 13 of the Regulations as hereinafter defined over the area described in Annex A and shown on the map attached as Annex B subject to the terms and conditions herein set forth and subject to the provisions of the Act and Regulations and ESSO has agreed by execution of this Agreement to accept the said licence on the said terms and conditions and provisions; NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows

4 Article 1 Definitions

1.1 In this agreement unless the context otherwise accounting procedure means the procedure set out on Annex C; Act means the Petroleum exploration and Production Act 1986 No.3 of 1986; affiliated company in relation to the Contractor means a company or corporation i which is directly or indirectly controlled by the Contractor; or ii which directly or indirectly controls the Contractor; or which is directly or indirectly controlled by a company or corporation that also directly or indirectly controls the Contractor. For the purpose of this definition control means the right to exercise votes of fifty per cent 50 or more of all the voting shares; agreed interest rate means interest compounded daily $1365 \times \text{rate}$ at an annual rate equal to the average London Interbank Offer Rate LIBOR for six 6 months United States dollars quoted at 1100 hours 11.00 a.m. London time on the first business day of such month by the London Office of the Bank of America or as the Parties may agree plus three 3 percentage points; 5 Agreement means this Agreement and the Annexes hereto attached and made a part hereof; appraisal programme means a programme carried out following a discovery of petroleum in the contract area for the purpose of delineating the petroleum reservoir as defined in the Act to which that discovery relates in terms of thickness and lateral extent and estimating the quantity of recoverable petroleum therein prior to declaration of its commerciality; appraisal well means a well drilled for the purpose of an appraisal programme; Article means an Article of this Agreement; associated gas means all natural gas produced from any petroleum reservoir the predominant production of which is with crude oil and includes gascap gas which overlies and is in contact with crude oil; barrel means a quantity consisting of fortytwo 42 United States gallons liquid measure

measured at standard conditions of atmospheric pressure and temperature 14.7 lbssq. inch absolute or 1 Kgsq. cm. absolute and corrected to a temperature of sixty 60 degrees Fahrenheit or fifteen 15 degrees Celsius; calendar month or month means any of the twelve months of the Calendar Year; calendar quarter or quarter means a period of three 3 consecutive months beginning on the first day of January April July or October; 6 calendar year or year means a period of twelve 12 consecutive months commencing on January 1 and ending on the succeeding December 31 provided however that a year of a term of a licence shall be the period specified in section 2 2 b of the Act; commercial discovery means any discovery which the Contractor in its sole judgement considers economic to develop and produce pursuant to the terms of the Agreement; contract area means on the effective date the area described in Annex A and shown on the map in Annex B and the subject of the petroleum prospecting licence granted to the Contractor pursuant to Article 3; and thereafter any areas which at any particular time are subject to the petroleum prospecting licence or petroleum production licences granted to the Contractor under Article 8; contract costs means exploration costs development costs operating costs service costs general and administrative costs and annual overhead charge; Contractor means ESSO and includes its successors and assignees; cost oil has the meaning assigned in Article 11; 7 crude oil or oil means crude mineral oil asphalt ozokerite distillates condensates and all kinds of hydrocarbons and bitumens both in solid and liquid forms whether in their liquid state at the well head or field separator or liquified from produced natural gas by chemical treatment condensation or extraction; delivery point means the fob point of export in the Cooperative Republic of Guyana either offshore or onshore which shall be agreed to by the Contractor and the Minister; development costs means the expenditure so categorised in Annex C; development plan means the plan referred to in Article 8.4; development well means any well drilled as part of a development plan; discovery area means an area which is part of a prospecting area consisting of a discovery block or blocks in respect of which the Minister has been informed under section 30 of the Act; discovery block means that as defined in the Act; discovery of petroleum means that as defined in the Act; effective date means the date on which this Agreement

comes into force pursuant to Article 30; 8 expatriate employee means any employee other than a Guyanese citizen not permanently resident in Guyana who is engaged under a contract of service for the purpose of petroleum operations; exploration costs means those expenditures so categorized in Annex C exploration period means the initial period or the first renewal period or both; or the first renewal period; or the second renewal period or both; or the initial and all renewal periods referred to in Article 4.1 as the case may be; exploration well means a well drilled which is not a development well with the objective of exploring for petroleum on a geological entity be it of structural stratigraphic facies or pressure nature to a depth or stratigraphic level specified in the work programme for the exploration work programme; field means an area within the contract area consisting of a petroleum reservoir or multiple petroleum reservoirs all grouped on or related to the same individual geological structural features or stratigraphic conditions from which petroleum may be produced commercially; general and administrative costs and annual overhead charge means the expenditures so categorised in Annex C; geologic basement means any igneous or metamorphic rock or any stratum in and below which the geological structure or physical characteristics of the rock sequence do not have. 9 the properties necessary for the accumulation of petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected; Government means the Government of the Cooperative Republic of Guyana and its ministries and agencies; GGMC means the Guyana Geology and Mines Commission established under section 3 of the Guyana Geological and Mines Commission Act 1979; licence means the petroleum prospecting licence or the petroleum production licence or; both as the context requires; lifting entitlement means the quantity of crude oil to which a Party shall be entitled in any given period pursuant to Article 11; Minister means the Minister assigned responsibility for petroleum or where there is no such Minister the President; natural gas or gas means all hydrocarbons which at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or 1 Kgsq. cm is in a gaseous state including but not limited to wet mineral gas dry mineral gas and casing 10 head gas all substances contained therein including helium which are

produced from an oil or gas well in their natural state or residue gas remaining after extraction of liquid crude oil from wet gas; nonassociated gas means natural gas or gas other than associated gas; operating costs means those costs so categorized in Annex C; operator shall have the meaning assigned to it in Article 2.2 a; Parties means the Government ESSO and includes its successors and assign and a Party shall mean any of the Parties; petroleum operations means prospecting operations or production operations as defined in the Act or both; petroleum prospecting licence means a licence issued by the Government under the Act and the Regulations to ESSO for carrying out prospecting operations and as set forth in Form C of the Schedule to the Regulations; petroleum production licence means a licence to be issued by the Government under the Act and the Regulations to ESSO for carrying out production operations and as set forth 11 in Form D of the Schedule to the Regulations; profit oil has the meaning assigned in Article 11; recoverable contract costs has the meaning assigned in Article 11; Regulations means the Petroleum Exploration and Production Regulations 1986; service costs means the expenditures so categorized in Annex C; subcontractor means any company or entity which provides services to the Contractor in connection with petroleum operations; third party sales means third party arms length sales transacted in foreign exchange; The words and expressions used in this Agreement but not defined herein shall if meanings have been assigned to them under the Act have for the purposes of this Agreement the same meanings.

1.4 The provision of this Agreement relating to the petroleum prospecting licence shall be read as part of the provisions of such licence.

13 Article 2 Agreement the Operator.

Liabilities and Indemnities Agreement. This Agreement constitutes an agreement made under section 10 of the Act consistent with the Act and the Regulations and is a production sharing agreement the objective of which is the exploration for development and production of petroleum in the contract area by the Contractor subject to the terms hereof and the provisions of the Act and Regulations under which the Contractor shall have an economic interest in the development of petroleum from the contract area. The operator. a ESSO shall be the operator charged with conducting the day to day activities of the Contractor under this Agreement. No transfer of

operatorship to another not comprising the Contractor shall take effect unless it has been approved by the Minister which approval shall not be unreasonably withheld b The Minister shall be notified of any change of operatorship to another Party comprising the Contractor c The Contractor shall provide the Minister with a memorandum summarizing the operating arrangements between the operator and the Contractor including any Party comprising the Contractor for the conduct of petroleum operations which will include inter alia a provision whereby the operator agrees to conduct the petroleum operations in accordance with this Agreement the licences and any applicable laws of Guyana. Liability. The duties obligations and liabilities of the Parties including an assignee of ESSO under this Agreement and under any licence issued pursuant hereto shall be joint and several. 14 Indemnity. The Contractor shall at all times keep Government indemnified against all actions claims and the demands that may be brought or made against Government by a third party by reason of negligence any act or omission by reckless disregard of harmful consequences which results in damage to a third party by the Contractor or the operator in the exercise or purported exercise of the rights of the Contractor under the Act or the licence provided however that nothing in this Article shall require the Contractor to give the said indemnity for any claim or demand in respect of petroleum taken by the Minister pursuant to Article 11 after title has passed to the Minister at the delivery point or in respect of assets acquired by the Minister pursuant to Article 20 from and after the date of acquisition. Liability by the Contractor to the Government for damages in respect of petroleum operations under this Agreement is limited to insurance required in accordance with Article a provided however that the Contractor shall not be liable to the Government for indirect punitive or consequential damages including but not limited to production or loss of profits. 15 Article 3 Petroleum Prospecting Licence and Guarantee 3.1 Petroleum Prospecting Licence. a On the date of this Agreement the Minister in accordance with the Act the Regulations and the terms of this Agreement shall grant to the Contractor the petroleum prospecting licence for an initial period of four 4 years commencing six 6 months from the effective date over the area described in Annex A and shown on the map attached as Annex B hereto. b Subject to Article 4 and the other terms of this

Agreement such petroleum prospecting licence may be renewed but not more than twice at the election of the Contractor for consecutive periods of three 3 years each in accordance with the provisions of the Act and the Regulations. Guarantee. The Contractor shall on or before the sixtieth 60th day prior to the commencement of data compilation review and reprocessing during year one 1 of phase one 1 of the initial period in accordance with Article 4.1 a i hereunder and thereafter no later than ninety 90 days after the commencement of all subsequent work commitment periods as specified in Article 4.1 provide an affiliate company guarantee or other form of guarantee acceptable to the Minister in the amount of ten percent 10 of the budget submitted by the Contractor pursuant to Article 7.1 for each specific work commitment period. Notwithstanding the foregoing if the Contractor exceeds its minimum work commitment in any phase specified in Article 4.1 the completion of such work commitment shall constitute a waiver of such proportion of the requirement of the guarantee by the Minister which is the equivalent of the excess work previously done but which is applicable to the subsequent work commitment phase. 16 If the guarantees are of affiliate company guarantees they shall be in lieu of and satisfy any obligation to provide a guarantee or bond or both pursuant to the Act Regulations or this Agreement on the part or on behalf of the Contractor 17 Article 4 Exploration Programme and Expenditure Obligation 4.1 Exploration Programme. Subject to the provisions of this Agreement in discharge of its obligations to carry out prospecting operations in the contract area the Contractor shall carry out the minimum work described herein during the periods into which prospecting operations are divided hereunder After the preparation period of six 6 months from the effective date the initial period of four 4 years shall commence. The initial period shall be divided into two 2 phases each phase consisting of two 2 years duration. i Phase One 2 years aa During phase one of the initial period the Contractor shall acquire 2150 kilometres of 2D seismic acquire potential field data and conduct radar imagery and geological and geophysical studies. bb At the end of phase one of the initial period the Contractor shall elect either to relinquish the contract area or to enter phase two of the initial period. 18 ii Phase Two 2 years aa Subject to Article 5 during phase two of the initial period the Contractor shall acquire 3000 kilometres of 2D seismics conduct a

seabottom geochemical sampling study and conduct geological and geophysical studies. bb At the end of the initial period of four 4 years the Contractor shall elect either to relinquish the entire contract area or to renew the petroleum prospecting licence for a three 3 year period. The first renewal period of three 3 years shall be divided into two 2 phases with phase one consisting of two 2 years duration and phase two consisting of one 1 year duration. i Phase One 2 years aa Subject to Article 5 during phase one of the first renewal period the Contractor shall possess the option to either acquire 1250 square kilometres of 3D seismic or alternatively drill one 1 exploration well to depth of 3600 metres subsea or to test the Tertiary age deep water reservoir section whichever depth is lesser. 19 bb At the end of phase one of the first renewal period the Contractor shall elect either to relinquish the contract area except for any discovery areas in respect of which the Minister is informed under section 30 of the Act and the area contained in any petroleum production licence or to enter phase two of the first renewal period. ii Phase Two 1 year aa Subject to Article 5 during phase two of the first renewal period the Contractor shall drill one 1 exploration well to depth of 3600 metres subsea or test the Tertiary age deepwater reservoir section which ever depth is lesser. bb At the end of the first renewal period of three 3 years the Contractor shall elect either to relinquish the contract area except for any discovery in respect of which the Minister is informed under section 30 of the Act and the area contained in any petroleum production licence or to renew the petroleum prospecting licence for a second three 3 year period. The second renewal period of three 3 years shall be divided into two 2 phases each phase consisting of one and onehalf 1 years in duration. 20 Phase One 1 years aa Subject to Article 5 during phase one of the second renewal period the Contractor shall drill one 1 exploration well to depth of 3600 metres subsea or to test the Tertiary age deepwater reservoir section which ever depth is lesser. bb At the end of phase one of the second renewal period the Contractor shall elect either to relinquish the contract area except for any discovery area in respect of which the Minister is informed under section 30 of the Act and the area contained in any petroleum production licence or to enter phase two of the second renewal period. Phase Two 1 years aa Subject to Article 5 during phase two of the second renewal period the

Contractor shall drill one 1 exploration well to depth of 3600 metres subsea or test the Tertiary age deepwater reservoir section which ever depth is lesser. 21 bb At the end of the second renewal period of three 3 years the Contractor shall relinquish the entire contract area except for any discovery area in respect of which the Minister is informed under section 30 of the Act the area contained in any petroleum production licence and any other portion of the contract area on which the Minister agrees to permit the Contractor to conduct further exploration activities. The minimum work commitment for a given phase or period referred to in Article 4.1 b and c may be undertaken in an earlier phase or period in whole or in part and in such a case the work commitment with respect to the subsequent period shall be deemed to be satisfied accordingly in whole or in part as the case may be. The Minister may extend any exploration period pursuant to a showing of good cause by the Contractor. No exploration well drilled by the Contractor shall be treated as discharging any obligation of the Contractor to drill such exploration well unless either it has been drilled to the depth or formation agreed with the Minister and specified in the annual work programme or before reaching such depth or formation 22 the Contractor has expended on such well and any substitute well drilled pursuant to Article 4 d below the amount for such work commitment in the budget submitted by the Contractor and approved by the Minister as specified in Article 7.1; or the geologic basement is encountered; or a discovery is made and the Minister is informed thereof; or insurmountable technical problems are encountered which in accordance with good oilfield practice make further drilling impractical provided that if the said well is abandoned owing to the said problems before reaching the geologic basement the Contractor shall drill a substitute well in the contract area to the same minimum depth as aforesaid unless otherwise agreed with the Minister or until the amount in Article 4 a less any amounts actually expended on the abandoned well is reached or one of the criteria listed at Articles 4 b to d is satisfied. Expenditure Obligation. The sum actually spent in fulfilment of the work obligation in a specific phase or period shall be deemed to have satisfied the Contractors minimum expenditure obligation for that phase or period. 23 Article 5 Relinquishment of Areas Prior to the end of phase one of the initial period of the petroleum

prospecting licence issued to the Contractor under Article 3.1 the Contractor shall relinquish at least twentyfive percent If prior to the end of the second phase of the initial period of the petroleum prospecting licence an application is made by the Contractor for renewal of the licence under section 24 1 of the Act the Contractor shall relinquish at the end of the initial period an area equal to at least twentyfive percent 25 of the original contract area less the exclusions provided for in Article 5.4 b and c. If prior to the end of the second phase of the first renewal period of the petroleum prospecting licence an application is made by the Contractor for a second renewal of the licence under section 241 of the Act the Contractor shall then relinquish at the end of this first renewal period an area equal to at least twenty five percent 25 of the original contract area less the exclusions provided for in Articles 5.4 b and c. The areas to be relinquished pursuant to Articles 5.1 5.2 and 5.3 shall comprise of blocks as defined in the Act; exclude any discovery area together with a reasonable area of protective ac 25 of the contract area less the exclusions provided for in Article 5.4 b and c. surrounding the discovery area; 24 exclude any production area; be selected by Contractor so that i the area relinquished shall comprise not more than three discrete areas having regard to any representations made by the Minister with respect to location shape and size; ii the blocks to be retained for and during the first and second phase of the initial period pursuant to Articles 5.1 and 5.2 shall constitute not more than two 2 discrete areas unless otherwise agreed to by the Minister. In the event that an area or areas cannot be identified for relinquishment in accordance with this Article without including in such area or areas in whole or in part a subsisting discovery area or production area or the Minister is of the opinion that the areas to be relinquished will not enable licensing separately or jointly with contiguous unlicensed areas then the Minister and Contractor shall consult together with a view to agreeing on the areas to be relinquished in the light of the circumstances then prevailing. If after sixty 60 days from receiving notice of the Contractors proposed relinquishments the Parties cannot agree on a proposed relinquishment the Parties shall refer the matter to a sole expert pursuant to Article 26. For the purpose of this Article a discovery area shall not include any discovery block which relates to a discovery in respect of which the Contractor has

notified the Minister that the discovery is not of potential commercial interest pursuant to section 31 of the Act unless such discovery block forms a part and only to that extent of another subsisting discovery area. 25 If a petroleum prospecting licence ceases to have effect pursuant to section 32 of the Act with respect to discovery blocks reduction in size of the contract area shall be treated as an advance relinquishment under this Article and consequently shall reduce the area next required to be relinquished. 5.8 Without prejudice to the obligations undertaken in Article 4 the Contractor may at any time during the period of the petroleum prospecting licence on giving the Minister no less than three 3 months notice in writing of its intention to do so relinquish any block or blocks in the contract area pursuant to section 28 of the Act and in accordance with Articles 5.4 and 5.5. Any such relinquishment shall count towards any subsequent mandatory relinquishments required under Articles 5.1 5.2 or 5.3 as the case may be. 26 Article 6 Delegation Cooperation between Contractor and Delegate The Minister may subject to the provisions of the Act or any other law delegate any public officer to exercise and perform any of his functions under this Agreement and anything done by the delegatee in pursuance of the delegation shall have the same validity and effect as it would have if done by the Minister. The delegatee shall perform inter alia the following functions to monitor the petroleum operations carried out by the Contractor; to review any proposed exploration work programme and budgets presented by Contractor under Article 7 and any appraisal programme presented by the Contractor under Article 8; to review any development plan submitted by the Contractor in connection with an application for a petroleum production licence pursuant to section 34 of the Act; to ensure the maintenance and availability for inspection of operating records and reports for petroleum operations in accordance with this Agreement; to ensure the accounting procedures specified in Annex C of this Agreement are followed; to ensure compliance with the provisions of this Agreement Act and Regulations. 27 The Contractor and the delegatee shall cooperate in good faith in the exercise of the Ministers functions delegated pursuant to this Article and the Contractor shall keep the delegatee advised of all activities taking place during the course of petroleum operations and shall provide the delegatee with all available information relating to

petroleum operations as the Minister or the delegatee may reasonably require. Towards this end the delegatee and the Contractor shall meet at regular intervals but at least once every six 6 months to review the progress and results of the petroleum operations and to discuss the work programme and other activities to be undertaken in the ensuing months. With respect to the matters to be reviewed pursuant to Article 6.2 should the delegatee wish to make any specific proposals or revisions thereto the delegatee shall so notify the Contractor specifying its reasons therefor; within reasonable time thereafter the Contractor and the delegatee shall meet and endeavour to agree on the proposals or revisions. The Contractor shall consider and take into account the proposals of the delegatee and shall attempt in good faith to reach agreement on such proposals. If the Contractor and the delegatee fail to agree within sixty 60 days of submission by the Contractor the exploration work programme and budget including as appropriate any minimum work programme to be undertaken pursuant to Article 4 submitted pursuant to Article 7 and the appraisal programme except in the case of gas to which the provision of Article 12 shall apply submitted pursuant to Article 8 revised in accordance with any amendments or additions thereto agreed by the delegatee and the Contractor shall be deemed adopted. 28 Any approvals required by the Minister or delegates shall not be unreasonably withheld. If the Contractor requests a requisite approval from the Minister or delegates such approval shall be deemed as granted if no response is provided within sixty 60 days of making the request. The Minister or the delegatee shall upon request either provide to the Contractor or assist the Contractor in obtaining the assistance required for Contractor to fulfill requirements of the contract including but not limited to the following approvals required from the Government agencies or provincial or local government for conducting hydrocarbon operations including approvals necessary to import goods and services free from duties and taxes; approvals for easements and right of way to enable Contractors to conduct operations; approval relating to security for field operations and personnel; permission for entry and exit visas and working permits for Contractors employees subcontractors and their dependents; supply of reports analyses samples geological geophysical and production data necessary to Contractor from areas inside and outside

the contract area; and 29 approvals to export hydrocarbons and use essential infrastructure necessary for the economic export of hydrocarbons at normal commercial terms. 30 Article 7 Annual Work Programme and Budget Within sixty 60 days after the effective date the Contractor shall prepare and submit to the Minister in detail a work programme and budget setting forth the prospecting operations which the Contractor proposes to carry out including as appropriate any minimum work obligations to be undertaken pursuant to Article 4 during the remaining portion of the calendar year. In subsequent years no less than one 1 month before the beginning of the calendar year the Contractor shall prepare and submit to the Minister a work programme and budget setting forth petroleum operations which the Contractor proposes to conduct during the upcoming calendar year. The Contractor may for good cause amend the details of any work programme or budget submitted to the Minister pursuant to Article 7.1 provided that a notice of the details of the reasons for the amendments is given to the Minister; b such amendments shall not have the effect of reducing the minimum work obligations undertaken under Article 4 without the prior consent in writing of the Minister; c any proposed amendment shall be subject to review pursuant to Article 6.

31 Article 8 Discovery and Development Where pursuant to section 30 of the Act notice has been given to the Minister of a discovery in the contract area the Contractor shall forthwith inform the Minister of the steps it proposes to take to satisfy the requirements of section 30 1 a iii of the Act. Where the Contractor pursuant to section 31 1 of the Act has informed the Minister that in its opinion the discovery is of potential commercial interest the Contractor shall as soon as practicable thereafter submit for the consideration of the Minister its proposals for an appraisal programme to meet the requirements of section 30 1 b of the Act. Where an appraisal programme has been adopted by the Contractor pursuant to Article 8.2 the Minister may on application by the Contractor pursuant to section 31 2 of the Act stating reasons therefor extend the period within which application may be made by the Contractor for a petroleum production licence. 8.4 Where the Contractor has made an application to the Minister for a petroleum production licence in respect of any part of the contract area in accordance with section 34 1 of the Act such application shall be

accompanied by the proposals required under section 34 3 of the Act hereinafter referred to as the development plan and shall satisfy the provisions of section 36 of the Act and the Regulations. The development plan shall provide that not later than six 6 months after the grant of the first petroleum production licence the Contractor shall in consultation with delegatee prepare and implement a programme for training and 32 employment of Guyanese nationals in each phase and level of petroleum operations and for the development of management and technical skills for the safe and efficient conduct of petroleum operations. Where the Minister considers that the application has not met the requirements of Article 8.4 he shall so notify the Contractor within sixty 60 days of receipt of the application and delegatee and Contractor shall meet to discuss the application with a view to ensuring that the requirements of Article 8.4 are met. In the event that the Parties are unable to agree on amendments to the application to meet such requirements within sixty 60 days from the date of aforesaid application or such longer period as the Parties shall agree or where the Minister fails to respond to or act on the aforesaid application within sixty 60 days the Contractor may refer the matter to a sole expert pursuant to Article 26 for determination within sixty 60 days of appointment of such expert or such other time period as may be agreed between the Contractor and the Minister. Where the Minister considers that the aforesaid application has met the requirements of Article 8.4 he shall within sixty 60 days of receipt thereof so notify to the Contractor. In such an event or where in the event of a dispute it is determined by the sole expert pursuant to Article 26 that the Contractor has made an application which meets the requirements of Article 8.4 provided the Contractor is not in default under this Agreement the Minister shall grant within sixty 60 days of such notification or determination as the case may be to Contractor a petroleum production licence in the Form D of the Schedule to the Regulations over the area for which the application has been made on terms and conditions 33 consistent with this Agreement and the Act and Regulations which will enable the Contractor to carry on petroleum operations in the production area in accordance with the development plan wherein the level of production set shall be consistent with the maximum efficient rate of production which conforms to sound reservoir engineering principles in accordance

with good international petroleum industry practice. While the Contractor holds a petroleum prospecting licence or has made an application pursuant to Article 8.4 and in accordance with section 34 1 of the Act the Minister shall not grant a petroleum production licence in respect of all or part of the contract area or area covered by such application whether on a geographical or geological basis to any third party. Where the Contractor pursuant to section 31 1 of the Act has served notice on the Minister that in its opinion a discovery made in the contract area is not of potential commercial interest the provisions of section 32 1 of the Act shall apply. The Contractor may apply for a renewal of a petroleum production licence for a maximum period of ten 10 years. The Minister shall not refuse to grant the renewal of a petroleum production licence under section 401 of the Act without first providing the Contractor a notice stating the grounds of the intended refusal; and a reasonable period to respond to or remedy the stated grounds for refusal. 34 Article 9 Records. Reports and Information; Confidentiality Records Reports and Information. a The Contractor shall at all times while this Agreement is in force maintain and submit to the Minister in accordance with the provisions of the Act and the Regulations the petroleum production licence and this Agreement full and accurate reports records returns and accounts of petroleum operations in the contract area. All data well logs maps magnetic tapes cuts of core and cutting samples and all other geological and geophysical information obtained by the Contractor in the course of carrying out petroleum operations hereunder and all geological technical financial and economic reports studies and analyses generated in relation thereto hereinafter referred to as petroleum data shall be submitted to the Minister in accordance with the Regulations. The Contractor may freely export for processing or laboratory examination or analysis samples or other original materials constituting petroleum data provided that samples equivalent in size and quality or where such material is capable of reproduction copies of equivalent quality have first been delivered to the Minister. d Petroleum data shall be the joint property of the Minister and the Contractor but shall become the sole property of the Minister with respect to any area which ceases to be part of the contract area whether as result of relinquishment or expiry surrender or termination of a licence or otherwise in

accordance with the Act from the date on which such area ceases to be part of the contract area. e The Minister through duly appointed representatives upon providing the Contractor with at least seven 7 days notice shall be entitled to observe the petroleum operations conducted by the Contractor at his sole cost and expense and at all reasonable times to inspect all assets records and data kept by the Contractor relating to such petroleum 35 operations. In the exercise of such rights under this paragraph the Minister shall not unduly interfere with the Contractors petroleum operations under this Agreement. f Nothing in this Article shall be construed as requiring the Contractor or any of the Parties comprising the Contractor to disclose any of its proprietary technology or that of its affiliated companies which is not acquired in the course of petroleum operations under this Agreement. Confidentiality. a All petroleum data information and reports obtained or prepared by the Contractor hereunder shall so long as they relate to any part of the contract area be treated as confidential and each of the Parties undertakes not to publish reproduce or otherwise deal with such petroleum data or to disclose the same or the thereof to any other person without the consent in writing of the other Parties such consent not to be unreasonably withheld provided however that subject to Article 9.2 b this Article shall not i prevent disclosure by the Contractor aa to an affiliated company for the purpose of carrying out petroleum operations; bb to consultants professional advisers data processing centres laboratories and subcontractors in connection with the petroleum operations; 36 cc to a bank or other financial institution in connection with financing for petroleum operations; dd to the extent required by any applicable law or the regulations of any stock exchange upon which the shares of the Contractor or an affiliated company are quoted; ee to bona fide prospective assignees or transferees of an interest hereunder of the Contractor or in connection with a sale of stock of the Contractor or an affiliated company thereof; or ff in connection with data trades; gg of data information and reports already known to the Contractor prior to the effective date; hh of data information and reports acquired independently from a third party that represents that it has the right to disseminate such data at the time it is acquired by the Contractor; prevent disclosure pursuant to section 4 of the Act provided however that neither the

Minister nor Contractor shall disclose petroleum data relating to 37 any area subject to a licence to a competitor of the Contractor without the prior written consent of the other Party; or be construed as imposing on any Party any obligation hereunder with respect to any petroleum data information or reports which are without disclosure by such Party generally known to the public. Any petroleum data information or reports disclosed by the Contractor pursuant to this Article shall be disclosed on terms which ensure that the data information or reports aforesaid are treated as confidential by the recipient except for disclosures made pursuant to Article 9.2 a i dd and prompt notice of all disclosures shall be given to the Minister. All petroleum data which becomes the sole property of the Minister pursuant to Article 9.1 d shall continue to be treated as confidential by the Contractor for a period of one 1 year from the date on which it became the sole property of the Minister but may be used by the Contractor in connection with data trades with the prior written consent of the Minister such consent not to be unreasonably withheld subject however to Article 9.2 b. Where a licence ceases to be in force with respect to any area the Contractor shall deliver to the Minister originals of all petroleum data and other information relating to such area pursuant to regulation 26 of the Regulations provided however that on d 38 application duly made to him pursuant to regulation 28 of the Regulations the Minister shall permit the Contractor to retain copies of petroleum data and information relating to the contract area subject to Article 9.2 b. e Notwithstanding the provisions of Article 9.1 d all Contractor proprietary technology except technology for which the cost of development has been approved as recoverable contract cost under this Agreement shall remain the property of the Contractor. 39 Article 10 Annual Licence Rental Charge The Contractor shall on the effective date of the petroleum prospecting licence or the date of grant of any petroleum production licence as the case may be and thereafter so long as the said licence remains in force on each anniversary date thereof pay without demand to the Government an annual licence rental charge in respect of the contract area as provided below for the entire exploration period and such payments shall apply to those areas remaining after taking into account any relinquishments pursuant to Article 5 Period Initial Initial First Renewal First Renewal Second Renewal Second

Renewal Phase 1 Rental Fee U. 120000. 2 1 2 1 2 180000. 240000. 240000. 240 000. 240000. 40

Article 11 Cost Recovery and Production Sharing Subject to the terms and conditions of this Agreement the Contractor shall bear and pay all contract costs incurred in carrying out petroleum operations and shall recover contract costs only from cost oil as herein provided. All recoverable contract costs incurred by the Contractor shall subject to the terms and conditions of any agreement relating to NonAssociated gas made pursuant to Article 12 be recovered from the value determined in accordance with Article 13 of a volume of crude oil hereinafter referred to as cost oil produced and sold from the contract area and limited in any month to an amount which equals seventyfive percent 75 of the total production from the contract area for such month excluding any crude oil used in petroleum operations or which is lost. Recoverable contract costs means such costs as the Contractor is permitted to recover as from the date they have been incurred pursuant to the provisions of Annex C. To the extent that in any month recoverable contract costs exceed the value of cost oil determined in accordance with Article 13 the unrecovered amount shall be carried forward and subject to the limitation stipulated in Article 11.2 shall be recoverable in the immediately succeeding month and to the extent not then recovered in the subsequent month or months. 41 The balance of crude oil available in any month after recoverable contract costs have been satisfied to the extent aforesaid hereinafter referred to as profit oil shall be shared between the Government and the Contractor for each field in the following proportions Contractor fifty percent 50 and Minister fifty percent 50. The quantity of cost oil actually utilized in satisfying the recoverable contract costs may be allocated by the Contractor to production from any field or fields. Subject to the provision of Article 14 the profit oil shall be shared between the Government and Contractor on a monthly basis according to their respective entitlements as specified in Article 11.4. To the extent that the actual quantities and costs required to determine cost oil and profit oil for the month in question are not known crude oil sharing shall be calculated on an interim basis each month taking the following factors into account unrecovered recoverable contract cost; estimated current recoverable contract cost by reference to the agreed work programme and budget supplemented by any other relevant

documents or information which are accepted by Contractor and Minister as being reliable indicators of the actual position for the month in question; estimated production for the month in question; and 42 crude oil price from the previous month calculated. Retroactive adjustments shall be made to the crude oil entitlements and shall be agreed with the Minister based on recalculations utilizing actual quantities of crude oil produced and saved and recoverable contract costs. Any revised entitlements shall be made subject to any applicable lifting agreements as soon as practicable after such elements have definitely been determined. The Contractor shall have the right to use in any petroleum operations as much of the production as may reasonably be required by it therefor and the quantities so used or lost shall be excluded from any calculations of cost oil and profit oil entitlement.

43 Article 12 Associated and Non Associated Gas. 12.1 Associated Gas. a The associated gas produced from any oil field within the contract area shall be with priority used for the purposes related to the operations of production and production enhancement of oil fields such as gas injection gas lifting and power generation. b Based on the principle of full utilization of the associated gas and with no impediment to normal production of crude oil a plan of utilization of the associated gas shall be included in the development plan of each oil field. If there is any excess associated gas in the oil field after utilization pursuant to Article 12.1 a the Contractor shall carry out a feasibility study regarding the utilization of such excess associated gas of such oil field. Such feasibility study if carried out before submission of the development plan of an oil field shall be included in the development plan. In the event that the Contractor conducts a further feasibility study of the utilization of the excess associated gas of such oil field such further feasibility study shall be submitted to the GGMC for review and discussion. If the excess associated gas in any oil field is utilized the construction of facilities for such utilization and the production of excess associated gas shall be carried out while a petroleum production licence continues in force. c If the Parties agree that the excess associated gas of an oil field has no commercial value then such gas shall be disposed of by the Contractor provided that there is no impediment to normal production of the crude oil in the most economic manner consistent with good international petroleum industry

practice including flaring pursuant to regulation 6.3 of the Regulations. d If either Party to the Agreement considers unilaterally that the excess associated gas of an oil field has commercial value such associated gas may be utilized by that Party provided there is no impediment to normal production of crude oil. All handling from the point of separation of crude oil shall be at the 45 sole risk and expense of the Party utilizing such associated gas and will not affect the amount of cost oil and profit oil due to the other Party to the Agreement. e If the Parties agree that excess associated gas of an oil field has commercial value Contractor shall be entitled but not required to make further investment to utilize such excess associated gas subject to terms at least as attractive as those established for crude oil in Article 11 including but not limited to cost recovery for such further investment. If Contractor believes improved terms are necessary the Parties shall carry out friendly negotiations in a timely manner to find a new solution to the utilization of the said excess associated gas and reach an agreement in writing. f Expenses incurred by the Contractor in the production and use of the associated gas of an oil field as stipulated in Article 12.1 and those incurred in carrying out any feasibility study on the utilization of the excess associated gas shall be charged to the development cost of the oil field. The time period between the notice of discovery provided for by section 311 of the Act and the application for grant of a petroleum production licence may be extended pursuant to section 312 of the Act if necessary to provide reasonable time to conduct an appraisal programme and to develop a gas market.

12.2 Non Associated Gas. a When the Contractor in accordance with Article 8.2 has informed the Minister of any non associated gas discovery within the contract area that is of potential commercial interest the Parties shall promptly carry out friendly negotiations to reach agreement on the additional terms necessary for commercial development and production of the discovery. The agreement which shall form an annex to this Agreement shall be based on and include the following principles 45 The petroleum production licence shall be extended as may be required to allow for commitment of the reserves for the life of the gas project and consistent with the terms for marketing that may be negotiated with the buyers of the gas. The cost recovery rate and the Contractors profit gas share shall be negotiated by the

Parties taking into consideration the actual conditions in the gas field and the markets for such gas so that the Contractor shall be able to obtain an economic benefit acceptable to the Contractor. If the Parties fail to reach an agreement within three 3 years after the date of commencement of negotiations the Government shall have the right unilaterally to put up the gas field for bidding but shall keep as confidential the substance of any previous and future negotiations undertaken with Contractor. In such case Contractor shall be entitled to participate in the bidding. b Following the signature of the agreement herein the Contractor shall work out an appraisal programme for the discovered gas field according to the terms and conditions determined in the said agreement and submit it to the GGMC for review pursuant to Article 6.4. The Contractor shall carry out the appraisal programme 46 which was reviewed and agreed upon with GGMC. The expenses incurred in carrying out the said appraisal programme by the Contractor shall be charged to the exploration costs of the contract area. After completion of the appraisal programme of a gas field the Contractor shall submit a report on the appraisal programme to GGMC for its review and discussion. If Contractor dees that a gas field is non commercial the corresponding area covered by the gas field may be retained in the contract area during the exploration period. However at the expiration of the exploration period if Contractor still considers the said gas field non commercial the area covered by the said gas field shall be excluded from the contract area. With respect to a gas field which has potential commercial value but has not been developed because the market and consuming facilities are not available the period during which the gas field is retained in the contract area shall be extended at the request of the Contractor. Such extended period however shall not be more than five 5 consecutive contract years after the date of expiration of the exploration period hereunder. In case the time necessary for the market to develop and for the consuming facilities to be constructed for the gas field exceeds such extended period Contractor shall then have the right to request from the Minister a grant of further extended period. Prior to expiration of the exploration period if the Parties agree that any commercial gas field needs to be reappraised because of some favourable factors the Contractor shall work out and submit a new evaluation report on the gas field and submit

it to 47 the GGMC for its review pursuant to Article 6.5 and any expenses incurred in doing so shall be cost recoverable. D If the Contractor retains a gas field beyond the expiration of the exploration period pursuant to Article 12.2 c the Contractor shall pay to the Minister at the commencement of each year of the retention period an annual rental to be arrived at through friendly negotiations but which shall be no less than two hundred thousand United States Dollars U.S.200000.. The holding fee shall be applied on a pro rata daily basis in the event the Contractor relinquishes the gas field or declares such gas discovery to be a commercial discovery prior to the end of the such year. 12.3 General Conditions Applicable to Natural Gas. a The Contractor shall have the primary responsibility for marketing all the available natural gas from the contract area and for negotiating for the sale thereof on a joint basis at fair market prices and terms common to both the Minister and the Contractor. The Contractor will pursue markets both within and outside Guyana and seek to market natural gas to the highest realization outlets after deduction of transportation costs. The Contractor will seek to recognize natural gas potential value at the international value of alternative fuels in the end user market of the buyers. b The Contractor shall have the right but not the obligation to process natural gas for conversion to liquids chemicals or similar gas utilization projects and Contractor shall have the right to dispose of the liquids or products therefrom. The Contractor shall have the right to process natural gas for recovery of the liquids contained therein and such liquids sold shall be treated as crude oil. The Parties shall carry out friendly negotiations to reach 48 an agreement on the valuation of such liquids when the Contractor submits a proposal for such development. The agreement shall be based on principles for valuation of crude oil provided in Article 13 taking into consideration the specific components of the liquids recovered from the natural gas. c The Contractor shall have the right to use natural gas both associated gas and nonassociated gas as may be required for oil field and gas field operations including the right to reinject for pressure maintenance and enhanced recovery without charge fee or royalty. Hi 49 Article 13 Valuation of Crude Oil 13.1 For the purpose of this Agreement the value of a barrel of crude oil shall be the average fair market price determined as follows as soon as practicable after the end of each

calendar month in which crude oil has been produced and sold from any field pursuant to this Agreement an average price in terms of United States dollars per barrel fob delivery point for each field shall be determined in respect of production during that calendar month. It is understood that production from different fields may be of different quality and that separate average prices may accordingly be determined for any calendar month in respect of production from each field; the prices aforesaid shall be determined as follows in the event that fifty percent 50 or more of the total volume of sales by the Contractor during the calendar month of crude oil of a given quality produced hereunder from a field were third party sales as hereinafter defined the price of all crude oil from such field of that quality shall be deemed to be the simple arithmetic average price actually realised calculated by dividing the total receipts from all such sales calculated fob the delivery point by the total number of barrels of crude oil sold from such field in such sales; 50 in the event that less than fifty percent 50 of the total volume of sales by the Contractor during the calendar month of crude oil of a given quality produced hereunder from a field were third party sales the price of all crude oil from such field of that quality will be determined by the arithmetic average of aa the simple arithmetic average price actually realised in the third party sales during the calendar month of such crude oil produced hereunder if any calculated by dividing the total receipts from all such sales calculated fob the delivery point by the total number of barrels of crude oil sold in such sales from such field; and bb the simple arithmetic average price per barrel at which one or more crude oils of similar quality to the crude oil are being sold such price being determined by calculating the average for the month in which production takes place of the mean of the high and low fob price or prices for each day of those crude oils as quoted in Platts Crude Oil Market Wire daily publication. In the event that Platts ceases to be published or is not published for a period of thirty 30 consecutive days then the Parties shall agree on an appropriate alternative publication. 51 In determining the final price account shall be taken of any differences between the crude oil and the crude oils quoted in Platts for quality API gravity sulphur pour point product yield as well as differences in quantity delivery time payment and other contract terms to the extent known. Allowance will also be made to take account

of the market area into which the crude oil is sold should it be different from the area used for Platts. The selected crude oils will be agreed between Contractor and the Minister in advance for each calendar year and in making the selection preference will be given to crude oils of similar quality to crude oil from the relevant field. The arithmetic average aforesaid will be determined by the percentage volume of total sales of crude oil by Contractor that are and that are not as the case may be third party sales during the calendar month in question. all such prices will be adjusted to fob delivery point. for the purposes of this Article third party sales of crude oil made by the Contractor shall include any third party sales made by the Contractor on the Ministers behalf pursuant to Article 14 but shall exclude 52 aa sales whether direct or indirect through brokers or otherwise of any seller to any affiliated company of such seller unless at demonstrably arms length price; bb crude oil exchanges barter deals or restricted or distress transactions or any crude oil transaction which is motivated in whole or in part by considerations other than the usual economic incentives for commercial arms length crude oil sales; cc Government to government sales. The Contractor shall be responsible for determining the relevant prices in accordance with this Article. The calculation basis of calculation and the price arrived at shall be supplied to the Minister and shall be subject to agreement by the Minister before it is finally determined. Pending final determination the last established average crude oil price shall be used. During the first calendar year of production from the contract area the Contractor and the Minister will meet in order to establish a provisional selection of the crude oils and an appropriate mechanism for the purposes of giving effect to Article 13.1 bii. This selection will be reviewed annually and modified if necessary. In the event of any difference or dispute between the Contractor and the Minister concerning selection of the crude oils the calculation or the basis of calculation of the prices and the prices arrived at or generally about the manner in which the prices are determined according to the provisions of this Article the matter or matters in issue shall finally be resolved by a sole expert appointed pursuant to Article 26.3. 53 For the purposes of this Article in determining the quality of a crude oil regard shall be given to all relevant characteristics including but not limited to gravity sulphur and metal pour point and product

yield. 54 Article 14 Disposal of Production Each of the Parties shall have the right to take in kind at the delivery point and separately dispose of its share of the total quantities of production available under this Agreement. The Contractor shall have the right to use as much production as may be needed in any petroleum operations within the contract area and also within the transportation and terminal system. In the event of third party usage of the transportation terminal systems the quantities so used or lost outside the contract area shall be proportionate to aggregate use of that transportation and terminal system. All quantities so used or lost shall be excluded from any calculations of entitlement pursuant to Article 11. The quantity of production to which the Minister is entitled pursuant to Article 11 shall be measured and delivered to the Minister at the delivery point and the Minister shall be responsible for all costs and risks associated with the Ministers lifting entitlement from and after the delivery point. Within twelve 12 months after the Ministers approval of a development plan or within a later period as may be agreed between the Parties but in any event no longer than three 3 months before the first scheduled lifting of crude oil the Contractor shall propose to the Minister offtake procedures to govern the method whereby the Parties will nominate and lift their respective shares of crude oil. The details of such procedures shall be discussed and agreed upon between Minister and Contractor. The major principles of such procedures shall include the following lifting shall be carried out so as to avoid interference with petroleum operations.

55 in the event that any Party shall find itself unable for any reason to lift such quantities of crude oil as are to be lifted in accordance with procedures it shall forthwith notify the other Parties to that effect. Such procedures shall include such deterrents as the Parties may agree to prevent a Party from delaying the lifting of any quantities of crude oil not so lifted to a later period; and in the absence of any agreement to the contrary between the Parties the Contractor and the Minister shall share in each type of grade of crude oil in proportion to their respective lifting entitlement. The Contractor shall if requested by the Minister use reasonable efforts to market abroad on competitive terms all or part of the Ministers lifting entitlement subject to payment by Minister of costs normally borne by a seller in such transactions and on other terms to be agreed including an agreed

marketing fee in respect thereof. The Minister shall provide the Contractor with at least six 6 months notice before changing between receiving payment in kind as provided under Article 14.1 and seeking the Contractor to market the Ministers lifting entitlement under this Article. Subject to the provisions of Article 17 hereof the Contractor shall have the right to export at the export point chosen for this purpose all petroleum to which it is entitled under this Agreement free of any duty tax or other financial impost and to receive and retain abroad all proceeds from the sale of such petroleum.

14.5 All Guyanas export laws regulations orders directives and notifications of the Minister will apply as these relate to export destinations. The Contractor agrees to abide by the said laws regulations orders directives and notifications which shall also apply to its affiliated companies engaged in petroleum operations in Guyana. In connection with the above the Minister shall concurrently with the effective date and thereafter from time to time advise the Contractor of these destinations to which exports of crude oil shall be contrary to the said regulations orders directives and notifications. The Contractor shall be free always to sell or deliver or sell and deliver petroleum to third parties in the United States of America. Contractors terms of sale to third parties shall contain a stipulation that the regulations orders directives and notifications as set forth in this Article shall apply.

57 Article 15 Taxation and Royalty 15.1 Except as provided in Article 15.2 and 15.8 and except as otherwise set forth in this Article 15.1 no tax duty fee charge or other impost shall be levied at the date hereof or from time to time thereafter on the Contractor in respect of income derived from petroleum operations or in respect of any property held or thing done for any purpose authorised or contemplated hereunder other than a subject to the provisions of Article 21 import duties at the rates specified from time to time in the Customs Act Cap. 8201; b taxes duties fees or other imposts for specific services rendered on request or to the public or commercial enterprises generally; c rents due to Government in respect of any land rights granted or assigned to the Contractor; d annual licence rental charges due under Article 10; e subject to Article 15.7 local government rates or taxes being rates or taxes not calculated by reference to income not in excess of those generally applicable in Guyana; and 58 f stamp duties registration fees licence fees and

any other tax duty fee or other impost of a minor nature. 15.2 The Contractor affiliated companies subcontractors and individuals who are expatriates shall be subject to the income tax laws of Guyana including the Income Tax Act of Guyana Cap. 8101 and the Corporation Tax Act of Guyana Cap. 8103 and shall separately comply with the requirements of those laws in particular with respect to filing returns assessment of tax and keeping and showing of books and records. 15.3 The taxable income of the Contractor arising in each year of assessment under this Agreement for purposes of the income tax laws of Guyana including the Income Tax Act and the Corporation Tax Act referred to in Article 15.2 shall include the amounts of Contractors income tax and corporation tax paid pursuant to Article 15.4. Based on the thirtyfive percent 35 income tax rate the amount grossup that shall be included as the additional taxable income of the Contractor shall be the amount resulting from multiplying the Contractors taxable income based on fifty percent 50 of the production subject to the profit share computed without regard to any grossup by a factor of 0.53846 where such grossup factor is computed as follows The grossup factor equals Applicable Guyana tax rate Applicable Guyana tax rate or; 0.35 10.35 59 The above can be illustrated by the following example. Assuming the taxable income of the Contractor before application of Article 15.3 equals 1000 the Contractors grossedup taxable income under Article 15.3 shall be equal to 1538.46. That is 1000 plus the Contractors taxable income multiplied by the grossup factor of 0.53846 or 538.46. Likewise the Contractors tax burden under the income Tax Act and the Corporate Tax Act referred to in Article 15.2 which shall be payable by the Minister shall be equal to 538.46 or 35 of the Contractors grossedup taxable income i.e. 1538.46×0.35 . 15.4 The Minister hereby agrees a that the appropriate portion of the Governments share of profit oil delivered in accordance with provisions of this Agreement shall be accepted by the Minister as payment in full by the Contractor of Contractors share of each of the following levies whatsoever the applicable rate of such levies may be and in respect of Article 15 .4 a ii which the Minister shall then pay on behalf of the Contractor to the Commissioner of Inland Revenue i. the share of royalty payable by Contractor pursuant to Article 15.6; ii. the Contractors share of the income taxes imposed by the laws of Guyana including but not

limited to income tax imposed by the Income Tax Act and corporation tax imposed by the Corporation Tax Act and payable at the date hereof or from time to time thereafter and any other levy or charge on 60 income or profits which may become payable from time to time under any laws acts statutes regulations or orders by the Government; and iii. any other similar charge imposed and payable in respect of petroleum operations at the date hereof or from time to time hereafter except charges of the type specified in Article 15.1 ad. 15.5 The Contractor shall provide the Minister with the Contractors income tax returns who shall submit same on his behalf to the Commissioner of Inland Revenue. On receipt of notice of assessment issued by the Commissioner of Inland Revenue the Minister shall pay corporation tax on behalf of the Contractor as provided under Article 15.4 aii and shall be entitled to receive on behalf of the Contractor from the Commissioner of Inland Revenue properly prepared receipts required under this Article 15.5. Within one hundred and eighty 180 days following the end of each year of assessment the Minister shall furnish to Contractor proper tax certificates in the Contractors name issued by the Commissioner of Inland Revenue acting in accordance with the Income Tax Act and the Corporation Tax Act respectively. Such certificates shall state the amount of tax paid and other particulars customary for such certificates.

15.6 The Governments share of profit oil specified in Article 11 includes royalty payable by the Contractor at the rate of one percent 1 of crude oil produced and sold and delivery to the Minister pursuant to Article 14 of his share of profit oil equivalent to royalty shall constitute payment of such royalty in kind. Within one hundred and eighty 180 days following the 61 end of each year of assessment receipts evidencing payment of Contractors royalty shall be furnished by the Minister to the Contractor stating the amount and other particulars customary for such receipts.

15.7 Subject to the conditions of section 49 of the Act the Minister may remit in whole or in part or defer payment of any royalties payable by Contractor.

15.8 Nothing in this Agreement shall be construed to place an obligation on the Government to file a tax return declaring its share of production or profit share or to regard such profit share as income within the meaning of section 5 of the Income Tax Act Cap. 8101 or section 4 of the Corporation Tax Act Cap. 8103.

15.9 The Minister hereby agrees that the

Contractor shall be exempt from the Property Tax Act pursuant to section 51 of the Act and any other act which amends or replaces in part or in whole the Property Tax Act. 15.10 The Minister agrees that for the duration of the exploration period and for any area within the contract area where exploration activity is in progress the provisions of section 10 b of the Corporation Tax Act Cap. 8103 shall not apply to the Contractor with respect to payments made any affiliated companies or subcontractors. The affiliated companies and subcontractors shall however be subject to withholding tax in accordance with the provisions of section 39 8 of the Income Tax Act Cap. 8101 with respect to profits remitted or deemed remitted to its head office. 62 15.11 The expatriate employees of the Contractor affiliate companies and the subcontractor shall be liable to pay personal income tax in Guyana on income earned in Guyana. Guyana represented herein by the Minister shall cause the proper authorities to issue appropriate tax certificates to expatriate employees when required. If an expatriate employee is liable to pay income tax in Guyana on income earned in Guyana he shall pay such income tax at a rate equal to the lesser of i the rate of income tax currently prevailing for individuals under the Income Tax Act Cap. 8101 being a maximum effective rate of 26.67 and ii the rate of tax prevailing at the relevant time. Likewise the amount of tax payable shall be calculated in accordance with the rules set forth in the Income Tax Act Cap.8101 as they apply as of the effective date of this Agreement to the exclusion of such rules less favourable to the taxpayer as may be enacted in the future. However should any subsequent amendment to the Income Tax Act result in the enactment of any rule or rules regarding the calculation of taxes payable which are more favourable to the taxpayer than that which is or those which are in effect on the effective date of this Agreement the taxpayer shall be entitled to invoke such amended rule or rules for the purpose of calculating his income tax liability hereunder. 15.12 An order shall be made giving effect to the provisions of this Article in statutory form and language as specified in section 51 of the Act. 63

Article 16 Contracts and Assignments 16.1 The Contractor shall upon request provide to the Minister copies of a contracts with respect to the sale or disposal of petroleum including invoices issued thereunder; b any deed of assignment of an interest of the Contractor under this Agreement

pursuant to Article 25 c any instrument by which the Contractor pledges mortgages encumbers or hypothecates its interest under this Agreement or the contract area. 64 Article 17 Domestic SUDDIV

Obligation 17.1 If the requirements of the domestic market in Guyana exceed the Ministers total entitlement from all crude oil production in Guyana then the Contractor if requested by the Minister shall sell crude oil in Guyana on the basis of the ratio which the Contractors lifting entitlement bears to the sum of Contractors lifting entitlement plus the total entitlement of all other producers in Guyana subject to Article 17.3. The volume of crude oil which the Contractor shall be required to sell under this Article shall not exceed the Contractors share of profit oil. The Minister shall give the Contractor notice on or prior to April 1 of the year preceding the calendar year in which the Government will have the said requirement and the term of the supply shall be on a calendar year basis unless otherwise agreed. 17.2 The Contractor shall in any year have a right to supply out of Contractor lifting entitlement the proportion of the crude oil requirements of Guyana that the quantity produced from the contract area bears to the total production at the time in Guyana to the extent that such requirement is not satisfied from any contract entered into prior to the date of commencement of production from the contract area. For the purpose of this paragraph the term the crude oil requirements of Guyana means the amount by which in any year domestic demand exceeds the Ministers total entitlement to all crude oil produced in Guyana. The Contractor shall give the Minister notice on or prior to April 1 of the calendar year preceding the calendar year in respect of which Contractor wishes to exercise the aforesaid right and the term of the supply shall be on a calendar year basis unless otherwise agreed. Notwithstanding the foregoing the Contractor shall have the right to supply the total amount calculated pursuant to the foregoing provisions. 65 17.3 The price payable for the sale of crude oil pursuant to this Article shall be paid in United States dollars or other currency as may be agreed at a place specified by the Contractor within thirty 30 days of receipt of the Contractors invoice by the Minister and shall be determined in accordance with Article 13. All sums overdue shall bear interest at the agreed interest rate 17.4 Any sale of crude oil as provided for in Article 17.1 and 17.2 shall occur at the delivery point or such other point as the

Minister and the Contractor may mutually agree. 17.5 All terms and conditions for the sale of crude oil pursuant to this Article shall be specified in a contract of sale entered into between the Minister and the Contractor.

Article 18 Guyana Resources 66

18.1 In the conduct of petroleum operations pursuant to this Agreement the Contractor shall give preference to a the purchase of Guyanese goods and materials provided that such goods and materials are available on a timely basis of the quality and in the quantity required by the Contractor at competitive prices; and b the employment of Guyanese subcontractors in so far as they satisfy the Contractors financial and technical requirements and meet the requirements of Article 18.1a.

18.2 The Contractor shall establish appropriate tender procedures for the acquisition of goods materials and services which shall ensure that Guyanese suppliers and subcontractors are given adequate opportunity to compete for the supply of goods and services.

18.3 Within ninety 90 days after the end of each calendar year the Contractor shall provide the Minister with a report outlining its achievements in utilizing Guyanese resources during that calendar year.

Article 19 Employment and Training 67

19.1 Subject to the requirements of any law relating to immigration the Government shall provide necessary work permits and other approvals required by the Contractor for employment of expatriate employees in Guyana for the purpose of petroleum operations.

19.2 Without prejudice to the right of the Contractor to select employees and determine the number thereof in the conduct of petroleum operations the Contractor shall to the maximum extent practicable employ and encourage subcontractors to employ Guyanese citizens having appropriate qualifications and experience.

19.3 During each year of the term of the petroleum prospecting licence or any renewal thereof the Contractor shall make available to the delegatee the following amounts

Period	Initial	Initial First	Renewal	First Renewal	Second Renewal	Second Renewal	Renewal Phase
1	2	1	2	1	2	1	2

for one or more of the following purposes

Training Fee	U.S	30000	35000	40000	40000	45000	45000
68 a							

to provide a mutually agreed number of Guyanese personnel nominated by the delegatee with onthejob training in Contractors operations in Guyana and overseas or practical training at institutions abroad or with onthejob training in Contractors operations in Guyana and overseas and practical training at

institutions abroad particularly in the areas of logistical planning for undertaking petroleum operations seismic acquisition and interpretation economic analysis petroleum accounting and contract administration; b to send qualified Guyanese personnel selected by the delegatee on courses not exceeding one year at universities colleges or other training institutions mutually selected by Contractor and the delegatee; c to send Guyanese personnel selected by the delegatee to conferences and seminars related to the petroleum industry; d to purchase advanced technical books professional publications scientific instruments or other equipment required by the delegatee.

69 Article 20 Rights to Assets and Insurance 20.1 Rights to Assets. a The Contractor shall have the right to use free of charge assets previously installed by the Contractor in relinquished areas which are required for its operations in the remaining portion of the contract area provided that in the event of relicensing of the relinquished area such licence shall exclude the aforesaid assets. b Subject to Article 20.1 c upon expiry or termination of this Agreement in accordance with the provisions hereof the Contractor shall upon notification by the delegatee pursuant to Article 20.1 d i. deliver to the Minister free of charge in good order and condition fair wear and tear excepted all installations works pipelines pumps casings tubings engines and other equipment machinery or assets of a fixed or permanent nature constructed used or employed by the Contractor or the operator in the contract area; ii. deliver to the Minister free of charge any fixed assets relating to petroleum operations outside the contract area and movable assets owned by the Contractor or the operator and used or employed in connection with petroleum operations and located in Guyana for which costs have been fully recovered in accordance with Annex C herein; where costs have not been fully recovered the provisions of Article 20.1 biii shall apply; iii. sell to the Minister any other assets owned by the Contractor or operator and 70 used or employed by the Contractor or operator in the contract area or elsewhere in Guyana in connection with petroleum operations at a price equivalent to the unrecovered cost of the assets. c The above provisions of Article 20.1 b shall not apply to i. assets which are still required by the Contractor or operator for use in respect of an area in Guyana subject to another petroleum Agreement at the time of expiry or termination of this Agreement; ii. equipment

and other assets rented or leased by Contractor in Guyana; iii. equipment and other assets rented or leased by Contractor and imported in Guyana for use in petroleum operations and subsequently exported therefrom; iv. equipment and any other assets owned or leased by a subcontractor; v. household goods which are the personal property of employees of the Contractor; vi. equipment and assets otherwise not owned by Contractor. 71 d The Contractor shall notify the Minister of all assets acquired as provided in section 4 of Annex C to this Agreement. i. At least six 6 calendar months before expiry of the term of this Agreement within three 3 calendar months following notice of termination of this Agreement or promptly following cancellation of all licences the delegatee shall notify the Contractor of the assets to be delivered or sold to the Government. ii. Subject to the terms and the provisions of this Article the Contractor shall not within one 1 year of the date upon which it estimates that termination of this Agreement will occur remove from the contract area or sell any assets of a fixed or permanent nature which might be deliverable to the Government under this Article without the consent of the Minister such consent not to be unreasonably withheld. iii. Abandonment Programme and Budget. aa Within sixty 60 days after the expiration of the term of this Agreement or the sooner relinquishment of some or all of the contract area the Contractor shall carry out to the Ministers satisfaction an abandonment programme agreed with the Minister for all installations and pipelines provided by Contractor under this Agreement that the Minister elects not to have delivered up to him in accordance with Article 72 20.1b. With respect to the area being relinquished or with respect to the area being relinquished and facilities thereon such abandonment programme shall comply with and be limited to internationally accepted standards prevailing at the time of abandonment. bb Concurrent with the submission of a development plan as provided in Article 8.4 the Contractor shall submit for the Ministers approval a proposed abandonment programme and budget covering all such installations and pipelines provided by Contractor under this Agreement. cc The Minister shall act without unreasonable delay in reaching a decision on the Contractors proposal under Article 20. Idiiibb and may approve or modify or impose conditions thereon. Before modifying or imposing conditions on the proposal the Minister shall notify the

Contractor of the proposed modification or conditions and give the Contractor the opportunity to make written representations within sixty 60 days thereafter about the proposed modifications or conditions. After taking into consideration such representations the Minister and the Contractor shall make their best efforts to mutually agree on the proposed modifications or conditions of the abandonment programme and budget. In the event that the Minister and Contractor cannot mutually agree on the proposed abandonment programme and budget either Party may by written notice to the other Party propose that the dispute be referred for determination in accordance with the provisions of Article 26. dd In the event that the Contractor does not present a timely proposal to the Minister under Article 20.1diiibb the Minister after giving thirty 30 days notice to the Contractor of his intention 73 to do so may prepare an abandonment programme and budget for the contract area if the Contractor does not present a proposal by the end of the thirty 30 day period. When the Minister has so prepared the abandonment programme and budget it shall have the same effect as if it had been submitted by the Contractor and approved by the Minister. ee The Contractor shall have the right on an annual basis to propose a revised abandonment programme and budget. Such proposal shall be subject to the approval process in Article 20. Idiiicc. Any revisions to the abandonment programme and budget shall result in a revision to the guarantee referred to in Article 20.1diiihh. ff All funds required to carry out the approved abandonment programme shall be made available by Contractor when the cost for abandonment are incurred. gg All cost included in the approved abandonment programme and budget shall be recoverable as operating costs on a unit of production basis commencing during the period when the abandonment programme and budget is approved. The amount to be recovered in a respective period shall be calculated by dividing the approved abandonment budget by the estimated units of production to be produced and sold by the Contractor between the date of the Ministers approval and the anticipated date of abandonment and multiplying the result by the units produced in the period. hh The Contractor shall deliver to the Minister within seven 7 days after the date the abandonment programme and budget are approved an undertaking from Contractors immediate parent company stating that such parent company shall

ensure provision of financial and technical resources necessary to conduct the approved abandonment programme. The amount of the financial undertaking shall be equal to the amount recovered under Article 20.1diiigg less any amounts spent under the approved abandonment programme. ii Notwithstanding the provisions of Article 20.1diiiff in the event the Minister elects to have all or a portion of the facilities delivered up to him in accordance with Article 20.1b the Contractor shall pay the Minister at the time of transfer the amounts stipulated in the latest approved abandonment budget for the transferred facilities. Upon transfer and receipt of the funds the Minister shall assume all responsibilities for the transferred facilities and their abandonment and shall hold the Contractor harmless against any liability with respect thereto accruing after the date of such transfer to the Minister. iv. Subject to Article 20.1 c in the event that the Government acquires any assets pursuant to this Article the Government shall assume all liabilities with respect to such assets arising from and after the date of acquisition and shall not direct the Contractor to remove or abandon any such assets pursuant to regulation 9 1 a of the Regulations. The Government shall indemnify and hold Contractor harmless for any and all costs and claims which may arise from the use or abandonment of any asset from and after the date of acquisition by the Government. 75 v. Assets not acquired by the Government pursuant to this Article may be sold or otherwise freely disposed of by the Contractor subject to Article 21.2 and the Regulations. 20.2 Insurance. a The Contractor shall effect and at all times during the term of this Agreement maintain for petroleum operations hereunder insurance as required by applicable laws rules and regulations and of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practice in respect of but not limited to i. any loss or damage to all assets used in petroleum operations; ii. any pollution caused in the course of petroleum operations for which the Contractor or the operator may be held responsible; iii. any loss or damage to property or bodily injury suffered by any third party in the course of petroleum operations for which the Contractor may be liable to provide an indemnity pursuant to Article 2.4; iv. the Contractors liability to its employees engaged in petroleum operations. The insurance may be provided to the extent permitted by

applicable laws rules and regulations through Contractors affiliate insurance company. 76 b The Contractor shall require the operator to carry and to endeavour to have its subcontractors carry insurance of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practices. 77 Article 21 Import Duties 27.1 The Contractor affiliated companies and the subcontractors engaged in petroleum operations subject to Article 21.1a hereunder shall be permitted to import free of duty or other taxes or imposts machinery equipment vehicles materials supplies consumable items other than foodstuffs or alcoholic beverages or fuel and movable property where imports in any of the said categories have been certified by the Chief Inspector designated as such under section 3 of the Act to be for use solely in carrying out petroleum operations. The Contractor shall give prior notification to the Minister of subcontractors engaged in petroleum operations. a Subject to Article 21.1 and for as long as this petroleum Agreement remains in force the Contractor affiliated companies and subcontractors engaged in petroleum operations hereunder shall be required to pay to the relevant authority a ten percent 10 consumption tax on any fuel imports where such imports have been certified by the Chief Inspector designated as such under section 3 of the Act to be used solely in carrying out petroleum operations in any area within the contract area. 21.2 Subject to Article 20 any of the items imported into Guyana may if no longer required for petroleum operations hereunder be freely exported at any time by the importing party without the payment of any export duty or impost; provided however that on the sale or transfer by the importer of any such item to any person in Guyana other than the Government import duty shall be payable by the importer 78 on the value thereof at the date of such sale or transfer as determined by the Customs and Excise Department in accordance with their applicable rules. Each expatriate employee of the Contractor including any affiliated company and of subcontractors shall be permitted subject to the limitations and conditions set out in the Customs Act to import into Guyana free of import duty within six 6 months on first arrival his personal and household effects including one 1 motor vehicle; provided however that no property so imported by the employee shall be sold by him in Guyana except in accordance with Government regulations

and upon the payment of the prescribed customs duties. Any importation or replacement of motor vehicles shall be a matter for consultation with the Minister. Article 22 Foreign Exchange Control 79

22.1 The Contractor shall during the term of this Agreement have the right a to retain abroad all foreign exchange obtained from the export sales of Contractors petroleum and to remit and retain abroad all foreign exchange earned from sales of petroleum or assets in Guyana; b to finance petroleum operations hereunder in any currency through any combination of equity interaffiliate or third party loans intercompany open accounts or production payments but no payments of principal or interest in respect thereof shall be made from any source in Guyana other than the bank accounts referred to in Article 22.1 c; c to open and maintain bank accounts denominated in Guyanese dollars United States dollars or both in Guyana and freely dispose of the sums deposited therein without any restriction provided that the said accounts are credited only with sums deposited in foreign currency or with the proceeds of the sale of foreign currency being credits relating to or derived from petroleum operations; d to open and maintain bank accounts in any foreign currency outside Guyana which may be credited without restriction and freely dispose of any sums deposited therein without restriction and without any obligation to convert 80 into Guyana currency any part of the said amounts save that such accounts shall not be credited with the proceeds of the sale of any Guyanese currency without the consent of the Bank of Guyana; e to purchase and with the approval of the Bank of Guyana to sell Guyanese currency through the authorized banks without discrimination at the rate of exchange determined by the Bank of Guyana for authorized banks at the time of purchase or sale. 22.2 The expatriate employees of the Contractor or of affiliated companies and of subcontractors engaged in petroleum operations shall be subject to all Exchange Control Regulations that may be in effect from time to time. The expatriate employees of the Contractor affiliated companies and subcontractors should be entitled to remit freely abroad any portion of their salaries paid in Guyana and any investment income that may be earned on the portion of their salaries paid in Guyana. 22.3 Where the Contractor affiliated company or subcontractor by notice in writing to the Commissioner of Inland Revenue has guaranteed the full

and proper discharge by an expatriate employee engaged in petroleum operations of his liability to income tax under the laws of Guyana that expatriate employee shall be entitled to receive payment of the whole or any part of his remuneration in the country in which he is normally resident. Article 23 Accounting and Audits 81 23.1 The Contractor shall be responsible for maintaining accounting records relating to petroleum operations under this Agreement in accordance with the accounting procedures set out in Annex C hereto. 23.2 The Minister shall have the right to audit the accounting records of the Contractor in respect of petroleum operations in accordance with accounting procedure. 23.3 Nothing in this Article shall be construed as limiting the right of Government or any officer of Government pursuant to any statutory power to audit or cause to be audited the books of the Contractor. 82 Article 24 Force Majeure 24.1 Any nonperformance or delay in performance by any Party hereto on any of its obligations under this Agreement or in fulfilling any condition of any licence granted to such Party or in meeting any requirement of the Act or Regulations and any licence issued thereunder shall except for the payment of monies due by Government to Contractor or monies due to Government under section 43 4 of the Act unless such failure to pay is prevented by any action of the Government not be a breach of this Agreement the licence or the Act and Regulations if and to the extent that such nonperformance or delay is caused by force majeure as defined in this Article. 24.2 In this Article the term force majeure shall mean any event beyond the reasonable control of the Party claiming to be affected by such event which has not been brought about at its instance and which has caused such nonperformance or delay in performance and without limitation to the generality of the foregoing includes natural phenomena or calamities epidemics fires wars declared or undeclared hostilities invasions blockades riots strikes insurrection civil disturbances mining of the seas international disputes affecting the extent of the contract area and any governmental action that would prevent the performance of an obligation or ability of the Contractor to export petroleum except as provided in Article 14.5. 24.3 Where any Party is claiming suspension of its obligations on account of force majeure such Party shall promptly notify the other Parties in writing of the occurrence thereof giving particulars of the force majeure and obligations

affected. The Parties shall promptly carry out friendly discussions regarding the impact of the force majeure and possible remedies to the force majeure. If any Party then determines that on account of the force majeure in a portion of the contract area they 83 are unable to perform their obligations in the remaining portion of the contract area in a manner consistent with good oil field practices the force majeure shall apply to the entire contract area. Each Party shall promptly notify the other Parties as soon as the force majeure has been removed or no longer prevents it from carrying out its obligations hereunder.

24.4 Where a Party is prevented from exercising any rights or performing any obligations under this Agreement due to a force majeure the Minister hereby agrees pursuant to section 43 3 of the Act subject to the proviso therein that a period equivalent to the period of such force majeure and any additional time necessary for restoration of damages caused during a force majeure delay shall be added to the time allowed under this Agreement for the performance of such obligation and for the performance of any obligation or the exercise of any right dependent thereon and to the term of any licence issued pursuant to this Agreement. The Contractor shall have the option of terminating this Agreement without any further obligation if force majeure exceeds one 1 year.

24.5 Without prejudice to the other provisions of this Article the Parties shall meet to discuss the consequences of the force majeure and the course of action to be adopted in the circumstances.

24.6 The Government shall not invoke force majeure due to any order regulation or written directive of the Government which affects the Governments performance of its obligations under this Agreement.

84 Article 25 Assignment

25.1 Subject to the regulation 20 of the Regulations the Contractor shall not assign or transfer in whole or in part any of its rights privileges duties or obligations under this Agreement or any licence issued pursuant to this Agreement to any person firm or corporation without the prior written consent of the Minister.

25.2 The Minister shall give his consent under Article 25.1 where a the assignment or transfer will not adversely affect the performance or obligations under this Agreement; b the assignment is not contrary to the interests of Guyana; c subject to a above the assignment or transfer is to an approved affiliated company.

25.3 In the event that the Minister does not give his consent or does not refuse a request for an

assignment or transfer by Contractor within sixty 60 days of receipt of such request consent shall be deemed to have been given by the Minister. 25.4 Any assignment made pursuant to this Article shall bind the assignee to all the terms and conditions hereof and the terms and conditions of any licence issued pursuant to this Agreement unless otherwise agreed and as a condition to any assignment the assignee shall provide an unconditional undertaking to the Minister to assume all obligations by the Contractor under this Agreement or any licence issued pursuant to this Agreement.⁸⁵ 25.5 An application for assignment or transfer of a licence shall be made in accordance with Form E of the Schedule to the Regulations. The applicant shall submit such additional information relating to the intended assignee which the Minister may reasonably require to enable him to dispose of the application.

Article 26 Sole Expert. Conciliation and Arbitration ⁸⁶ 26.1 The Parties shall use their best efforts to settle amicably all disputes arising out of or relating to this Agreement. 26.2 Except for matters referred to in Articles 812 and 13 and any other matter which the Parties agree to refer to a sole expert any dispute arising out of or relating to this Agreement which cannot be settled amicably may be submitted by any Party to arbitration pursuant to Article 26.4 or Article 26.6 whichever applies. 26.3 The sole expert referred to in Article 26.2 shall be appointed by agreement between the Parties and in the event the Parties fail to agree on the sole expert within sixty 60 days after receipt of the written notice from any Party proposing the appointment of a sole expert such expert shall be appointed by the Minister of the Institute of Petroleum of the United Kingdom. The decision of the sole expert on matters referred to him shall be final and binding on the Parties. The Parties shall refer any dispute arising out of or relating to such expert decision including enforcement thereof to arbitration pursuant to Article 26.4 or Article 26.6 whichever applies. 26.4 Subject to the provisions herein the Parties hereby consent to submit to the International Centre for the Settlement of Investment Disputes ICSID any dispute relating to or arising out of this Agreement for settlement by arbitration pursuant to the rules of the Convention on the Settlement of Investment Disputes between States and Nationals of Other States hereinafter referred to as the Convention. The Government hereby irrevocably waives any claim to immunity with regard to any arbitration pursuant

to this Article 26 and to any proceedings to recognise or to enforce this Article 26 or any proceeding to recognise or enforce an arbitral award 87 rendered in an arbitration thereunder. Without prejudice to the generality of the foregoing the waiver of immunity shall include immunity from service of process and immunity from jurisdiction of any competent court and immunity of any of the Governments property from execution of any arbitration award or judgement entered thereon. 26.5 Subject to Article 26.6 prior to submitting a dispute for arbitration a Party may submit the dispute to conciliation under the Convention by a sole conciliator to be appointed by agreement of the Parties. If the Parties fail to agree on a conciliator in accordance with the Convention the dispute may be submitted for arbitration. No arbitration proceedings shall be instituted while conciliation proceedings are pending. 26.6 If the SecretaryGeneral of the International Centre for the Settlement of Investment Disputes refuses to register a request for conciliation or arbitration or if a tribunal of arbitrators constituted pursuant to Article 26.4 above determines that a dispute is outside of the jurisdiction of the International Centre for the Settlement of Investment Disputes either Party may request arbitration of the dispute before three arbitrators pursuant to the Arbitration Rules of the United Nations Commission on International Trade Law UNCITRAL. The American Arbitration Association shall administer the arbitration under the Arbitration Rules of the United Nations Commission on International Trade Law and shall act as the appointing authority when the Rules of the United Nations Commission on International Trade Law call for an appointing authority. 88 26.7 If the SecretaryGeneral of the International Centre for the Settlement of Investment Disputes refuses to register a request for conciliation and neither Party has requested arbitration under the Arbitration Rules of the United Nations Commission on International Trade Law pursuant to Article 26.6 above either Party may request conciliation pursuant to the Conciliation Rules of the United Nations Commission on International Trade Law prior to submitting the dispute to arbitration. 26.8 Conciliation or arbitration proceedings pursuant to this Article 26 shall be held in Washington DC United States of America or PortofSpain Trinidad and conducted in the English language. The Parties shall select the location from between the above mentioned options and failing agreement

between them the arbitrators shall make such selection in their stead. 26.9 The fees and expenses of a sole expert or conciliator as well as the charges for the use of the International Centre for the Settlement of Investment Disputes or other facilities shall be borne equally by the Contractor and the Minister. Each Party shall bear any other expenses it incurs in connection with expert or conciliation proceedings. In the case of arbitration proceedings the arbitrators shall assess the expenses incurred by the Parties the fees and expenses of the arbitrators the charges for the use of the facilities and any other costs related 89 to the arbitration and shall decide by whom such costs shall be paid. The arbitrators shall render a decision within six 6 months after having been appointed. 26.10 The decision of a majority of the arbitrators shall be final and binding on all the Parties and shall be enforceable in any court of competent jurisdiction. 90 Article 27 Applicable Law 27.1 This Agreement shall be governed by interpreted and construed in accordance with the laws of the Cooperative Republic of Guyana. 91 Article 28 Protection of the Environment 28.1 In accordance with the Environmental Protection Act 1996 No. 11 of 1996 the Contractor shall obtain an environmental authorization as required from the Environmental Protection Agency established under section 3 of the Environmental Protection Act 1996 No. 11 of 1996 and comply with the provisions of that Environmental Protection Act 1996 in relation to any activity of this Agreement that is governed by that Environmental Protection Act 1996 No. 11 of 1996 28.2 The Contractor is precluded from initiating any exploration or development activity on those areas outside of the contract area which the Environmental Protection Agency may determine to be sensitive or protected. 28.3 In furtherance of regulation 6 of the Regulations in the conduct of petroleum operations the Contractor shall take necessary and adequate precautions in accordance with good international petroleum industry practice against pollution and for the protection of the environment and the living resources of the sea. 28.4 If the Contractor's failure to comply with the provisions of Article 28.1 results in pollution or damage to the environment or marine life or otherwise the Contractor shall take all reasonable measures in accordance with good international petroleum industry practice to remedy the failure and the effects thereof and shall where pollution occurs treat or disperse it in an

environmentally acceptable manner. The Contractor shall not be obligated to remedy or clean up pollution or environmental damage of any type that existed prior to the commencement of petroleum operations by the Contractor or arises as a consequence of preexisting environmental conditions.

28.5 The Contractor shall notify the Minister forthwith in the event of any emergency or accident arising from petroleum operations affecting the environment and shall take such action as may be prudent and necessary in accordance with good international petroleum industry practice in such circumstances. 28.6 If the Contractor does not act promptly pursuant to Article 28.3 so as to control

or clean up any pollution within a reasonable period specified by the Minister the Minister may after giving the Contractor reasonable notice in the circumstances take any actions which are in accordance with good international petroleum industry practice and the necessary reasonable costs and expenses of such actions shall be borne by the Contractor. Article 29 Termination and

Cancellation 29.1 This Agreement shall be deemed to have been terminated if the petroleum prospecting licence granted to the Contractor pursuant to Article 3 and every petroleum production licence granted to the Contractor under Article 8 has either expired or under and in accordance with the Act and any relevant provision of this Agreement been surrendered by the Contractor or lawfully cancelled by the Minister pursuant to section 42 of the Act but save as aforesaid shall continue in full force and effect so long as Contractor continues to hold any of the said licences. 29.2 Should

any issue arise between the Parties as to whether the Contractor is in default and such issue cannot be amicably settled by consultation between the Parties and a dispute thereon is referred for resolution pursuant to Article 26 this Agreement and the aforesaid licences shall continue in force pending resolution of such dispute. 29.3 Pursuant to section 42 of the Act the Minister shall not

cancel a licence on the basis of default unless the Minister has by notice served on the licensee given not less than thirty 30 days notice of such intention and the basis of default. In the notice the Minister shall specify a reasonable date before which the licensee may submit a written response or remedy the default. 94 29.4 On termination of this Agreement or cancellation of any licence as

aforesaid the rights and obligations of the Parties shall cease by the termination or cancellation shall

not affect any right of action existing or liabilities incurred by a Party before the date of termination or cancellation and any legal proceedings that might have been commenced or continued against a Party may be commenced or continued against it. 95 Article 30 Effective Date 30.1 The effective date shall be the date on which this Agreement is duly signed. 96 Article 31 Miscellaneous 31.1 The Government assures the Contractor that the contract area lies entirely within the territorial limits of Guyana and that Guyana has sovereignty over such area. The Government shall continue to assert its right to the entire contract area and seek to resolve current or future claims if any by other States that impugn any portion of the contract area. The Government shall also use its best efforts to permit due observance of the terms and conditions of this Agreement by both Parties. Both Parties undertake not to take any action inconsistent with the terms and conditions of this Agreement. 31.2 This Agreement shall not be amended or modified in any respect except by written agreement entered into by all the Parties which shall state the date upon which the amendment or modification shall become effective. 31.3 In the event of any conflict between any provisions in the main body of this Agreement and any provisions in the Annexes the provision in the main body shall prevail. 31.4 The headings of this Agreement are for convenience of reference only and shall not be taken into account in interpreting the terms of this Agreement. 31.5 A reference to the singular in this Agreement includes a reference to the plural and vice versa. 31.6 The provisions of this Agreement shall inure to the benefit of and be binding upon the Parties and their permitted assigns and successors in interest. 97 31.7 No waiver by any Party of any one or more obligations or defaults by any other Party shall be construed as a waiver of any other obligations or defaults whether of a like or of a different character. 31.8 This Agreement supersedes and replaces any previous Agreement or understanding between the Parties whether oral or written on the subject matter hereof prior to the date of this Agreement. 98 Article 32 Stability of Agreement 32.1 The Government shall not after the effective date unilaterally increase the contractual obligations of the Contractor under this Agreement or diminish the contractual rights of the Contractor hereunder as such obligations and rights exist as of the effective date. If the Government promulgates new or amended laws makes

orders or regulations which negatively impacts the Contractors economic benefits the Parties shall promptly make revisions and adjustments to this Agreement as necessary to maintain the Contractors economic entitlements at the level existing as of the effective date.

99 Article 33 Notices

33.1 All notices and other communications to be given under this Agreement shall be deemed to have been made properly if delivered in person in writing mailed with charges prepaid or sent by telex or telecopier by one Party to the other at their respective addresses in Guyana as set forth below and copied to their overseas addresses. Any such notice or communication given as aforesaid shall be deemed to have been given and received at the time of delivery if delivered by hand or by courier or at the time of receipt if transmitted by facsimile

The Minister Responsible for Petroleum do Guyana Geology And Mines Commission Upper Brickdam Stabroek P.O.BOX 1028 Georgetown GUYANA. Attention Commissioner GGMC Facsimile 02 53047

ESSO EXPLORATION AND PRODUCTION GUYANA Ltd 233 Benmar Houston Texas 77060 UNITED STATES of AMERICA. Attention President Facsimile 2814237381 100 Address in Guyana 80 Cowan Street Kingston Georgetown GUYANA. Attention Melinda Janki Facsimile 262522

33.2 Party may by notice as provided hereunder to the other Parties and GGMC change its address and other particulars for notice purposes. IN WITNESS whereof the Parties have caused their duly authorised representatives to set their hands at the City of Georgetown in the Cooperative Republic of Guyana in the presence of one another the day and year first above written. Signed by The Minister Responsible For Petroleum Representing the Government of the Cooperative Republic of Guyana.

Ganges Street Sophia 4 Georgetown GUYANA Environmental Tel. 59222554679 Protection Fax 592 2255481 Coup tizy Agency Email epaepaguyana.org Website <httpwww.epaguyana.org>

Environmental Permit Issued under the Environmental Protection Act Cap. 20:05 Laws of Guyana the Environmental Protection Amendment Act 2005 and the Environmental Protection Authorisations Regulations 2000. Reference No. 20181204PPOIX Fees Extra Large C1 US 15500 5 years i.e.US 3100 per po year a Fees Paid USD 15500 September 24 2020 September 23 2025

Addressees Mr. Alistair Routledge President Esso Exploration and Production Guyana Limited 86

Duke Street Kingston Georgetown Guyana. Activity Payara Development Project Stabroek Block Offshore Guyana Esso Exploration and Production Guyana Limited EEPGL hereinafter referred to as the Permit Holder is hereby authorised by the Environmental Protection Agency EPA hereinafter referred to as the Agency in accordance with the Environmental Protection Act Cap 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and the Environmental Protection Regulations 2000 to undertake the Payara Development Project hereinafter referred to as the Project which includes but is not limited to drilling of subsea development wells installation and operation of subsea equipment use of a Floating Production Storage and Offloading FPSO vessel to process store and offload the recovered crude oil during production operations as well as the use of shorebase facilities and marine aviation services in support of these activities in the manner indicated in the Application submitted on December 04 2018 the Environmental Impact Assessment submitted on July 22 2020 and the Environmental and Socioeconomic Management Plan submitted on July 22 2020 which includes the Revised Oil Spill Response Plan submitted on July 22 2020 and Wildlife Response Plan all of which may be updated from time to time and are subject to the terms and conditions set forth herein and any existing or forthcoming regulations best practices guidelines and standards relevant to this project. The Permit Holder Shall

1.0 GENERAL

1.1 Comply with any directions of the Agency where compliance with such directions is necessary for the implementation of any obligations of Guyana under any treaty or international law related to environmental protection.

1.2. Ensure onshore and offshore contractors contracted by the Permit Holder are duly authorised by the Agency to conduct any activities relative to any phases associated with the project.

1.3 Restore or rehabilitate the environment to an acceptable state after any impacts resulting from any breach of the conditions of this Permit.

1.4 Comply with the approved Payara Environmental Impact Assessment Environmental and Socioeconomic Management Plan and Oil Spill Response Plan.

1.5 Comply with any forthcoming

guidelines standards best practices and the National Oil Spill Contingency Plan. 1.6 The Permit Holder shall submit within one 1 year of issuance of this Permit an updated Payara Environmental and Socioeconomic Monitoring Plan including protocols performance standards and responsibilities in Consultation with and jointly implemented by the Permit Holder and the Agency. Capacity e.g. training within the EPA shall be supported by the Permit Holder where necessary and practicable. External expertise local and international may be sourced by the EPA as may be required to augment this monitoring plan and/or conduct associated audits. The Permit Holder will be responsible for all reasonable and jointly agreed fees. Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 upon costs associated with this monitoring plan and its implementation and any associated independent audits. 1.7. The Permit Holder shall notify the Agency in writing and obtain its approval for ANY proposed changes to the operation at least 21 calendar days prior to making the change. 1.7.1. The notification shall contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition change in operation means a change in the nature or functioning or an extension or any additional installation which may have consequences for the environment. Changes to operation may include but not limited to the following i. Changes in vessels equipment or technology; ii. Installation of new and/or changes excluding routine maintenance to equipment machine apparatus mechanism system or technology serving the facility or operation; iii. Any change of technology used or installed at the facility from which effluent may be discharged or any changes in the nature composition concentration or quantity of the discharge; or iv. Any other variance prescribed by Regulation 203 of the Environmental Authorisations Regulations 2000 1.8 Comply with all applicable laws and regulations including but not limited to the following a. Environmental Protection Act Cap 2005 Laws of Guyana and associated Regulations; b. Petroleum Exploration and Production Act 1986; c. Petroleum

Exploration and Production Amendment Act 1992; d. Pesticides and Toxic Chemicals Act No. 13 of 2000; e. Pesticides and Toxic Chemicals Regulations No. 8 of 2004; f. Pesticides and Toxic Chemicals Amendment Regulations No.8 of 2007; g. All applicable policies, laws and regulations of Guyana; and h. International conventions and protocols.

1.9 The best available techniques and technologies which consider economic and technical feasibility as well as the facilities and controls described in the EIA shall be used to prevent or mitigate pollution in relation to any aspect of the operation which is not regulated by any other condition of this Permit.

1.10 The Permit Holder shall use an effective Environmental Management System with policies and procedures for environmental compliance and improvements and shall perform internal audits on at least an annual basis. The Permit Holder shall share the results of the internal audits with the Agency. The Agency at its discretion may require other independent environmental audits in accordance with applicable International Conventions and Protocols during the course of this Permit.

1.11 Employ effective operational and maintenance systems on all aspects of the facility whose failure could impact the environment. A schedule of maintenance of all vessels, equipment and/or plant shall be kept on site and made available for inspection on request by the Agency. Maintenance shall be carried out in accordance with the relevant manufacturers' specification.

1.12 Comply with the following Legislation, Guidelines, Conventions as indicated under 3.0 Administrative Framework as well as Section 6, 7 and 8 in the Environmental Impact Assessment dated July 2020 and under the following headings: Environmental Protection Act Cap.2005 Laws of Guyana; National Legal Framework; Environmental Permits and Licenses; Laws and regulations enacted by Guyana to implement the National Policy Framework; International Conventions and Protocols; and EEPGLs Operations Integrity Management System.

2 NOISE MANAGEMENT

2.1. Where practicable ensure that soundmaking devices or equipment are equipped with silencers or mufflers and are enclosed and/or utilise softstart procedures e.g. pile driving, vertical seismic profiling activities

etc. to reduce noise to levels that do not cause material harm or injury to marine species. 2.2 Implement engineering controls administrative controls and training to protect offshore workforce from high noise levels in offshore work environment. Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000

3 AIR QUALITY MANAGEMENT

3.1 Annually quantify aggregate greenhouse gas GHG emissions as well as emissions from the use of fossil fuels primarily natural gas and diesel from all offshore facilities and offshore support activities which are directly owned or controlled by Permit Holder or its dedicated contractors and is directly or indirectly related to the Project. The information must be included in the annual report required under Condition 12.5 along with the methodology employed to calculate the emissions.

3.2 Ensure all reasonable attempts are made to implement appropriate methods for controlling and reducing fugitive emissions in the design operation and maintenance of offshore facilities and to maximize energy efficiency and design facilities for lowest energy use with the overall objective to reduce air emissions. Environmentally effective and technically feasible best practices for reducing emissions must be evaluated and adopted as far as practicable.

3.3. Utilize low sulphur fuels and/or natural gas on all vessels including the FPSO in turbines reciprocating engines or boilers used for heat or power generation or to drive machinery such as compressors or pumps.

3.4 Routine flaring and venting is strictly prohibited excludes tank flashing emission standing working breathing losses low pressure streams during any developmental drilling or production activities without EPA approval. Flaring is only permissible under the following conditions Commissioning Startup or Special Circumstances as defined below

i. Commissioning shall be defined as the process of ensuring that all systems and components are designed installed tested operated and maintained according to the operational requirements or manufacturers specifications. This condition shall also apply to the commissioning of any new units or systems postproduction or the renovation of existing units or systems which may require flaring. During commissioning all gas systems must be properly installed fully leak tested and

able to receive gas before startup. ii. Startup shall be defined as the activity that occurs at the end of commissioning where production operations are initiated. The Permit Holder shall not exceed sixty 60 days of flaring during Startup unless approved by the EPA subject to Condition 3.15. fe Be35 3.6 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 The Permit Holder shall notify the Agency of the expected flaring volumes expected during startup and commissioning at least six 6 months before Startup. iii. Special Circumstances a. Emergencies i. Controlled any unavoidable expected event including inclement weather conditions strictly requiring the flaring of gas; and ii. Safety Response any unplanned event requiring the flaring of gas for safety purposes or flaring required to maintain the flare system in a safe and ready condition purge gasmakeup gasfuel gas and pilot flame. b. Maintenance i. Plannedunplanned maintenance and inspections on gas handling system and related processes and construction activities. ii. Scheduled unloading or cleaning of a well or well workover well testing production testing other wellevaulation testing or the necessary blow down to perform these procedures; and maintenance required during and after an emergency shutdown or restart. c. Restart the instance of resumption of oil production following a shutdown event. 3.4.1 Except where unplanned and required for safety where any of the abovementioned Special Circumstances conditions is expected to exceed fortyeight 48 cumulative hours the Permit Holder shall seek approval from the EPA for Flaring within the first fortyeight 48 hours of the commencement of flaring unless otherwise approved by the EPA. Ensure associated gas brought to the surface with crude oil during oil production is reinjected into the reservoir and utilized as fuel gas on the FPSO. However all feasible alternatives for gas utilization must be evaluated and adequately documented to the EPA upon request. Adopt risk assessment processes e.g. hazard and operability study HAZOP hazard identifications study HAZID etc. to assess risks associated with process upset and lossofcontainment events which could impact the environment. fic37 3.8 39 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of

Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 Adopt measures as far as practicable in accordance with the Global Gas Flaring and Venting Reduction GGFVR Partnership when considering venting and flaring options under emergency or upset conditions. Notify the Agency within twentyfour 24 hours of all process upset events or unplanned maintenance occurrences which result in a flaring event on the FPSO. The following conditions must be complied with when flaring from the FPSO is necessary in accordance with Condition 3.4 3.9.1 3.9.2 3.9.3 3.9.4 3.9.5 3.9.6 ii. iii. iv. Submit the following documents as soon as practical after seeking approval for flaring Description of conditions which includes but is not limited to commissioning schedule startup schedule and/or maintenance schedule; where applicable; Detailed schedule for flaring; Justifications for required approval; and Daily projected flare volumes. Employ a metering system with an accuracy of plus or minus five 5 percent to determine the quantity of gas to the flare system. Calibrate and maintain flare metering system in accordance with the manufacturers recommendations. The calibration certificate must be submitted to the EPA upon completion of calibration. Maintain a consolidated record of all flaring events regardless of size and duration including begin times end times and volumes and meter calibration and maintenance records for six 6 years. The records must be kept on the FPSO for two 2 years and be available for inspection by the EPA upon request thereafter. Ensure flare equipment and gas handling systems are inspected and correctly installed function tested and monitored maintained according to manufacturers specifications and certified for use under operation conditions prior to oil production and throughout operations. Ensure flaring stack is installed a safe distance from storage tanks containing flammable liquids or vapours and accommodation units.

Environmental Permit Ref. No. 20181204PPOIX ssued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 3.9.7 3.9.8 3.9.9 3.9.10 3.9.11 3.9.12 3.9.13 3.9.14 Ensure that flare equipment gas handling systems and all combustion equipment is designed and built to appropriate engineering codes and certified standards. Flaring system must only be operated within

manufacturers recommended specifications. Use efficient flare tips and optimize the size and number of burning nozzles. Ensure use of a reliable pilot ignition system. The burner must have a continuously burning pilot system or other automatic ignition system that ensures that it is lit and gives the operator immediate warning if it fails to operate. Minimize risk of pilot flare blowout by ensuring sufficient exit velocity and providing wind guards. Determine the minimum exit velocity required to avoid pilot flare blowout and submit information to the EPA one hundred and eighty 180 days before planned Startup. Install high integrity instrument pressure protection systems to reduce overpressure events and avoid or reduce flaring situations. Operate flaring to control odour and smoke emissions where practicable. Ensure the volumes of hydrocarbons flared are recorded and submitted to the Agency in a monthly report as required by Condition 12.20 and the estimated quantity of specific pollutants emitted from flaring including but not limited to carbon dioxide CO₂ carbon dioxide equivalent CO₂ e nitrogen oxides NO_x sulfur oxides SO_x carbon monoxide CO particulate matter hydrogen sulfide H₂S volatile organic compounds VOCs; methane and ethane; benzene ethyl benzene toluene and xylenes BTEX; glycols and polycyclic aromatic hydrocarbons PAHs must also be reported. The report must include methodology used to determine the concentration of each pollutant. Implement burner maintenance and replacement programs in accordance with manufacturers recommendations to ensure continuous maximum flare efficiency.

3.10 3.11 3.12 313 3.14 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 3.9.15 Maximize flare combustion efficiency by controlling and optimizing flare fuel air and stream flow rates to ensure the optimum ratio of assist stream to flare stream. Determine the optimum ratio of assist stream to flare stream. 3.9.16 Minimize liquid carryover and entrainment in the gas flare stream with a suitable liquid separation system with sufficient holding capacity for liquids that may accumulate and which must be designed in accordance with good engineering practice. Employ all reasonable efforts to prevent equipment breakdowns and plant upsets which could result in flaring and provisions must be made

for equipment sparing and plant turndown protocols. All equipment relating to the gas handling water handling and oil handling systems on the FPSO must be supplemented in accordance with the reliability study outcomes under Condition 3.16 which includes evaluation of equipment sparing to be stored at a shorebase facility in Guyana or on the FPSO. Equipment spares must be located in Guyana before the Startup and shall be maintained in accordance with Condition 1.11. Ensure there is no use of chlorofluorocarbons CFCs and polychlorinated biphenyls PCBs on the FPSO; except as may be authorised by the Agency. Monitor exhausts daily for smoke and particulates; in instances of visible smoke the causes must be investigated and resolved. Ensure there is no discharge of ozonedepleting substances ODS in accordance with the International Convention for the Prevention of Pollution from Ships MARPOL Annex VI. If well testing must be performed the following measures must be implemented i. During well testing only the minimum volume of hydrocarbons required for the test must be flowed and welltest durations must be reduced to the extent practical. An efficient test flare burner head equipped with an appropriate combustion enhancement system must be selected to minimize incomplete combustion black smoke and hydrocarbon fallout to the sea. fx Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 li. Volumes of hydrocarbons flared must be recorded and reported in the End of Well report as required by Condition 12.9. The estimated quantity of specific pollutants emitted from flaring including but not limited to carbon dioxide CO₂ carbon dioxide equivalent CO₂e nitrogen oxides NO_x sulfur oxides SO_x carbon monoxide CO particulate matter hydrogen sulfide H₂S volatile organic compounds VOCs; methane and ethane; benzene ethyl benzene toluene and xylenes BTEX; glycols and polycyclic aromatic hydrocarbons PAHs must also be reported. The report must include methodology used to determine the concentration of each pollutant. ili. Provide adequate gas sensors that are to be appropriately located during testing operations to ensure all sources of gas can be detected. iv. Ensure all pipes and joints are regularly monitored for leakages and fugitive emissions. Additionally all collected gaseous streams must be

burned in high efficiency flares and leak detection and repair programs must be implemented and maintained. v. Ensure the well test is kept to the minimum practical time in keeping with preapproved schedule between the Agency and Permit Holder. Also notify the Agency immediately in case of any deviationvariation to the well test. 3.15 Approval for flaring shall not be issued for a period exceeding two 2 months; noting where flaring exceeds or is expected to exceed the two month period the Agency may approve continued flaring on a monthly basis after taking into account the study and report set out in Condition 3.16 below or as the Agency may see fit. 3.16 The Permit Holder shall conduct a study of minimum feasible volumes andor durations for flaring associated with Startup production restart emergencies special testing plannedunplanned shutdown flare pilot maintenance and plannedunplanned maintenance. The study will also consider equipment reliability and include an evaluation of spare pieces of equipment related to gas handling. Utilising such study the EPA and Permit Holder will meet and mutually agree to necessary amendment to Condition 3.4 to incorporate such study results. The Permit Holder shall submit to the EPA terms of reference for the study three 3 months before planned startup and commissioning of the gas injection system. 3.17. Inaccordance with the Polluter Pays Principle enshrined in the EP Act Cap 2005 within three 3 months of issuance of the Permit a fine framework shall be 10 fe4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8

Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 established by the EPA for flaring volumes beyond the permitted period referenced in Condition 3.4 taking into account international standards and norms applied to the Oil and Gas Industry. Applicability and institution of the fines shall be determined by the Agency. WATER QUALITY MANAGEMENT Marine discharges from well drilling hydrostatic testing of flow lines and risers and the overall production operations shall be undertaken in a manner that does not cause or permit the entry of contaminants into the environment in amounts concentrations or levels in excess of that prescribed by the regulations or stipulated by any environmental authorisation. Notify the Agency in writing of any change in the type of drilling fluid

used disposal/recycle/treatment method outlined. Submit upon receipt a copy of the FPSOs International Sewage Pollution Prevention Certificate along with a copy of the Certificate of Type Approval for Sewage Treatment Plants and associated appendices. Discharges of pollutants/contaminants in coastal waters i.e. twelve 12 nautical miles in amounts/concentrations or levels in excess of that prescribed by the regulations or stipulated by any environmental authorisation are prohibited. Visually check and take appropriate measures to mitigate occurrence of free oil resulting from discharge of NADF drill cuttings. Maintain an inventory of all drilling fluid constituents added downhole for each well. Produced water from the reservoir shall be treated onboard the FPSO to an acceptable specification prior to discharging. The oil specification of produced water to be discharged shall not exceed 42 mg/L on a daily basis or 29 mg/L on a monthly average. If the oil of produced water is observed to exceed these limits the produced water shall be routed to an appropriate storage tank on the FPSO until further treatment system is restored and the discharge meets the specification above. Monthly reports shall be submitted to the EPA to demonstrate compliance with the limits set out in condition 4.7. 4f4.9 4.10 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 The Agency reserves the continuous and irrevocable right to order the sampling and analysis of any discharges/effluent or waste emanating from the Project to be analysed by an independent certified laboratory or institution approved by the Agency at the expense of the Permit Holder. The Permit Holder shall complete a study to investigate and determine the feasibility/benefits/implications and cost of reinjecting one hundred 100 percent of produced water and shall be guided by the principles set forth in conditions 4.10.1 4.10.6. 4.10.1 4.10.2 4.10.3 4.10.4 4.10.5 4.10.6 Within thirty 30 days of the date of Permit the Permit Holder shall submit to the EPA for approval terms of reference for the conduct of a study detailing the feasibility of reinjecting produced water in lieu of routine discharge to the ocean including implementation for future installation of facilities for produced water injection and an evaluation of any potential risks to the reservoir from

injection a full cost benefit analysis and Permit Holders recommendations. Within 180 days of the date of the EPAs approval of the terms of reference the Permit Holder shall complete the study's final reports. The study shall be conducted by an independent consultant/contractor approved by the Agency not to be unreasonably withheld. During the conduct of the aforementioned study the Permit Holder shall meet with the EPA upon request to provide any updates on the progress of the study discuss the issues raised by the study and come to an agreement on resolution of issues and/or concerns regarding the study. Thirty 30 days before completion of the study the Permit Holder will issue a draft report to enable the EPA to provide inputs into the final report. The final report shall not be deemed final until approved by the EPA. Upon issuance of the Permit the Permit Holder shall update its base design for the Project to include i tie in points and ii space for potential produced water injection equipment. Condition 4.7 may be amended by the Agency in consideration the aforementioned approved study and the conclusions of the EPA the fd Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 20:05 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 Permit Holder and the Minister of Natural Resources the Minister Responsible for Petroleum.

4.11 The use of fluids that contain diesel as the principal component of the drilling mud liquid phase is prohibited. 4.12 For well sections requiring nonaqueous drill fluid NADF use only lowtoxicity International Oil and Gas Producers IOGP Group 3 base fluid. 4.13 Use solids control and cuttings dryer systems to treat cuttings so that the end of well maximum weighted mass ratio averaged over well sections drilled using IOGP Group 3 nonaqueous fluids polycyclic aromatic hydrocarbons 0.001 by weight and total aromatic 0.5 by weight not exceeding 6.9 grams of non aqueous based fluids per 100 grams of wet drill cuttings. The end of well maximum weighted mass ratio averaged over all well sections drilled using nonaqueous fluids shall be determined using an internationally recognised and EPA approved method and the results must be submitted in the End of Well Report. 4.14 Antifouling chemical dosing to prevent marine fouling of offshore facility cooling water systems shall be carefully considered. Available alternatives should be evaluated and where

practical the seawater intake depth should be optimised to reduce the need for use of chemicals. Appropriate screens should be fitted to the seawater intake if safe and practical to avoid entrainment and impingement of marine flora and fauna. 4.15 The cooling water discharge should be designed to ensure that the temperature is within 3C of ambient seawater temperature at 100 meters. 4.16 Monitor temperature of FPSO cooling water discharges to ensure a temperature rise of no more than 3C above ambient water temperatures at 100 m. 4.17 Abide with the International Maritime Organization IMO Guidelines including the International Convention for the Control and Management of Ships Ballast Water and Sediments 2004 with the exception of Regulation D2 Ballast Water Performance Standard while the FPSO is on station and abide with the International Convention for the Prevention of Pollution from Ships MARPOL. 4.18 Adhere to operational controls regarding material storage washdowns and drainage systems. 13 fk DE Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 4.19 4.20 4.21 4.22 4.23 4.24 4.25 4.26 4.27 4.28 Treat bilge water in accordance with MARPOL to ensure compliance with an oil in water of 15 ppm as applicable. Ensure there is no visible oil sheen from commissioningrelated discharges i.e. flowlinesrisers commissioning fluids including hydrotesting waters or FPSO cooling water discharge. . Prohibit the discharge of drilling fluids which contain usedwaste engine oil cooling oil gear oil or lubricant and which has previously been used for purposes other than borehole lubrication. Prohibit the discharge of cuttings generated using drilling fluids which contain conventional mineral oil IOGP Group 1 except when the mineral oil is used as a carrier fluid transporter fluid lubricity additive or pill. Discharge of diesel oil halogenated phenol compounds or chrome lignosulfonate is prohibited. Wastewater that is released from the onboard Sewage Treatment Plant when sampled three times or more over 24 hours shall comply with the aquatic discharge standards in accordance with MARPOL 7378 regulations. Macerate food waste in accordance with MARPOL prior to discharge. Measure residual chlorine concentration of treated sewage discharges on FPSO monthly to ensure that it is below 0.5mg/L in accordance with

MARPOL 7378 regulations; keep log of results and submit in the quarterly compliance report. Safety management system on board shall include steps for regular checks and maintenance of the sewage plant check pipes storage tanks and other equipment as per manufacturers instructions; checks and maintenance of the sewage plant and other equipment should be logged and documented for the annual compliance report. Inform the Agency in the event that wastewater from the sewage treatment plant is diverted to the oilybilge water separator providing the reasons for this occurrence its duration the quantity diverted and actions taken to resolve the issue should be provided. Further any discharge from the oilybilge separator in this occurrence should be in accordance with Annex IV of MARPOL. . fk Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 4.29 4.30 4.31 4.32 5.0 5.1 5.2 53 5.4 55 5.6 Perform daily visual inspections on the FPSO of discharge points to ensure that there are no floating solids or discolouration of the surrounding waters and document observations provide same in the quarterly compliance report. Ensure that leak detection mechanisms are in place for those equipment treatment and storage facilities fuel chemical etc. on the drillship in accordance with international offshore petroleum industry standards. Utilize leak detection controls during FPSO offloading e.g. for breach of floating hose instrumentation procedures to perform volumetric checks. Utilize leak detection controls during installation and operation of SURF equipment e.g. pigging and pressure testing of lines periodic ROV surveys of subsea trees manifolds flowlines and risers. HAZARDOUS AND NONHAZARDOUS WASTE MATERIALS MANAGEMENT Adhere to the provisions of the Environmental Protection Hazardous Waste Management Regulations 2000. Ensure effective management of waste and recoverable materials generated by the project in accordance with internationally acceptable standards and the Environmental Protection Act Cap. 2005 Laws of Guyana. Dispose of all wastes in accordance with the Waste Management Plan and individual vessel Garbage Management Plans. Waste management companies contracted by the Permit Holder to manage waste which includes collection

transportation storage treatment and disposal shall be authorized by the Agency. Maintain a high level of housekeeping sanitary and hygienic practices and environmental standards of all facilities vessels and associated structures at all times. Operate incinerators in accordance with the Manufacturers Operating Manuals and Waste Management Plan. Ensure that the incinerators are operated only by trained personnel. fi57 5.8 59 5.10 5.11 5.12 513 514 515 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 Perform periodic inspections of the FPSOs waste storage areas and containers and maintain an inspection log. Maintain an inventory of wastes stored aboard the FPSO and Drill Ship. Maintain a record of hazardous materials used in operation and submit in the Annual Report a summary table with the following information a Name and description; b Classification e.g. code or class; c Quantity used per month; d Characteristics that makes the material s hazardous e.g. flammability toxicity. Maintain copies of waste manifests and chain of custody forms. Transport of hazardous waste offsite for treatment and/or disposal MUST be accompanied by a manifest signed by the hazardous waste generator and transporter; the manifest must be provided within the Annual Report as well as submitted to the Agency electronically and should include the name and address of waste generator; name and description of the waste and hazard class; number and type of containers; quantity transported and name and address of receiving facility. Periodically audit waste contractors to verify appropriate waste management practices are being utilized. Utilise low toxicity chemicals/materials where practical. Each chemical/material should be managed in accordance with the associated Safety Data Sheet. Implement best practices outlined in the IFC Environmental Health and Safety EHS General Introduction Guidelines and Offshore Oil and Gas Development Guidelines with respect to the prevention of spills of hazardous materials from offshore facilities during chemical transfers and loading activities. Radioactive sources will be returned to their supplier and radioactive wastes will be sent according to the Waste Management Plan to a facility permitted to manage such wastes. 16

few De5.16 517 5.18 519 5.20 5.21 5.22 523 Environmental Permit Ref. No. 20181204PPOIX
Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental
Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000
The Agency considers all materials listed in Schedules I and II of the Environmental Protection
Hazardous Waste Management Regulations 2000 to be hazardous. Please see attached list of
Hazardous Wastes to be controlled. Fuel oils and chemicals shall be appropriately secured and
contained in accordance with their Material Safety Data Sheet. Submit the types and quantities of
chemicals stored in offshore facilities as part of reporting requirements stipulated in Condition 12.5
of this Permit. Spent oils lubes and chemicals that cannot practically and safely be recycled through
the FPSO process will be sent to shore for disposal in a manner approved by the EPA. Disposal of
usedwaste oils and chemicals in the marine environment or in any waterways is prohibited as well
as disposal onshore if untreated. During the lifetime of the Project the Permit Holder shall be
responsible for stewarding and auditing the activities of all downstream subcontractors handling
Project waste streams and shall contractually require them to conduct all treatment and disposal of
such waste streams in keeping with the EPA approved Waste Management Plan included within the
Project EIA. Within thirty 30 days of issuance of the Permit the Permit Holder shall submit to the
EPA for approval the Terms of Reference for the conduct of a cradle to grave waste analysis study
which must include factors related to i environment ii management iii auditing iv schedule and v
costbenefits. The cradle to grave waste analysis study must be submitted to the EPA for approval
within sixty 60 days of the EPAs approval of the Terms of Reference. The approved cradle to grave
waste analysis study must form part of the revised Waste Management Plan which shall be
submitted within one 1 month of submission of the cradle to grave waste analysis approved study.
The Revised Waste Management Plan referenced in condition 5.22 shall be implemented during the
lifetime of the project. pep6.0 6.1 6.2 6.3 6.4 6.5 6.6 Environmental Permit Ref. No.
20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the
Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations

Regulations 2000 SEISMICRELATED ACTIVITIES Notify the Agency in writing of the intent to commence seismicrelated activities e.g. Vertical Seismic Profiling VSP site investigations or monitoring surveys in the Payara Area of Interest at least thirty 30 days in advance of commencing activities. Employ trained Marine Mammal Observers MMOs during the conduct of seismicrelated activities e.g. at least one trained MMO for VSPs or at least two trained MMOs for other seismic surveys requiring more than 12 continuous hours of observation per day. Conduct a continuous observation of a mitigation zone 500 metres around a sound source to verify whether it is clear of marine mammals and marine turtles before commencing sound producing seismic operations. Sound producing seismic operations including soft starts shall not commence if marine mammals or turtles are sighted within the mitigation zone during the 30 minutes prior to commencing sound producing operations in water depths less than 200 metres or 60 minutes prior to commencing sound producing operations in water depths greater than 200 metres. Adhere to the Joint Nature Conservation Committee JNCC Guidelines 2017 during the conduct of seismicrelated activities. Record all marine mammals protected species and marine turtle observations and respective mitigation actions e.g. delay of soft start in a standardized report format and submit a copy of the report to the Agency within fortyfive 45 days of the activity completion. The report should contain at minimum the following i. The location date and start time of the activity; ii. Name qualification and experience of MMOs involved in the survey; iii. The location time and reasons when observations were hampered by poor visibility or high winds; iv. The location and time when any startup delays power downs or stop work procedures were initiated due to marine mammal protected species and marine turtle sightings; v. The location date time and distance of any marine mammal protected species and marine turtle sighting including species where possible and whether the sound source was active at the time of sighting; and i i7.0 7.1 7.2 73 7.4 73 7.6 77 7.8 79 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 vi. The date and time when the activity was completed. FPSO

DRILL SHIP INSTALLATION AND SUPPORT VESSELS Vessels shall travel no faster than idle or no wake speed within 300 metres of observed marine mammals and sea turtles and not approach the animals closer than 100 metres. Lighting on the vessels shall adhere to maritime safety regulationsstandards. Where practicable direct lighting on FPSO and major vessels to required operational areas rather than at the sea surface or skyward. Procedures for loading storage processing and offloading operations either for consumables i.e. fuel drilling fluids and additives or for liquid products should be utilized to minimise spill risks. Pumps hoses and valves should be inspected and maintained on a monthly basis. FPSO may be subject to inspection and certification by an appropriate national or international body in accordance with International Maritime Organization IMO requirements. Double hull vessels are preferred whenever available. Offloading activities shall be supervised by the designated Mooring Master according to the conditions of the sea. The conditions and characteristics of the export tankers should be assessed by the Mooring Master and reported to the Offshore Field Manager prior to commencing offloading operations; only properly registered and wellmaintained doublehull vessels should be utilized. In accordance with MARPOL 7378 requirements maintain an Oil Record Book to document the manner in which sludge oil bilge water waste oil etc. are disposed. In accordance with MARPOL requirements maintain a Garbage Management Plan and Garbage Record Book to record the manner in which waste e.g. sewage macerated food waste etc. are managed and disposed. The Garbage Management Plan shall include all information as per MARPOL specification waste type quantity stored onboard waste delivered ashore amount of waste generated and waste discharged at sea in accordance with MARPOL Requirements. . fap 7.10 8.1 8.2 8.3 8.4 8.5 8.6 8.7 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 Equipment on board engines compressors generators sewage treatment plant and oilwater separators shall be inspected and maintained in accordance with manufacturers guidelines in order to maximise efficiency and minimise malfunctions and unnecessary discharges

into the environment. WELL BLOWOUT PREVENTION BOP Install a well BOP system that can be closed rapidly in the event of an uncontrolled influx of formation fluids and that allows the well to be circulated to safety by venting the gas at surface and routing oil so that it may be contained. The BOP system should be tested at installation and at regular intervals at least every 14 days or as operations allow. The BOP system shall be pressure tested at installation after the disconnection or repair of any pressure containment seal in the BOP system and at least every 14 days or as operations allow. Subsea BOP stack should be tested to the maximum anticipated wellhead pressure for the current well program. Annular preventers should not be tested to greater than 70 of the working pressure of the preventer. Facility personnel shall conduct biweekly wellcontrol drills or as operations allow which should be attended by key personnel. Well control training and drills shall be documented and made available to the Agency upon request. BOP testing shall be conducted by the drill ship contractor. The BOP system design maintenance and repair shall be undertaken in accordance with international standards. It is recommended that at a minimum subsea BOP systems consist of one annular preventer two shear ram preventers one of which must be sealings and two pipe ram preventers and that they be equipped with choke and kill lines and failsafe choke and kill close valves. The BOP must be able to close on the maximum OD drill pipe string used for the drilling operations. BOP systems shall operate failsafe in the event of a loss of control signal and hydraulic supply from the surface. At a minimum subsea BOP systems should allow closure of one set of pipe rams and all blindshearing type rams by Remotely Operated Vehicle ROV intervention should automatic systems fail. Contingency plans shall be prepared for well operations and must include identification of provisions for well capping in the event of uncontrolled blowout

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8.9 8.10 8.11 8.12 8.13 Environmental Permit Ref. No. 20181204PPOIX Issued under the
Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment
Act 2005 and Environmental Protection Authorisations Regulations 2000 providing indication of the
tools equipment and intervention time required and identification of spill recovery measures. Prepare
and submit an Emergency Plan for review by the Agency within one 1 year of issuance of this Permit

detailing the measures in place to prevent a blowout and the provisions for wellcontrol in a blowout scenario including capping tools and oil spill recovery means. The Emergency Plan shall be reviewed by the Permit Holder annually and any proposed modifications/amendments must be communicated to the Agency for approval. The Permit Holder shall maintain access to one or more subscription services as necessary to allow mobilization of a Capping Stack to the Payara Project location within five 5 days or less of an uncontrolled well event consistent with the Capping Stack Report until such time as any new system is implemented pursuant to subsection 8.15 below. Within thirty 30 days of the date of the Permit the Permit Holder shall submit to the EPA for approval terms of reference for a study detailing the implementation of a system that allows for deployment of a Capping Stack and Debris Removal Systems within three 3 days and four days 4 of an uncontrolled well event including the cost and benefits of each such system. The Permit Holder shall within three 3 months of the date of Permit supplement its incountry First Response Toolkit to include all elements of the Essential First Response Toolkit as outlined in the Capping Stack Report excluding those elements requiring longer manufacturing times. Such longerlead elements will be identified within thirty 30 days of the date of the Permit and shall be promptly completed and delivered to Guyana but in no event shall delivery be later than nine 9 months from the date of the Permit. Within one hundred and eighty 180 days of the date of approval of the terms of reference the Permit Holder shall complete the studys final report. During the pendency of the study the Permit Holder shall meet with the EPA and/or his representatives no less than every thirty 30 days or more frequently on request to provide an update on the progress of the study discuss the issues raised by the study and come to agreement on resolution of issues and/or concerns regarding the study. n JRA 9.0 9.1 9.2 9.3 9.4 9.5 9.6 9.7 9.8 9.9 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 20:05 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 OIL SPILLS AND OTHER EMERGENCY MANAGEMENT Adhere to the approved Oil Spill Response Plan contained within Volume III of the Environmental Impact Assessment dated July 22 2020. Install an Emergency

Shutdown System on the FPSO to initiate automatic shutdown actions to bring the offshore facility to a safe condition and which should be activated in case of any significant release. Implement a corrosion management system to monitor risks and identify corrective actions in the atmospheric zone splash zone submerged zone and internal zones. Develop and implement appropriate maintenance and monitoring programs to ensure the integrity of well field equipment. Implement personnel training and field exercises such as drills in oil spill prevention containment and response at the frequencies defined in the approved Oil Spill Response Plan submitted in the Environmental Impact Assessment. Inspect maintain and operate incountry spill response and containment equipment in accordance with the defined OSRP which will include monthly inspection of oil spill response equipment quarterly test run of oil spill response equipment annual preventive maintenance program execution and annual exercise and deployment of oil spill response equipment to test readiness and response capability. Excountry spill response equipment shall be inspected according to the oil spill response organizations established programs which are aligned with good industry practice and periodically verified by operator. Spills and near misses shall be documented and made available to the Agency upon request. Notify the Agency in alignment with the approved Oil Spill Response Plan for the utilization of insitu burning and/or use of dispersant e.g. Corexit 9500 Corexit 9527A Finasol OSR 52 and Dasic Slickgone NS.. Build Capacity where applicable and/or ensure continued Oil Spill Response capacity building among key national Agencies Community Based Organizations Regional Democratic Councils Neighbourhood Democratic Councils and other relevant stakeholders in Regions 1 2 3 4 5 and 6. Nfs Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 10.0 DISPERSANTS 10.1 Within ninety 90 days from the date of the Permit the Licensee shall provide a report calculating the appropriate volume of dispersants sufficient for immediate deployment for any Tier 3 event. The report shall not be deemed final until approved by the EPA. 10.2 Following the EPA's approval of the report the Licensee shall maintain

throughout the Permit term such volume of dispersants and the required deployment equipment so as to sufficiently and effectively deal with any Tier 3 event.

11.0 EMPLOYEES

11.1 Operate in accordance with the Occupational Safety and Health Act 1997.

11.2 Employees must at all times be provided with the necessary personal protective equipment to job specification.

11.3 Implement and document training for all employees and contractors on the conditions of the Environmental Permit and good environmental management practices.

11.4 Employ a Health Safety and Environmental Officer and/or establish a health and Safety Committee who would be responsible for the implementation of the Health Safety Environmental and Social Management Plan and the terms and conditions of this Permit.

12.0 COMPLIANCE MONITORING AND REPORTING

12.1 Prepare and submit to the Agency no later than fortyfive 45 days after the end of the operating year a report relating to the activities for the previous year. The report shall include

- i. The identification information of the facility;
- ii. Types and quantities of waste including hazardous waste generated treatment and disposal both onshore and offshore;
- iii. Notwithstanding the obligation to immediately report any acent's and/or noncompliances with this permit a summary of any acent's Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 and noncompliances that may have occurred and any actions taken should be provided;
- iv. A report on all routine marine species observations on vessels and any mitigation measures implemented to avoid injury or harm;
- v. Provide an inventory of prior years emissions including but not limited to particulate matter sulphur dioxide volatile organic compounds carbon monoxide nitrogen dioxide and other greenhouse gases as applicable;
- vi. Report on generation treatment and disposal of wastewater generated on all vessels associated with the project;
- vii. Any other matter the Agency may require.

12.2 Retain copies of all reports required by this Permit for a period of at least three 3 years.

12.3 Provide any information or copies of records requested within a reasonable timeframe as requested by the Agency.

12.4 Submit to the Agency annually a summary of any nonconformances with the Environmental Permit and corrective actions taken.

12.5 Submit

Environmental Annual Report to the EPA on or before March 31 every year on your compliance with this Permit Please see attached Guidelines for the Preparation of Environmental Annual Reports.

12.6 Submit to the Agency Ballast Water Management Plans prepared specifically for the FPSO Drill Ship installation and support vessels outlining how ballast water is managed in accordance with international standards. 12.7. Submit to the Agency within one 1 week of commencement of drilling a list and estimated quantities of all additives to be used in the drilling fluids. 12.8 Notify the Agency 21 days prior to the proposed date of making any changes in the type of drilling fluid to be used and outline the disposalrecycle treatment methods to be applied. Notification after the 21 days period can be accepted under . fp Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 12.9 12.10 12.11 12.12 12.13 12.14 12.15 12.16 12.17 conditions where the notification period was not feasible or where flow assurance or safety risks are a concern. Submit End of Well Reports ninety 90 days following the completion of drilling operations for each well with estimated quantities of fluids additives and cuttings discharged duration of discharges and estimated maximum concentration of each constituent in the discharged drilling fluid. Inform the Agency in the End of Well Report of tests conducted with the Blow out Preventer BOP equipment detailing occasions where there was an influx of formation fluids the well control methods applied and their effectiveness. Inform the Agency in a timely manner of any variation or intentions to conduct other activities not stipulated in this permit such as but not limited to Side tracking of a well. Notify the Agency in writing two 2 years prior to planned decommissioning of the well save and except where mechanical issues or safety concerns are encountered that will affect the integrity of the well to continue operations and submit revised End of Operations Decommissioning Plan including Well Abandonment Plan for approval. Notify the Agency in writing six 6 months prior to well abandonment save and except where mechanical issues or safety concerns are encountered that will affect the integrity of the well to continue operations. Submit to the EPA reports on the progress of the Project activities and

compliance with the conditions under which this Permit was granted within two 2 months after the closure of activity specific Project stage e.g. drilling installation etc.. Report spills to the Agency and other relevant authorities in accordance with the Oil Spill Response Plan. Notify the Agency in writing within twentyone 21 days in event of death bankruptcy liquidation or receivership of the Permit Holder or if the Company becomes a party to an amalgamation Inform the Agency prior to or within thirty 30 days of any change of name or ownership of the Project. fix jp Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 12.18 12.19 12.20 12.21 13.0 13.1 13.2 Submit a copy of the International Oil Pollution Prevention IOPP Certificate for the FPSO. Within three 3 months of issuance of this Permit the Permit Holder shall submit to the EPA for its approval a Terms of Reference for the development of an enhanced Environmental Monitoring Reporting and Verification Framework. A Draft Environmental Monitoring Reporting and Verification Framework shall be submitted by the Permit Holder to the EPA for its approval within three 3 months of the approved Terms of Reference. Submit monthly reports to the EPA on the progress of the operation and compliance with the conditions under which this Permit was granted on or before the 10 day of the following month. An annual audit of Safety Critical Drilling and Production Operations including waste management to ISO 14001 as amended or such equivalent standards may be conducted by the Government. The Permit Holder will request the Government to submit any audit report must be submitted to the Agency in the Annual Report required under Condition 12.5. All areas of shortcomings identified by the audit must addressed by the Permit Holder before the next years audit. LIABILITY FOR POLLUTION DAMAGE The Permit Holder shall have insurance of such type and in such amount as is customary in the international petroleum industry in accordance with good oil field practices for Petroleum Operations in progress Offshore Guyana in respect of i. Loss or damage to all assets used in Project. ii. Pollution caused in the course of the Project for which EGGPL will be jointly and severally held responsible. iii. Loss or damage to property or bodily injury

suffered by any third party in the course of the Project for which EGGPL is liable to according to the terms of the policy. iv. EEPGLs liability to its employees engaged in the Project. v. Any other requirements made by the EPA under Condition 13.4 below. Condition 13.1 shall not be interpreted to mean the Permit Holder its Parent Company Servants andor Agents will not be liable to any other existing or 26 MK Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 forthcoming applicable laws rules and regulations related to insurance for Petroleum Operations within or out the jurisdiction of Guyana.

13.3. This Permit is issued subject to the fulfillment of the obligations outlined in Condition 13.1 above and in a correspondence dated March 20 2019 indicating the commitment of EEPGL to obtain such insurance for coverage of environmental liabilities in accordance with the requirements of the EPA and the Bank of Guyana. Failure to fulfill such obligations or commitments is in breach of this Permit and will result in its immediate cancellation. 13.4 The EPA shall reserve the right to request and review the environmental liability insurance policy. Such review is subject to the following i. Provision of documentary evidence that the insurer is authorised to provide the insurance in the jurisdiction and to provide evidence of the insurers financial strength. ii. Provision of details of the amount of cover and the cost profile evidence of authorisation of the institution or parent insurers to provide insurance. As well as evidence of any supplementary cover required to cover gaps in the primary cover inclusive of details relevant to the excess level which is the responsibility of the policyholder to cover. iii. Agreement to provide notification to the EPA of modification cancellation expiration intent to renew renewal or nonrenewal and expiry dates of the policy. iv. Provision of reports on whether the insurance policy is maintained or renewed so that the EPA can determine if it is acceptable or if it requires a replacement policy. v. Provision of the final insurance policy or certificate of insurance evidence of financial strength and payment of premium. 13.5 The Permit Holder must as soon as reasonably practicable provide from the Parent Company or Affiliate Companies of Permit Holder and its CoVenturers Affiliates one or more legally binding agreements

to the EPA undertaking to provide adequate financial resources for Permit Holder and its CoVenturers to pay or satisfy their respective environmental obligations regarding the Stabroek13.6

13.7 13.8 13.9 Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 Block if EEPGL or its CoVenturers fail to do so. As a consequence EEPGL will be required to 1 provide evidence of the following e That the Affiliates are authorised to provide that guarantee or agreement in this jurisdiction. e That the Affiliates have sufficient financial strength for the amount of the potential liability. e That the Affiliates have the corporate legal capacity to enter into the agreement. 2 Agree to the following e To provide notification of cancellation expiration renewal or non renewal and expiry dates of the Agreement. e As well as to provide annual audited financial statements and notification if the Affiliates are no longer likely to be able to meet specified financial obligations. The Permit Holder his Servants andor Agents shall be strictly liable for the adverse effect of any discharge or release or cause or permit the entry of pollution contaminant in any amount concentration or level in excess of that prescribed by the regulations or stipulated by any environmental authorisation which are attributed to any Project and more specifically petroleum activities in accordance with section 191 and 2 of the Environmental Protection Act Cap. 2005 Laws of Guyana. The Permit Holder shall compensate any Party who suffers any loss or damage as a result of the attributed project in accordance with section 193e of the Environmental Protection Act Cap. 2005 Laws of Guyana. Do not assign or transfer the Environmental Permit to any person without prior consent of the Agency. The Permit Holder his Servants andor Agents shall be strictly liable to penalties prescribed for any material or environmental harm caused by pollution of the environment intentionally or recklessly in accordance with section 39 1 2 3 and 4 of the Environmental Protection Act Cap. 2005 Laws of Guyana. Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 13.10 The Permit Holder his Servants andor Agents

shall be liable jointly and severally for any gross negligence or willful misconduct to the marine environment biodiversity protected species and natural habitat with respect to any release or discharge spill contaminant fluids oil or lubricants any facilities permitted under this project. 13.11 The Permit Holder his Servants and Agents shall be liable jointly and severally for environmental damage due to pollution from its activities within Guyana its territorial waters contiguous zones continental margins continental shelf and Exclusive Economic Zone inclusive of damage to the marine environment biodiversity protected species and natural habitat with respect to any release or discharge spill or contamination which is attributable to the Permit Holder and his agents or contractors. This is in accordance with Section 49 1 of the Maritime Zones Act 2010 and is subject to any other existing or forthcoming laws regulations and standards governing the protection of the marine environment. 13.12 Where it appears to the EPA that the Permit Holder is engaged in any activity that may pose serious threat to natural resources or serious pollution of the environment or any damage to public health the EPA shall issue to the Permit Holder a Prohibition Notice ordering him to immediately cease the offending activity in accordance with section 27 of the Environmental Protection Act Cap. 20:05 Laws of Guyana. 13.13 Should the Permit Holder contravene or is likely to contravene any condition of this Permit the EPA may serve him an enforcement notice in accordance with section 26 of the Environmental Protection Act Cap. 20:05 Laws of Guyana. 13.14 Section 219 of the Environmental Protection Act Cap. 20:05 shall apply mutatis mutandis to this Environmental Permit for any breaches of terms or conditions herein. 14.0 INSTITUTIONAL AUTHORITY 14.1. The EPA reserves the right to conduct regular inspections of the permitted operations as part of its monitoring and enforcement requirements under the Environmental Protection Act Cap. 20:05 Laws of Guyana the Environmental Protection Amendment Act 2005 and the Environmental Protection Authorisations Regulations 2000 and any forthcoming regulations best practices guidelines and standards made under this Act. fo pe Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 20:05 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations

Regulations 2000 14.2 At all times allow entry to the permitted facility to any Officer designated by the EPA for the purposes of conducting inspections or any other legitimate business of the Agency. Pursuant to Section 38 of the Environmental Protection Act Cap 2005 Laws of Guyana it is an offence to assault obstruct or hinder an authorised officer in the execution of his/her duty under the said Act or its regulations and the Permit Holder shall be liable to penalties prescribed under paragraph c of the Fifth Schedule for doing so. 14.3. This Environmental Permit is not the final development consent. Permission from the other relevant regulatory bodies must be obtained prior to Project implementation as required. 14.4 The Permit shall be governed by interpreted and construed in accordance with the Laws of Guyana including but not limited to the Environmental Protection Act and Regulations and consistent with such rules of international laws as may be applicable or appropriate including the generally accepted customs and usages of the international petroleum industry. 14.5 This Permit is effective for the period stipulated herein September 24 2020 to September 23 2025 noting however this Permit and conditions herein and applicable fees will be reviewed annually in consideration of the previous years annual audit required by Condition 14.8 and the studies required by Condition 1.5. 14.6 The Agency reserves the right to suspend modify or cancel this Permit in accordance with Regulation 14 of the Environmental Protection Authorisations Regulations 2000 in consideration of a. any changes in fee structure as determined by the EPA for projects of this nature b. improvement in environmental best practices and best available techniques which consider economic and technological feasibility as described in 1.8 but not limited to any material change in activities and or operations proposed by the Permit Holder c. Recommendations arising from the updated Environmental Impact Statement and Environmental and Socioeconomic Management Plan and the studies provided for under section 1.5 d. Any other information arising from compliance monitoring including the successful completion of an independent third party audit of the facility. ; Vig be 3 oLe Environmental Permit Ref. No. 20181204PPOIX Issued under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and Environmental Protection Authorisations Regulations 2000 14.7. This Permit must be

renewed by submitting a completed Application Form for Renewal of Environmental Authorisation to the Agency at least six months before this Permit expires that is no later than March 24 2025. 14.8 This Environmental Permit shall remain valid until September 23 2025 unless otherwise revised amended suspended or revoked in accordance with its provisions or the Environmental Protection Act Cap 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and the Environmental Protection Authorisations Regulations 2000. 14.9 Failure to comply with the requirements of this Permit or with applicable laws and regulations whether existing or forthcoming shall render the Permit Holder liable to prosecution and to penalties prescribed under the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Regulation 2000 and other applicable Laws of Guyana. I, A PROTEC, on behalf of Esso Exploration and Production Guyana Limited (EEPGL) hereby accepts the above terms and conditions upon which this Operation Permit is granted and agree to abide by the Environmental Protection Act Cap. 2005 Laws of Guyana the Environmental Protection Amendment Act 2005 and the Environmental Protection Authorisations Regulations 2000 and any existing or forthcoming regulations, best practices, guidelines and standards made under this Act.

NAME: ALISTAIR G. KousrtbdGe
DESIGNATION: PRESIDENT
SIGNATURE: [Signature]
DATE: 2 SEPTEMBER 2024

Environmental Impact Assessment Liza Phase 1 Development Project Esso Exploration and Production Guyana Limited May 2017 www.erm.com David W. Blaha ERM Partner

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..... percent BFROC percentage of base fluid retained on cuttings

C degrees Celsius gm³ micrograms per cubic meter Pa

..... micro pascal AASM Airgun Array Source Model AMS

..... Alarm Management System AOI Area of Influence AQS

..... air quality standards AUV Automated Underwater Vehicle bbl

..... barrels BOEM U.S. Bureau of Ocean Energy Management

BOP blowout preventer BOPD barrels of oil per day CARICOM

..... Caribbean Community CBP chlorinated byproducts CCC

..... criterion continuous concentrations CCR central control room

CFC chlorofluorocarbon CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora CMC criterion maximum concentrations CO carbon monoxide COLREG Convention on the International Regulations for Preventing Collisions at Sea CPACC Caribbean Planning for Adaptation to Climate Change CPI Carbon preference index CR

..... Critically Endangered CREE Center for Rural Empowerment and the Environment CSC International Convention for Safe Containers CTD

..... conductivity temperature and depth dB decibel

DC..... drill center DDIA Declared Drainage and Irrigation Areas

DP Dynamic Positioning EBS environmental baseline

surveys EEA European Environment Agency EEPGL Esso
Exploration and Production Guyana Limited EIA Environmental Impact
Assessment EITI Extractive Industries Transparency Initiative EMT
..... emergency medical technician EN Endangered EPA
..... Guyanese Environmental Protection Agency ESMP
Environmental and Socioeconomic Management Plan EUNIS European Nature
Information System May 2017 EEPGL Environmental Impact Assessment Liza Phase 1
Development Project List of Acronyms EX Extinct EZZ
Exclusive Economic Zone FG Fire and Gas FAL Convention
on Facilitation of International Maritime Traffic FEED FrontEnd Engineering and
Design FGSI Fugro GeoServices Incorporated FLET flowline
end termination FPSO Floating Production Storage and Offloading FSO
..... Floating Storage and Offloading FSV Fast Supply Vessel ft
..... FeetFoot Fugro Fugro Marine Geoservices Inc. Fugro
EMU Fugro EMU Limited FWRAM Full Waveform Rangedependent
Acoustic Model GDP Gross Domestic Product GEA Guyana
Energy Agency GEMSSGIFT Generalized Integrated Fate and Transport GGMC
..... Guyana Geology and Mines Commission GHG greenhouse gas
GINA Government Information Agency GLSC Guyana Lands
and Surveys Commission GMPHOM Guide to Manufacturing and Purchasing Hoses for
Offshore Moorings GPHC Georgetown Public Hospital Corporation GRA
..... Guyana Revenue Authority GTT Guyana Telephone Telegraph
GuySuCo Guyana Sugar Corporation GWI Guyana Water Inc.
GYD Guyanese dollar H2S hydrogen sulfide ha
..... hectares HFC Highfrequency cetaceans HVAC
..... Heating Ventilation and Air Conditioning IBA Important Bird

Area ICSS Control and Safety System ICZM Integrated
 Coastal Zone Management IDB InterAmerican Development Bank IFC
 International Finance Corporation ILO..... International Labor
 Organization IMF International Monetary Fund IMO
 International Maritime Organization IOGP..... International Oil and Gas Producers
 ITCZ InterTropical Convergence Zone IUCN International
 Union for Conservation of Nature IUU Illegal Unreported and Unregulated IWC
 International Whaling Commission JNCC Joint Nature
 Conservation Committee kbd thousands of barrels per day May 2017 EEPGL
 Environmental Impact Assessment Liza Phase 1 Development Project List of Acronyms kHz
 kilohertz km kilometers LADCP Lowered
 Acoustic Doppler Current Profiler LC Least Concern LCDS
 Low Carbon Development Strategy LFC Lowfrequency cetaceans LME
 Large Marine Ecosystem MA Millennium Ecosystem
 Assessment MACT Maximum Acceptable Toxicant Concentration MARAD
 Maritime Administration MARPOL 7378..... International Convention for the
 Prevention of Pollution by Ships 1973 as modified by the Protocol of 1978 MBES
 multibeam echo sounder MDG..... Millennium Development Goal MFC
 Midfrequency cetaceans mgL milligrams per liter mi
 miles MICS Multiple Indicator Cluster Survey MMO
 marine mammal observationobserver MOC North Atlantic
 Meridional Overturning Circulation MONM Marine Operations Noise Model MoNRE
 Ministry of Natural Resources and Environment MPV
 MultiPurpose Vessel MSC Marine Sustainability Council mscfd
 million standard cubic feet per day MW megawatt Mweighted
 Auditory weighting functions for marine mammals NA not applicable NABF

..... nonaqueous base fluid NADF nonaqueous drilling fluid NBC
 North Brazil Current NBSAP National Biodiversity Strategy and
 Action Plan NDC Neighbourhood Democratic Councils NDIA
 National Drainage and Irrigation Authority NDS National Development Strategy
 NTD Neglected Tropical Diseases NEAP National
 Environmental Action Plan NGO nongovernmental organization nm
 nautical mile NO2 nitrogen dioxide NOAA
 U.S. National Oceanic and Atmospheric Administration NOM naturally occurring
 organic matter NT Near Threatened OG oil and grease
 OAS Organization of American States OCIMF Oil Companies
 International Marine Forum May 2017 EEPGL Environmental Impact Assessment Liza Phase 1
 Development Project List of Acronyms OI Operations Integrity OIMS
 Operations Integrity Management System OSH Occupational
 Safety and Health OSR Oil Spill Response OSRP Oil Spill
 Response Plan PA plugged and abandoned PAGA public
 address and general alarm system PAH Polycyclic aromatic hydrocarbons PC
 Project Contribution PCS Process Control System PDA
 Project Development Area PEC Predicted Environmental
 Concentration PM10 particulate matter with aerodynamic diameter of less than 10 micrometers
 PM2.5 particulate matter with aerodynamic diameter of less than 2.5 micrometers
 POB personnel on board POP Persistent Organic Pollutant
 ppb parts per billion PPE personal protective equipment
 ppm parts per million ppt parts per thousand PrPh Ratio
 Ratio of pristane to phytane Project Liza Phase 1 Development Project
 PSC Private Sector Commission PSV Platform Supply
 Vessel PTS Permanent Threshold Shift RMS root mean

square RO reverse osmosis ROV remotely operated
 vehicle SBP..... subbottom profiler SBPA Shell Beach Protected
 Area SC..... Scientific Committee SCAT Shoreline Cleanup
 Assessment Technique SDU Subsea Distribution Unit SEA
 Strategic Environmental Assessment SEL sound exposure level
 SEP..... Stakeholder Engagement Plan SGSCS SurinameGuyana
 Submarine Cable System SHC Saturated and aliphatic hydrocarbons SIS
 Safety Instrumented System SO2 sulfur dioxide SOLAS
 International Convention for the Safety of Life at Sea SPAW
 Specially Protected Areas and Wildlife SPL..... sound pressure level SRU
 Sulfate Removal Unit SSHE Safety Security Health and
 Environment May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development
 Project List of Acronyms STCW International Convention on Standards of Training
 Certification and Watchkeeping SURF Subsea Umbilicals Risers and Flowlines
 TB Tuberculosis THC total hydrocarbons TIP
 Technical Information Paper TOC total organic carbon ToR
 Terms of Reference TSS total suspended solids TV
 Tug Vessel UCM Unresolved complex mixture UNAIDS
 Joint United Nations Program on HIVAIDS UNESCO..... United Nations
 Educational Scientific and Cultural Organization UNFCC United Nations Framework
 Convention on Climate Change UPS uninterruptible power supply USD
 U.S. Dollars USEPA U.S. Environmental Protection Agency
 VLCC Very Large Crude Carrier VOC volatile organic
 compounds VSP Vertical Seismic Profile VU Vulnerable
 WBDF waterbased drilling fluids WHO World Health
 Organization WRC Wider Caribbean Region WRF Weather

Research and Forecasting May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project List of Acronyms Page Intentionally Left Blank May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Glossary List of Acronyms

Term	Definition
Anthropogenic	Made by humans or attributable to human activity.
Barrel	Biogenic
Biomagnification	The basic unit for measuring oil. A barrel is equal to 42 U.S. gallons. Made by living organisms or attributable to the activity of living organisms. Increasing concentration of a persistent substance usually a pollutant or toxin in the tissues of organisms at successively higher levels in a food chain
Borehole or wellbore	A deep narrow hole drilled in the earth for the purpose of extracting a core releasing gas oil water etc.
Casing	Steel pipe inserted into an oil or gas well to prevent the wall of the borehole from caving in to prevent movement of fluids from one formation to another and to improve the efficiency of extracting petroleum for producing wells.
Circumtropical	Distributed throughout the worlds tropical latitudes.
Congregatory	Crude oil
Cuttings	cuttings or drill Tending to gather in large groups on a cyclical or otherwise regular andor predictable basis
Liquid petroleum	as it comes out of the ground. The properties of crude oil such as color gravity and viscosity can vary.
Broken bits of solid material	produced as the drill bit advances through the borehole in the rock or soil. Cuttings are usually carried to the surface by the drilling fluid circulating up from the drill bit and can be separated from the drilling fluid using a variety of treatment methods e.g. centrifuge.
Development well	A well drilled in a proven area in a field for the purposes of producing hydrocarbons.
A selfpropelled floating offshore drilling unit	that is a ship constructed to permit a well to be drilled from it. Drill ships are generally the preferred option for drilling wells in deep remote waters.
Speciallyformulated fluids	which are typically a mixture of barite clay water and other chemical additives. Drilling fluids are circulated into the borehole to lubricate and cool the rotary drill bit to lift the cuttings out of the borehole and to the surface and to help maintain well control.
A unit of energy based on the approximate energy released by burning one barrel of crude oil.	Quantities of natural gas and natural gas liquids are often translated into barrels of oil equivalent BOE. The energy of six thousand cubic feet of gas 6 MCF is roughly equivalent to one barrel of oil.
Drill ship	

Drilling fluids Equivalent barrels or barrel of oil equivalent [BOE] May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Term Definition List of Acronyms Exploration Exploratory well Flare or Flaring The search for oil and gas. Exploration operations include aerial surveys geophysical surveys geological studies core testing and the drilling of test wildcat wells. A well drilled to 1 find oil or gas in an undiscovered or unproven area wildcat or 2 extend the limits or depths of a known area. In the oil industry A system of piping and burners used to dispose by burning of surplus gas or vapors produced with the oil. Floating Storage Offloading vessel Production and FPSO A floating vessel that is used for offshore oil and gas operations and is designed to process hydrocarbons and store oil until the oil can be offloaded onto a tanker ship or transported via pipeline. The processing equipment or topsides is located on the FPSOs deck while the oil storage is below the deck within the hull of the vessel. Flowline The surface pipe through which oil travels from a well to processing equipment or to storage. Hydrostatic test A way in which pressure vessels such as pipelines plumbing gas cylinders boilers and fuel tanks can be tested for strength and leaks. The test involves filling the vessel or pipe system with a liquid usually water which may be dyed to aid in visual leak detection and pressurizing the vessel to the specified test point. Pressure tightness can be tested by shutting off the supply valve and observing whether there is a pressure loss. Ichthyoplankton Fish eggs and larvae that drift with the ocean currents usually near the surface prior to developing directional swimming ability. A well in which fluids such as gas or water are injected to increase pressure in the reservoir and drive the oil remaining in the reservoir to the vicinity of production wells. Type of gridless atmospheric model in which pollutant particles move according to the wind field buoyancy and turbulence effects. Term is often used to differentiate such models from Eulerian models which use a gridded field. An area that has been cleared for the temporary storage of equipment and supplies. Laydown areas are usually covered with rock and/or gravel to ensure accessibility and safe maneuverability for transport and offloading of vehicles. A specific area of water where persons vessels and other activities are prohibited as the area has been designated for exclusive use by an activity; a form of safety control measure utilized

to keep unauthorized persons and vessels away from a higher risk activityevent. A highly compressible highly expansible mixture of hydrocarbons which at atmospheric conditions of temperatures and pressure are in a gaseous phase. Injection well Lagrangian Laydown area Marine exclusion zone safety Natural gas May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Term Definition List of Acronyms Oil field The surface area covering one or more reservoirs containing oil. The oil field also usually includes the reservoir the wells and the production equipment etc. Overboard water Another name for produced water or brine produced from oil and gas wells. Platform An immobile structure used in offshore drilling on which the drilling rig crew quarters and other related items are located. Plugging of well The sealing off of the fluids in the stratum penetrated by a well so that the fluid from one stratum will not escape into another or to the surface. Produced water Water that comes up a well with the oil and gas. Produced water is usually high in salinity. After leaving the well the produced water is separated from the oil and gas. Can also be referred to as formation water saltwater or oilfield brine. Production well A well that is used to retrieve petroleum or gas from an underground deposit. Refinery Reservoir Risers The facility where the characteristics of petroleum or petroleum products are changed. A porous and permeable sedimentary rock containing commercial quantities of oil and gas. The pipe and special fittings used on floating offshore drilling rigs to establish a seal between the top of the wellbore which is on the ocean floor and the drilling equipment located above the surface of the water. A riser pipe serves as a guide for the drill stem from the drilling vessel to the wellhead and as a conductor of drilling fluid from the well to the vessel. The riser consists of several sections of pipe and includes special devices to compensate for any movement of the drilling rig caused by waves. Risers are also used to connect subsea equipment to a surface facility such as an FPSO. Shorebase The land based facility that provides logistical and material support for offshore activities and facilities. A group of mooring lines distributed from the bow and stern of a vessel FPSO to anchors on the seafloor. The vessel is positioned in a fixed heading which is determined by the sea and weather conditions. The symmetrical arrangement of anchors helps to keep the vessel on its fixed heading

location. The spread mooring system does not allow the vessel to weathervane which means to rotate in the horizontal plane due to wind waves or current. The outer layer of large diameter heavywall pipe installed in wells drilled isolate very shallow sediments from from floating subsequent drilling resist the bending moments imposed by the marine riser and to help support the wellhead installed on the conductor casing. installations to Spread anchor system mooring Structural casing

May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project List of Acronyms Term Tree Wellhead Definition The assembly of valves pipes and fittings used to control the flow of oil and gas from the casing head. A structure that is installed at the top of a natural oil or gas well. Its main function is to ensure a safe operation and manage the flow of oil or gas from the well into the gatheringsystem. It is a system composed of valves spools and assorted adapters that control the pressure of the production well. It acts as an interface between the surface facilities and the casingstrings in the wellbore. May 2017 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement ENVIRONMENTAL IMPACT STATEMENT EIS Executive Summary Esso Exploration and Production Guyana Limited EEPGL proposes the Liza Phase 1 Development Project Project to develop the Liza field located in the Stabroek Block offshore Guyana. EEPGL obtained an offshore prospecting license for the Stabroek Block from the Government of Guyana. In 2015 oil was discovered in the Liza field within the eastern half of the Stabroek Block approximately 190 km 120 mi offshore from Georgetown in waters approximately 1500 to 1900 meters m deep. Subsequent surveys and exploratory drilling have identified a reservoir of oil in a sandstone formation approximately 3600 m below the seabed approximately 5400 m below sea level. This reservoir is estimated to have a recoverable resource of 0.8 to 1.4 billion oilequivalent barrels. EEPGL 45 together with Hess Guyana Exploration Limited 30 and CNOOC Nexen Petroleum Guyana Limited 25 are parties to a Petroleum Agreement with the Government of Guyana. Under this agreement and in light of the Liza field discovery EEPGL has applied for a Petroleum Production Licence and submitted a Project Development Plan to the Minister Responsible for Petroleum. A key permit required for EEPGL to develop the Liza field is the

Environmental Authorisation from the Guyana Environmental Protection Agency EPA in accordance with the Guyana Environmental Protection Act of 1996 EP Act Cap. 20:05. As part of its regulatory role the EPA considering recommendations from the Environmental Advisory Board EAB and Guyana Geology and Mines Commission GGMC is responsible for deciding whether and under what conditions to grant EEPGLs Application for Environmental Authorisation Application which was filed with the EPA on July 5 2016. Based on an initial assessment of the Project the EPA determined that an Environmental Impact Assessment EIA was required. The purpose of the EIA is to provide the factual and technical basis required by EPA EAB and the GGMC to make an informed decision on EEPGLs Application. EEPGL has conducted a robust public consultation program to both inform the public about the Project and to understand community and stakeholder concerns so this feedback could be incorporated and addressed in the EIA as applicable. EEPGL proposes to drill approximately 17 subsea development wells and use a Floating Production Storage and Offloading FPSO vessel to process store and offload the recovered oil. The FPSO will be connected to the wells via separate production oil gas and produced water gas injection and water injection flowlines and risers and associated subsea equipment. The Project will also involve shorebase facilities and marine aviation services to support development drilling FPSO and subsea equipment installation production operations and ultimately decommissioning. EEPGL will utilize proven and industry accepted standards and has incorporated many embedded controls into the overall Project design to minimize environmental and socioeconomic impacts. It could take up to four years to drill the wells with drilling planned to begin as early as 2018. The initial production is expected to begin by mid 2020 with operations continuing for at least 20 years. The Project is expected to employ up to 600 persons during well drilling approximately 600 persons at the peak of the installation stage and up to about 140 persons during production operations. The planned activities of the Project are predicted to have minor impacts on physical resources i.e. air quality marine sediments and water quality no impacts on coastal biological resources minor

impacts on marine biological resources and largely positive impacts on socioeconomics. These predictions are based on the fact that the bulk of the Project activity will occur approximately 190 km 120 miles offshore and the Project will capture and reinject produced natural gas which is not used as fuel on the FPSO back into the Liza reservoir; treat required wastewater streams prior to discharge to the sea; have a very small physical footprint e.g. infrastructure construction disturbs only about 0.3 km² of benthic habitat; and use Marine Mammal Observers MMO during selected activities to minimize the potential impacts to marine mammals due to auditory injury and ships strikes. Unplanned events such as a large oil spill are considered unlikely to occur because of the extensive preventative measures employed by EEPGL. Nevertheless an oil spill is considered possible and EEPGL has conducted oil spill modeling to evaluate the range of likely spill trajectories and rates of travel. The location of the Project 190 km 120 mi offshore prevailing northwest currents the light nature of the Liza field crude oil and the regions warm waters would all help minimize the severity of a spill. Accounting for these factors the modeling indicates only a 5 to 10 percent probability of any oil reaching the Guyana coast without taking into consideration the effectiveness of any oil spill response and in the unlikely event that a spill were even to occur. Although the probability of an oil spill reaching the Guyana coast is very small a spill at a Liza well would likely impact marine resources found near the well such as sea turtles and certain marine mammals that may transit or inhabit the area impacted by a spill. Air quality water quality seabirds and marine fish could also be impacted although likely to a lesser extent because the duration of acute impacts would not be long and the impacts are reversible. A spill could potentially impact Guyanese fishermen if commercial fish and shrimp were impacted. The magnitude of this impact would depend on the volume and duration of the release as well as the time of year the release were to occur e.g. whether a spill would coincide with the time of year when these species are more common. Effective implementation of the Oil Spill Response Plan OSRP would help mitigate this risk by further reducing the ocean surface area impacted by a spill and thereby reduce oil exposure to these species. As described above although a large oil spill is considered unlikely and the probability of

reaching the Guyana coast is very low nevertheless given the sensitivity of many of the resources that could be potentially impacted by a spill e.g. Shell Beach Protected Area marine mammals critically endangered and endangered sea turtles coastal Guyanese and Amerindian communities reliant on ecosystem services for sustenance and their livelihood preparation for spill response is warranted. Therefore we believe it is critical that EEPGL commit to regular oil spill response training exercises document the availability of appropriate response equipment on board the FPSO and demonstrate that offsite equipment could be mobilized for a timely response. May 2017 ii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement It is recommended that all EEPGL embedded controls recommended mitigation measures and appropriate Environmental and Socioeconomic Management Plans including an OSRP be adopted. With the implementation of such controls mitigation measures and management plans the Liza Phase 1 Development Project is expected to pose only minor risks to the environmental and socioeconomic resources of Guyana while potentially offering significant economic benefits to the residents of Guyana. May 2017 iii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project EIS 1.0 INTRODUCTION Environmental Impact Statement This Environmental Impact Statement EIS has been prepared for the Liza Phase 1 Development Project Project in accordance with the Guyana Environmental Protection Agency EPA Environmental Impact Assessment Guidelines November 2000 and the Project Final Terms of Reference February 2017. This EIS was prepared by Environmental Resources Management ERM which is an international environmental and social consulting firm with extensive experience in the preparation of Environmental Impact Assessments EIA for offshore oil and gas development projects. ERM is also a Guyana EPA registered consultant. EIA Appendix B provides the Curriculum Vitae of the key members of the EIA team. ERM did not encounter any specific difficulties in preparing the EIA. The information provided on the Project and the resources found in the Project Development Area PDA were adequate for ERM to prepare a robust impact assessment. EIS 1.1 Project Sponsor The Project Sponsor is a joint venture among Esso Exploration and Production

Guyana Limited EEPGL Hess Guyana Exploration Limited Hess and CNOOC Nexen Petroleum Guyana Limited Nexen. EEPGL will be the operator of the Project and is used in this EIA to represent the joint venture. EEPGL which is an affiliate of ExxonMobil Corporation was formed on October 16 1998 and subsequently registered in Guyana on June 29 1999. ExxonMobil Corporation either directly or through subsidiaries conducts oil and gas exploration activities worldwide. EIS 1.2 Project Context EEPGL obtained an offshore petroleum prospecting license for the Stabroek Block from the Government of Guyana. In 2015 oil was discovered in the Liza field within the eastern half of the Stabroek Block approximately 190 kilometers 120 miles offshore from Georgetown in waters approximately 1500 to 1900 meters m deep Figure EIS1. Subsequent surveys and exploratory drilling have identified a reservoir of oil in a sandstone formation approximately 3600 m below the seabed approximately 5400 m below sea level. This reservoir is estimated to have a recoverable resource of 0.8 to 1.4 billion oil equivalent barrels. EEPGL together with Hess and Nexen are parties to a Petroleum Agreement with the Government of Guyana. Under this agreement and in light of the Liza field discovery EEPGL has applied for a Petroleum Production Licence and submitted a Project Development Plan to the Minister Responsible for Petroleum. May 2017 iv EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Figure EIS1 Location of the Liza Project Development Area within the Stabroek Block NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. EIS 1.3 Purpose of the Project The purpose of the Project is to achieve safe and efficient production of hydrocarbons from the Liza field. A confidential Petroleum Agreement between EEPGL Hess Nexen and the Government of Guyana defines how revenues from the Project are to be shared between the parties. The Government of Guyana would begin receiving oil revenues when oil is produced. EIS 1.4 Regulatory Framework and Purpose of this EIA In order to develop the Liza field EEPGL needs to obtain approval of an Application for Environmental Authorisation Application from the Guyana EPA in accordance with the Guyana EP Act Cap. 20:05. Toward that end EEPGL filed its Application with the EPA on July 5 2016. As part of its regulatory role the EPA taking into consideration recommendations from the

Environmental Advisory Board EAB and GGMC is responsible for deciding whether and under what conditions to grant EEPGLs Application. Based on an initial assessment of the Project the EPA determined that an EIA was required. The purpose of this EIA is to provide the factual and technical basis required by EPA EAB and the GGMC to make an informed decision on EEPGLs Application. If approved the EPA would issue an Environmental Permit¹ with the terms and conditions necessary to effectively protect the environment. ¹The Environmental Authorisation granted by the EPA is also commonly referred to as an environmental permit and may be used interchangeably.

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EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement EIS 2.0 PROJECT DESCRIPTION

The Project proposes to develop the offshore resource by drilling approximately 17 subsea development wells and using a Floating Production Storage and Offloading FPSO vessel to process store and offload the recovered oil. The FPSO will be connected to the wells via associated equipment collectively referred to as subsea umbilicals risers and flowlines SURF to transmit produced fluids i.e. oil gas produced water from production wells to the FPSO as well as treated gas and water from the FPSO to the injection wells. The Project drilling and production operations activities will collectively occur in what is referred to as the Project Development Area PDA which is an approximately 50 km² area located approximately 190 km 120 mi offshore Figure EIS2. The Project will also involve use of onshore shorebase facilities and marine aviation services to support development drilling SURF and FPSO installation production operations and ultimately decommissioning. Figure EIS2 Preliminary Liza Phase 1 Field Layout

Natural gas will be produced in association with the produced oil. EEPGL will use some of the recovered gas as fuel on the FPSO and proposes to reinject the remaining gas back into the Liza reservoir which will assist in optimizing management of the reservoir. Alternative uses of gas for future phases are being studied and would be addressed in a separate environmental authorization.

Phase 1 will consist of essentially three stages 1 Drilling and Installation 2 Production Operations and 3 Decommissioning. Each of these stages is described briefly below.

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Statement EIS 2.1 Drilling and SURFFPSO Installation The approximately Figure EIS3 Typical Drill Ship EEPGL will use one or two drill ships Figure EIS3 to drill the development 17 wells. development wells are currently planned to include eight production wells for recovering the oil six water wells to inject water into the Liza reservoir to maintain pressure and three gas wells to reinject recovered gas not used on the FPSO into the reservoir. The wells will be clustered around two drill centers. For safety reasons a 500 m marine safety exclusion zone around the drill ships and major installation vessels will be established to avoid interactions with unauthorized vessels. For each well the initial section i.e. structural casing section will feature a pipe inserted into the borehole and cemented in place. This section will be drilled using water based drilling fluids WBDF and drill cuttings from this section will be discharged to the seafloor near the well. Subsequent lower sections of the wells will be drilled using lowtoxicity nonaqueous drilling fluids NADF with low to negligible aromatic . The used cuttings from the lower sections will be directed to the drill ship where the drilling fluids will be recovered for reuse to the extent practicable and the cuttings will be treated to limit the percentage of fluid retained on the cuttings. After treatment the cuttings are then discharged to the sea. Figure EIS4 FPSO Once each well is drilled a wellhead and tree are installed and the well is connected to a manifold which is connected as appropriate to an umbilical and production gas or water flowline. The flowlines will be laid on the seafloor and risers will connect the seafloor infrastructure to the FPSO. The flowlines and risers will be hydrostatically tested with treated seawater to ensure no leakage. After the testing the hydrostatic water used to test the water and gas injection flowlines will be discharged near the seafloor and the fluid used to test the production flowlines will be recovered and treated prior to discharging overboard. The FPSO Figure EIS4 will be a converted double hull tanker with the capacity to store 1.6 million barrels of stabilized crude oil. The FPSO will be secured to the seafloor by a 16 to 20point spread mooring anchor system. The FPSO and the mooring system are designed to remain in place for at least 20 years and to sustain extreme 100year return period environmental conditions. The FPSO will also provide living quarters

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Environmental Impact Statement and associated utilities for approximately 140 personnel. For safety reasons the FPSO will have a two nautical mile exclusion zone to avoid interactions with unauthorized vessels.

EIS 2.2 Production Operations The FPSO will be designed to separate the recovered reservoir fluids into its oil water and gas phases Table EIS1. The oil will be treated to remove impurities e.g. sulfate and other salts and then sent to storage tanks in the hull. The water from the reservoir referred to as produced water will be treated to remove hydrocarbons and will then be discharged to the sea. The FPSO will dehydrate compress and reinject the produced natural gas into the Liza reservoir although some of the gas will be used as fuel on the FPSO and some gas may be occasionally flared on a nonroutine temporary basis. The FPSO will also have the capacity to treat by filtration deaeration and sulfate removal seawater for injection into the reservoir to maintain reservoir pressure and offset the withdrawal of reservoir fluids to enhance oil production.

Table EIS1 FPSO Key Design Rates

Service	Oil Production	Produced Water	Total Liquids	Produced Gas	Gas Injection	Design Rate
Oil Production	100000 bpd	150000 bpd	190000 bpd	180000000 standard cubic feet per day	160000000 standard cubic feet per day	100000 bpd

peaks of 120000 bpd 100000 bpd 150000 bpd 180000000 standard cubic feet per day 160000000 standard cubic feet per day assumes some produced gas will be used as fuel gas for the FPSO 190000 bpd

Water Injection Project facilities will have the potential to safely operate at sustained peaks above the design rate. For purposes of this EIA potential impacts generated by the Project e.g. air emissions were based on a potential peak production volume of 144000 bpd to be conservative in the analysis. The FPSO will offload produced crude oil to conventional oil tankers on a regular basis. The tanker under the guidance of a Mooring Master will maneuver to within approximately 120 m 390 feet of the FPSO and hold position with the aid of up to three tugboats Figure EIS5. Crude oil will be pumped from the FPSO storage tanks to an offloading tanker using a floating hose at a rate of approximately one million barrels of oil in about 28 hours.

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 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Figure EIS5 Typical FPSO Offloading to a Conventional Tanker EIS 2.3
 Decommissioning Prior to the end of operations estimated at approximately 20 years EEPGL will

initiate detailed planning for facility decommissioning including filing a Notice of Intent for Decommissioning to the GGMC and EPA. All development wells will be permanently plugged and abandoned. It is expected that the SURF equipment and the FPSO mooring lines will be abandoned in place on the seafloor in accordance with standard industry practice subject to the decommissioning plan. The FPSO will be disconnected from its mooring system and towed to a shipyard for decommissioning.

EIS 2.4 Onshore Marine and Aviation Support Shorebases laydown areas warehouses fuel supply and waste management facilities will support the Project across the Project stages as described above. EEPGL is planning to utilize shorebases in Guyana and Trinidad to support the Project. Marine support will include various supply vessels with an average of 12 trips per week during drilling and installation and about 7 trips per week during production operations. These vessels are planned to originate from shorebases in Guyana and Trinidad. Aviation support is expected to average about 30 to 35 flights per week during drilling and installation and about 20 to 25 flights during production operations.

EIS 2.5 Project Workforce EEPGL estimates it will require a workforce of approximately 600 persons at the peak of the development well drilling approximately 600 persons at the peak of the installation stage approximately 150 shorebase and marine logistical support onshore staff some of whom will be Projectdedicated while others will be shared resources at the peak of installation and drilling activities approximately 100 to 140 persons at peak of production operations and approximately 60 persons at the peak of decommissioning.

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EIS 2.6 Project Schedule Environmental Impact Statement It could take up to four years to drill the approximately 17 wells with drilling planned to begin in 2018 or 2019. Installation of the SURF and FPSO are likely to be initiated in 2019 to be ready for initial production by mid2020 with operations continuing for at least 20 years

Figure EIS6. Figure EIS6 Preliminary Project Schedule

EIS 2.7 Public Consultation EEPGL has conducted a robust public consultation program to both inform the public about the Project and to understand stakeholder concerns so this feedback could be incorporated into the EIA as applicable. EEPGL has held various workshops with the government and others regarding

offshore oil and gas development. EEPGL and ERM have held meetings with over 30 Guyana government agencies, commissions, many elected officials and Regional Administrators, over 15 professional or business associations, various international and domestic nongovernmental organizations, several universities and research institutes, various religious and ethnic organizations and the media. EEPGL and ERM participated in two sector agency scoping meetings with over 150 attendees of which approximately 100 were members of the general public. These were followed by six public scoping meetings in Regions 1 through 6 which had over 300 attendees of which over 200 were public participants.

EIS 2.8 Alternatives

The EIA considered a range of potential Project alternatives as summarized below.

Location Alternatives

The location of the Project and the development wells in particular is driven by the location of the resource to be recovered. There are no meaningful differences in location alternatives for the FPSO, SURF equipment and drill centers within the PDA as the nature of the seafloor and the water surface are not expected to vary appreciably across the area; thus no environmental or social benefits would be achieved by minor location modifications.

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Given the water depth and distance to shore of the Liza field, the development alternatives are primarily limited to floating production systems e.g. FPSO, semisubmersible, tension leg platforms. With the exception of the FPSO concept, the other deepwater production systems would necessitate the use of a separate Floating Storage and Offloading (FSO) vessel for oil storage and offloading, which would increase environmental impacts. The FPSO was chosen because it is a more efficient standalone solution for deepwater oil processing and storage and is also the environmentally preferred alternative.

Gas Disposition

Three primary alternatives were considered for addressing associated gas produced during Phase 1 operations: gas reinjection, gas export and continuous flaring. Gas reinjection was determined to be feasible for Phase 1 and it also provides benefits in reservoir management. As such, produced gas not used as fuel gas on the FPSO will be reinjected under normal operations. Continuous flaring of gas on a routine basis is not preferred primarily due

to the associated air emissions. Gas export alternatives continue to be evaluated particularly given challenges related to commercialization of associated gas. The FPSO has been designed to allow for future gas export should an export alternative be identified. Technology Alternatives EEPGL is using the most appropriate industryproven technology in developing the Project in terms of well drilling drilling fluids equipment selection development concepts and environmental management. EEPGLs parent company ExxonMobil and its contractors have extensive experience in delivering offshore deepwater development projects around the world particularly with FPSO and SURF components and are applying that knowledge experience and technology in the development of the Project in Guyana. Nogo Alternative Under this alternative the Project would not be executed and the existing conditions in the PDA would remain unaffected by the Project and the potential positive and negative impacts assessed would not be realized. Therefore evaluating the nogo alternative means evaluating the tradeoff between positive and negative impacts. Overall the proposed Project reflects optimized locational siting appropriate development concept use of industryproven technology and also selection of the environmentally preferred action alternative. May 2017 xi EEPGL Environmental Impact Assessment Liza Phase 1 Development Project EIS 3.0 PROJECT IMPACTS Environmental Impact Statement This section summarizes the predicted environmental and socioeconomic impacts of the Project resulting from planned activities and potential unplanned events specifically an oil spill as well the Projects contributions to cumulative impacts on important resources and receptors. The resourcesreceptors considered in this analysis are listed in Table EIS2. The impacts of the Project were evaluated against the conditions of the existing environment as described in the Section 6 of the EIA. Table EIS2 Resources and Receptors Considered in this EIA Physical Resources Air Quality and Climate Sound Marine Geology and Sediments Coastal Wildlife and Shorebirds Community Health Wellbeing Employment and Livelihoods Biological Resources Protected Areas and Special Status Species Coastal Habitats Socioeconomic Resources Economic Conditions Marine Water Quality Seabirds Marine Mammals Marine Turtles Marine Fish Marine Benthos Ecological Balance and Ecosystems Marine Use and Transportation Social

EIS 3.1 Planned Activities The Project is an offshore oil development and all drilling installation production operation and decommissioning activities will occur over 190 km 120 miles off the coast of Guyana. The Project should not disturb any natural onshore habitats. There may be a minor increase in traffic congestion near the onshore shorebases and a Road Safety Management Procedure should mitigate those impacts. The Project will generate benefits for the citizens of Guyana through revenue sharing with the Government of Guyana a minor increase in employment and select Project purchasing from Guyanese businesses. The only resources with the potential to incur any meaningful adverse impacts from planned Project activities would be air quality and marineoriented resources i.e. marine sediments water quality and biological resources which are discussed briefly below.

EIS 3.1.1 Air Quality Emissions generated by the Project generally emanate from three source categories a specific point sources such as the power generating units and diesel engines on drill ships and on the FPSO b nonroutine flaring used to combust produced gas when not consumed as fuel gas on FPSO or reinjected and c general area sources such as support vessels construction vessels tug boats and helicopters. Such emissions contribute to increases in the ambient air concentrations of certain pollutants.

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The CALPUFF model was used to assess the dispersion of air pollutants and the potential impact for onshore human receptors. For all modeled constituents the maximum onshore concentrations predicted to result from Project activities are negligible relative to World Health Organization WHO guidelines the highest being less than or equal to 1 percent of the WHO guideline. The Project will also emit greenhouse gases GHGs throughout its predicted lifecycle with peak emissions during steadystate production operations stage estimated to be approximately 980 kilotonnes of CO₂equivalents per year. There are no applicable regulatory criteria against which these GHG emissions can be compared but these emissions are disclosed in accordance with good international practice to aid in managing GHG emissions at a national and international level. EEPGL proposes to reinject

recovered natural gas which is not used as fuel on the FPSO back into the Liza reservoir which represents a significant reduction in potential GHG emissions versus that which would result from routine gas flaring.

EIS 3.1.2 Marine Water Quality

The Project will impact marine water quality in a localized manner via planned discharges during well drilling hydrostatic testing of the flowlines and risers following installation and production operations stages. During well drilling as each well is started the Project will release a small volume of WBDF and cuttings at the seafloor. Low toxicity NADF will be used for the remainder of the well drilling but will be captured recovered to the extent practicable and reused. EEPGL would treat the drill cuttings to reduce the drilling fluids retained on the cuttings prior to discharging overboard. Modeling indicates that the residual NADF on the cuttings may have a localized minor impact on water quality. During installation the subsea flowlines and risers must be hydrostatically tested to confirm there are no leaks. Treated seawater is used for this purpose to prevent biofouling. A hydrate inhibiting substance such as methanol or ethylene glycol will also be used to prevent formation of hydrates during commissioning of the production and gas injection lines. After the completion of the testing the hydrostatic test water and hydrate inhibitor from the gas injection line will be released at the seafloor. The hydrostatic test water and hydrate inhibitor from the production lines will be returned to the FPSO treated and discharged from the overboard water line. These discharges would be a onetime short term impact and the treated seawater and hydrate inhibitor would be quickly diluted within the water column. During production operations the FPSO will discharge five primary effluent streams to the ocean Table EIS3. The FPSO systems associated with these discharges will be designed to ensure applicable discharge criteria are met which may require treatment in some cases. Modeling indicates that concentrations of chemical constituents would be reduced to insignificant levels within approximately 100 meters of the discharge point.

May 2017 xiii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Table EIS3 Summary of Production Operations Discharges

Discharges Source	Cooling Water	Process water to dissipate heat from FPSO systems	no hydrocarbon contact	Potential Contaminants	Temperature	Chlorine	Produced
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Water separated from reservoir fluids Sulfate Removal and Potable Water Processing Brines Removal of sulfates from seawater prior to injection; potable water processing Domestic Sanitary Wastewater Personnel black and gray water food wastes Oil grease Temperature Residual production and water treatment chemicals Bioe Chlorine Oxygen scavenger Scale inhibitor Nutrients chlorine bacteria Discharge Rate Comments 700000 bpd Discharge will meet internationally recognized standards limiting increases in ambient water temperature. 100000 bpd Will be treated to meet internationally recognized limits on oil grease . 100000 bpd Discharge 9000 bpd meets applicable standards without treatment. Will be treated in accordance with internationally recognized standards prior to discharge. Discharge will be conducted in accordance with internationally recognized standards. Offloading Tanker Ballast Water Offloading tanker will discharge ballast water as it loads oil from the FPSO None anticipated 1100000 barrels during each loading EIS 3.1.3 Marine Sediments and Marine Benthos The drilling of wells and the placement of flowlines and other subsea equipment will physically disturb approximately 0.3 km² of the sea bottom. After the initial structural casing section is installed the remaining NADF drill cuttings will be returned to the drill ship for treatment to remove associated drilling fluids prior to discharge to the sea in order to meet acceptable discharge thresholds. The planned discharge of NADF drill cuttings will result in the localized accumulation of cuttings on the seafloor primarily around the well locations with the distribution of deposition determined by oceanographic conditions. Modeling has indicated that the discharge of these cuttings will not significantly impact sediment quality because of the May 2017 xiv EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement relatively low toxicity and expected dispersion. Overall the Project impact on marine sediments will be negligible. Marine benthos organisms living on the seafloor could also be impacted by Projectrelated seafloor disturbance by potential smothering from the drill cuttings. Based on surveys of the seafloor however benthic organisms primarily consisting of polychaete worms occur at low densities. Modeling indicates that smothering effects from drill cuttings would be limited to a very small area around the well approximately 43 m diameter area. EIS 3.1.4 Marine

Biological Resources Marine resources i.e. seabirds fish mammals and turtles have the potential to be impacted by the Project but it was determined that the significance of these impacts range from minor to negligible for the reasons explained below. The Project could impact seabirds by interfering with their migration i.e. lights serving as attraction and potential exposure to the radiant heat from the flare. The Project lighting will be downcast to minimize its attraction potential and flaring will be nonroutine and temporary i.e. during select maintenance activities so the overall Project impact on seabirds was determined to be negligible. The Project could impact marine fish by deterioration of water quality from the discharges described above and the potential to entrain suck in fish at the cooling water intake. Modeling indicates that water quality will return to near background conditions within 100 m of the FPSO so the area impacted will be very small and fish are mobile and are known to avoid areas with degraded water quality. Water intakes will be designed to minimize the entrainment of fish. Marine mammals may be impacted by two types of sound continuous sound from vessels and machinery operating in the PDA and by comparatively louder shorter duration impulse sound from Vertical Seismic Profiling VSP and driven piles. Both the continuous sound and impulse sound sources would be loud enough to cause injury in the immediate vicinity of the source but would attenuate to noninjurious levels approximately 10 m horizontal distance from the vessels approximately 100 m from the VSP and approximately 1300 m from the driven piles at depths 1000m. Many of the larger baleen whales and dolphins would naturally avoid the area of potential effect especially around Drill Center 2 because it would be deeper than their typical maximum dive depths. Others such as sperm whales dive deep enough that they could potentially be exposed to injurious sound levels throughout the PDA however it would not be expected that they would be exposed for continuous time periods predicted to be necessary to result in injury. Vessel strikes would likely pose more of an immediate threat than auditory injury. Marine observers will be used to monitor for mammals present prior to or approaching during the VSP and soft start procedures will be used to allow any mammals in the immediate vicinity of the VSP and pile driving to vacate the area before sound levels reach potentially injurious levels in accordance with JNCC guidelines.

Vessel crews will also lookout for marine mammals to minimize the potential for vessel strikes. May 2017 xv EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement

Marine turtles are generally considered to be less sensitive to marine sound than marine mammals so underwater sound from Project activities would not have the same potential to impact marine turtles as marine mammals. The most significant potential Project-related impacts on marine turtles would be from marine vessel strikes and the same measures employed to manage risks of strikes on mammals would help manage risks of strikes on turtles. Numbers of vessel trips are modest in relation to existing vessel activity in Guyana waters; thus impacts to marine turtles are not anticipated to result in a significant impact.

EIS 3.2 Unplanned Events

An unplanned event is defined as an event that is not planned to occur as part of the Project e.g. accidents but that could potentially occur. Since these events are not planned they are evaluated using methods different from those used for planned events specifically taking into consideration the likelihood that an unplanned event will occur. For purposes of the Project three types of unplanned events were identified and considered hydrocarbon spill vessel collision and onshore vehicular accident. While a vessel collision and a vehicular accident could result in injuries significant injuries or fatalities would be expected to be rare occurrences considering likely vessel and vehicle speeds in areas where risk of collisions is highest. Thus vessel collisions and vehicular accidents are considered to have small temporary and localized impacts. The remainder of this section focuses on the potential impacts from an oil spill. The Project will be producing processing storing and offloading oil as its core activity so the risk of an oil spill would be present. EEPGL has identified nine spill scenarios including spills of different types of hydrocarbons e.g. crude oil marine diesel fuel oil lubricating oil NADF with several being applicable for spills at the shorebases and on vessels in the Demerara River estuary e.g. from supply vessel or in the Atlantic Ocean e.g. from a well drill ship supply vessel tanker FPSO. The largest of these scenarios considers a loss of well control in situ at the seafloor releasing 20000 barrels of oil per day for 30 days. EEPGL's well control philosophy is focused on blowout prevention using safety and risk management systems management of change

procedures global standards and trained experienced personnel. EEPGL has a mature program that emphasizes attention to safety well control and environmental protection. This includes proper preparation for wells e.g. well design well control equipment inspection and testing detecting changes in pressure quickly and efficiency in the process for temporary closing of a well personnel training and proficiency drills. In addition to these prevention measures EEPGL also has developed a detailed Oil Spill Response Plan OSRP to ensure an effective response to an oil spill if one were to occur. The OSRP identifies the organizations that would respond to a release event depending on the magnitude and complexity of the spill. The OSRP clearly delineates the responsibilities of each entity that would take part in a response and describes how EEPGL would mobilize both its own resources and those of its oil spill response contractors as well as notifying the government of Guyana with respect to mobilizing its resources. May 2017 xvi EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Due to the precautionary measures proposed by EEPGL to prevent and control an oil spill as described above the likelihood of an oil spill occurring is expected to be unlikely. Nevertheless EEPGL has conducted oil spill modeling and coastal sensitivity mapping to identify and characterize the resources/receptors with the potential to be exposed to oil in the event of a spill. An overview of this modeling and mapping is provided below. The spill modeling evaluated the range of possible trajectories and rate of travel of an oil slick from an extended loss of well control 20000 barrels of oil per day for 30 days. Several factors would inherently reduce the severity of an oil spill occurring in the Liza offshore development area and would increase subsequent ecosystem recovery rates including the following

Location of Spill a Liza well control event would occur approximately 190 km 120 mi offshore. It would take some time for oil to reach the Guyana shoreline which allows time to implement the Projects OSRP and also allows more time for evaporative and dispersive forces to act on the spilled material. Prevailing Currents the Guiana Current is a strong nearly year round westerly flowing current along the coast of Guyana. Modeling indicates that this current significantly reduces the probability of spilled oil reaching the sensitive coastal resources of Guyana. Properties of Spilled Oil

the Project will be producing a light crude oil which has low smothering potential and tends to spread readily on the ocean surface both of which can reduce severity of impacts to shoreline resources. Climate the relatively warm yearround waters of the Project area would keep any spilled oil less viscous which helps cleanup operations such as skimming and pumping. The modeling predicted that surface oil would generally travel towards the northwest in all scenarios during both the summer and winter seasons. The oil spill model indicates that even in the unlikely event of an oil spill there is only a 5 to 10 percent chance of shoreline oiling in Guyana. It is important to note that this modeling does not account for any oil spill response e.g. aerial vessel or subsea dispersant application offshore containment and recovery source control operations so any preventative measures taken to keep oil from reaching the coast during a response would further reduce the potential of shoreline oiling in Guyana below the estimated 5 to 10 percent. It is highly unlikely oil spilled in the Liza field would reach the Guyana shoreline in the case of an actual spill. In addition to the low probability of oil reaching the Guyana shoreline in the absence of any spill response it would take 5 to 15 days for oil to reach shore. This would allow ample time for mobilization of spill response resources to further reduce the risk of oil actually reaching the shoreline. Despite this if oil were to reach the Guyana shoreline those resources most at risk would include protected areas i.e. Shell Beach coastal habitats especially mangroves and marshes and coastal wildlife especially birds and furbearers as well as coastal communities and indigenous peoples dependent on fishing in the ocean and other ecosystem services Table EIS4. However the combination of the low probability of an oil spill actually reaching the shoreline and the time available to allow for spill response results in the residual risk to these resources being considered minor. May 2017 xvii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Table EIS4 Coastal Resources Potentially Impacted by an Oil Spill Resource Potential Impact Protected Areas Coastal Habitats and Wildlife Ecosystem Services Coastal Communities and Indigenous Peoples Per oil spill model Shell Beach Protected Area and its vicinity could be impacted if oil were to reach the Guyana shoreline. Mangroves and wetlands are common habitats along the Guyana coastline

and support many species and are considered sensitive to oil contamination. Many rural coastal communities and especially Indigenous communities rely on many ecosystem services e.g. for food housing materials medicinal plants income producing products flood protection for sustenance and livelihoods. Residual Risk Rating Minor Minor Minor Even though the probability of a spill impacting the coastal resources of Guyana is very low such an oil spill would likely have adverse impacts on marine resources in the area impacted by the spill. Those resources most at risk would be water quality seabirds marine mammals and marine turtles as described in Table EIS5. Effective implementation of the OSRP would help mitigate this risk by further reducing the ocean surface area impacted by a spill and oil exposure to these species. Table EIS5 Marine Resources Potentially Impacted by an Oil Spill Resource Potential Impact Marine Water Quality Seabirds Marine Mammals Marine Turtles Dissolution of some spilled oil into the water column but light oil expected to degrade quickly and the impacts are reversible. Seabirds are typically among the species most impacted by an oil spill because they spend significant time on the water surface and so may come in contact with the spilled oil but seabirds are primarily transient in the PDA. Ingestion and respiratory irritation from inhalation of vapors at the water surface and the potential for fouling of baleen whale plates which are used to feed. Dermal irritation from contact with oil ingestion and respiratory irritation from inhalation of vapors at the water surface. Residual Risk Rating Moderate Minor Moderate Moderate Cumulative Impacts EIS 3.3 The Project is located approximately 190 km 120 mi offshore so there are few opportunities for the Project to cumulatively impact resources that would be impacted by other activities. There is the potential for other future offshore Guyana oil and gas exploration and possibly development. If such nonProject activities were to occur the Project and nonProject activities together could cumulatively impact some resources such as Marine Mammals via vessel strikes or sound Marine Turtles vessel strikes Marine Fish degraded water quality and seawater entrainment Community Health and Wellbeing increased demand on limited medical treatment capacity Marine Use and Transportation marine congestion especially near May 2017 xviii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact

Statement Georgetown harbor and Social Infrastructure and Services increased demand for limited housing utilities and services. Many of the above potential impacts that require offshore interaction between the Project and others have a limited chance of cooccurring given the size of the Stabroek Block. Thus potential cumulative impacts were considered to be of Minor significance.

EIS 3.4 Degree of Irreversible Damage

The planned Project would not cause irreversible damage to any onshore areas of Guyana. There would be a very minor approximately 0.3 km² permanent loss of benthic habitat as a result of the installation of wells flowlines and other subsea equipment which may be proposed to be left in place upon decommissioning. However this equipment can ultimately provide the substrate for recolonization of the impacted areas. Even in the unlikely event of an oil spill little irreversible damage would be expected although it could take a decade or more for all resources to fully recover depending on the on the volume and duration of the release as well as the time of year the release were to occur.

EIS 3.5 Environmental and Socioeconomic Management Plan

An Environmental and Socioeconomic Management Plan ESMP has been developed to manage and mitigate the impacts identified in the EIA. The ESMP includes the following

Environmental and Socioeconomic Management Plan Framework

Environmental Management Plan including

- o Air Quality Management
- o Water Quality Management
- o Waste Management Plan
- o Marine Ecosystems Management

Socioeconomic Management Plan including

- o Stakeholder Engagement Plan
- o Grievance Management
- o Transportation and Road Safety Management
- o Cultural Heritage Management and Chance Finds

Environmental and Socioeconomic Monitoring Plan

Oil Spill Response Plan including

- o Oil Spill Modeling
- o Coastal Sensitivity Mapping
- o Emergency Preparedness and Response Procedures

Preliminary End of Operations Decommissioning Plan

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EIS 4.0 CONCLUSIONS AND RECOMMENDATIONS

EIS 4.1 Conclusions

The planned Project is predicted to have minor impacts on physical resources i.e. air quality marine sediments and water quality no impacts on coastal biological resources minor impacts on marine biological resources and largely positive impacts on

socioeconomics. These predictions are based on the fact that the bulk of the Project will occur approximately 190 km 120 miles offshore and the Project will capture and reinject produced natural gas; treat all significant wastewater streams prior to discharge to the sea; have a very small footprint e.g. only physically disturb about 0.3 km² of benthic habitat; and use MMOs during VSP operations to minimize the potential for auditory damage and injury from ship strikes to marine mammals. The Project will generate benefits for the citizens of Guyana through revenue sharing with the Government of Guyana a minor increase in employment and select Project purchasing from Guyanese businesses. Unplanned events such as a potential oil spill are considered unlikely to occur because of the extensive preventative measures employed by EEPGL. Nevertheless an oil spill is considered possible and oil spill modeling has been conducted to evaluate the range of likely spill trajectories and rates of travel. The location of the Project 190 km 120 miles offshore prevailing northwest currents the light nature of the Liza field crude oil and the regions warm waters would all help minimize the severity of a spill. Accounting for these factors the modeling indicates only a 5 to 10 percent probability of oil reaching the Guyana coast without taking into consideration the effectiveness of any oil spill response. Although the probability of an oil spill reaching the Guyana coast is very small a well control spill at a Liza well would likely impact marine resources found near the well such as sea turtles and certain marine mammals especially baleen whales that may transit or inhabit the area impacted by a spill. Air quality water quality seabirds and marine fish could also be impacted although likely to a lesser extent because the duration of acute impacts would not be long and the impacts are reversible. A spill could potentially impact Guyanese fishermen if commercial fish and shrimp were impacted. The magnitude of this impact would depend on the volume and duration of the release as well as the time of year the release were to occur e.g. whether a spill would coincide with the time of year [May to September] when these species are more common in the PDA. Effective implementation of the OSRP would reduce this risk by further reducing the ocean surface area impacted by a spill and oil exposure to these species. Table EIS6 provides a summary of the predicted residual taking into consideration proposed mitigation

measures impact significance ratings for impacts to each of the resources/receptors that may result from each of the Project stages i.e. well drilling SURFFPSO installation production operations and decommissioning unplanned event i.e. oil spill and cumulative impacts. May 2017 xx EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement Table EIS6 Summary of Residual Impact Ratings Resource Drilling and Installation Negligible None Air Quality and Climate Sound² Marine Geology/Sediments Negligible Marine Water Quality Protected Areas Special Status Species Critically Endangered and Minor None Negligible Terrestrial Species Production Operations Negligible None None Minor None Decommissioning Oil Spill Cumulative Negligible None None Minor None Minor Minor Minor Moderate Minor Impacts Negligible None Negligible Minor None Negligible Negligible Minor Minor Minor Minor None None Negligible Minor Minor Minor Negligible Negligible Negligible Negligible Minor Minor Minor Minor Minor Minor Negligible Negligible Negligible Negligible Minor Minor Minor Moderate Moderate Minor Minor None None Negligible Negligible Negligible Negligible Negligible None None Negligible Moderate Minor Minor Negligible None None Negligible Negligible Negligible Negligible Negligible Vulnerable/Near Threatened Species sharks bony fish Endangered Fish and Black Capped Petrel Coastal Habitats Coastal Wildlife/Shorebirds Seabirds Marine Mammals Marine Turtles Marine Fish Marine Benthos Ecological Balance Ecosystems Economic Conditions Employment/Livelihoods Community Health Wellbeing Marine Use/Transportation Commercial cargo Commercial fishing Subsistence fishing Social Infrastructure Services Cultural Heritage Land Use Ecosystem Services Indigenous Peoples Based on oil spill modeling of an unmitigated well control event in the PDA that indicates oil reaching Guyana shoreline is highly unlikely 5 to 10 percent probability. Excludes listed sea turtles which are covered in the Marine Turtles resource category. Negligible Negligible None None Negligible Negligible None None Negligible Minor Minor Negligible Minor Minor Negligible Minor Minor Minor None Minor Minor Minor Minor Minor Positive Positive Positive Positive Positive Minor Minor Negligible Negligible Negligible Negligible Minor Minor Minor Minor Minor Minor Negligible Negligible None None Minor Minor Minor Minor

Minor 2 Soundrelated impacts on Marine Mammals are factored into the Marine Mammal impact assessment. May 2017 xxi EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Environmental Impact Statement The Project will also generate benefits for the citizens of Guyana in several ways Through revenue sharing with the Government of Guyana although the details of this revenue sharing is confidential. The type and extent of benefits associated with revenue sharing will depend on how decision makers in government dee to prioritize and allocate funding for future programs which is unknown and outside the scope of the EIA; By procuring select Project goods and services from Guyanese businesses to the extent reasonably practicable; and By hiring Guyanese nationals where reasonably practicable although the potential magnitude of hiring will be limited. In addition to direct revenue sharing expenditures and employment the Project would also likely generate induced economic benefits as other nonProject related businesses benefiting from direct Project purchases or worker spending will reinvest locally or expand spending in the area thereby also generating more local valueadded tax. These beneficial multiplier impacts will occur throughout the Project life. EIS 4.2 Recommendations ERM recommends the following measures be considered by EPA GGMC and the EAB as conditions of any approval of the Project Embedded Controls incorporate all of the proposed embedded controls see EIA Chapter 11. Mitigation Measures adopt the recommended mitigation measures see EIA Chapter 11. Management Plans Management Plan. implement the proposed Environmental and Socioeconomic Oil Spill Response EEPGL has proactively embedded many controls into the Project design to prevent a spill from occurring and we agree that a spill is unlikely. But given the sensitivity of many of the resources that could be impacted by a spill e.g. Shell Beach Protected Area marine mammals critically endangered and endangered sea turtles Amerindian communities reliant on ecosystem services for sustenance and their livelihood we believe it is critical that EEPGL commit to regular oil spill response drills simulations and exercises document the availability of appropriate response equipment on board the FPSO and demonstrate that offsite equipment could be mobilized for a timely response. With the adoption of such embedded controls mitigation measures and management plans and requirements

for emergency response preparedness the Liza Phase 1 Development Project is expected to pose only minor risks to the environmental and socioeconomic resources of Guyana while potentially offering significant economic benefits to the residents of Guyana. May 2017 xxii EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 1 Introduction ENVIRONMENTAL IMPACT ASSESSMENT 1.0 INTRODUCTION Esso Exploration and Production Guyana Limited EEPGL³ together with its joint venture partners Hess Guyana Exploration Limited and CNOOC Nexen Petroleum Guyana Limited is seeking an environmental authorization for the first phase of oil field development of the Liza prospect in the eastern half of the Stabroek Block hereafter referred to as the Liza Phase 1 Development Project or the Project which is located approximately 190 km 120 mi offshore from Georgetown Figure 11. Based on exploration and assessment activities in the Stabroek Block including three exploration wells Liza1 Liza2 and Liza3 respectively EEPGL believes these reservoirs potentially contain a recoverable resource of between 0.8 and 1.4 billion oil equivalent barrels. Figure 11 Location of the Liza Project Development Area within the Stabroek Block NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. ³ EEPGL will be the operator of the Project and is used in this EIA to represent the joint venture. May 2017 1 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 1.1 Purpose of this EIA Chapter 1 Introduction Guyanese law requires EEPGL to obtain an environmental authorization from the Guyana Environmental Protection Agency EPA to undertake the Project. The EPA oversees the effective management conservation protection and improvement of the environment in Guyana. In this role the EPA is responsible for managing the environmental authorization process. EEPGL filed an Application for Environmental Authorisation Application with the EPA on July 5 2016. Based on an initial assessment of the Application the EPA determined that an Environmental Impact Assessment EIA was required in support of the Application. The purpose of this EIA is to provide the factual and technical basis required by EPA to make an informed decision on EEPGLs Application for Environmental Authorisation⁴ to permit the Project. After submission and review of this EIA the EPA takes into account recommendations from the

Environmental Advisory Board EAB and the Guyana Geology and Mines Commission GGMC the public's comments and EPA's own review including support from technical experts within other ministries in deciding whether and under what conditions to grant EEPGLs Application. The GGMC has several functions including promoting and regulating the exploration and development of the country's mineral and petroleum resources. The Petroleum Division of the GGMC is responsible for promoting Guyana's petroleum potential and monitoring exploration and production activities. GGMC oversees EEPGLs Prospecting Licence under which offshore exploration and drilling activities e.g. Liza 1 2 and 3 wells were conducted and has received EEPGLs application for a Petroleum Production Licence and associated Development Plan for the first phase of the Liza field development. GGMC will also provide technical input into the review of the EIA as discussed above and will consider the findings of the EIA as part of its evaluation of EEPGLs application for Petroleum Production Licence for the Liza Phase 1 Project. The EAB is an independent body that contributes to the development and review of the EIA and makes recommendations to the EPA on whether the EIA should be accepted amended or rejected and whether the environmental authorization should be granted and if so under what terms and conditions. This EIA was prepared by Environmental Resources Management ERM which is an international environmental and social consulting firm with extensive experience in the preparation of EIAs for offshore oil and gas development projects. In the Project's Final Terms of Reference ToR EPA approved ERM as the independent consultant to undertake the EIA. This EIA has been prepared in compliance with the Guyana Environmental Protection Act EP Act Cap.20:05 the Environmental Protection Authorisation Regulations 2000 the Environmental Impact Assessment Guidelines Volume 1 Version 5 2004 the Environmental Impact Assessment Guidelines Volume 2 Version 4 2000 other applicable Guyana 4 The Environmental Authorisation granted by the EPA is also commonly referred to as an environmental permit and may be used interchangeably. May 2017 2 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 1 Introduction regulations international good practice EEPGLs corporate standards and in accordance with ERM's standard practice. 1.2

EEPGL Exploration Well Drilling History EEPGL has drilled five exploration wells within the Stabroek Block offshore Guyana with a sixth well planned in 2017 as indicated in Table 11 below. After completion of the exploration testing each of these wells was closed consistent with good industry practice. EEPGL has plans to explore in other blocks but no drilling has yet occurred outside of Stabroek Block.

Well Name	Liza1	Liza2	Liza3	Skipjack	Payara	Snoek	Year Drilled	2015	2016	2016	2016	2016	Planned for 2017	Result
	Successful	oil found	Successful	Successful	Dry well	no oil found	Successful	Not available	1.3	Goals				

and Objectives of the EIA The goals of the EIA are to Provide the factual and analytical basis required by EPA and the GGMC to make an informed decision on EEPGLs Application for Environmental Authorisation to permit the Project; and Provide a basis for EEPGL to understand and appropriately avoid or manage the risks imposed by the Project via design or other management measures. In support of those goals and in accordance with the EIA Final ToR which were approved by the EPA on February 17 2017 the underlying objectives of the EIA are to Describe the Project including its various components and activities and full life cycle through to decommissioning; Describe the existing conditions within the Projects Area of Influence AOI; Identify and assess the potential direct and indirect environmental and socioeconomic impacts that could credibly result from the Project using a riskbased assessment process; Evaluate the potential for cumulative impacts; Describe a strategy to manage the identified significant adverse impacts of the Project; Characterize potential positive benefits of the Project; and Recommend monitoring to assess the effectiveness of the management strategy.

May 2017 3 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 1.4 Components of the EIA Chapter 1 Introduction As required by the Guyana EP Act Cap. 2005 and further described in the Guyana Environmental Impact Assessment Guidelines this EIA includes the required components of an EIA Project Description see Chapter 2 of the EIA; Environmental Baseline Studies see Chapter 6 of the EIA; Environmental Assessment see Chapters 7 8 and 10 of the EIA; Environmental Impact Statement provided at the beginning of the EIA; and Environmental and Socioeconomic Management Plan the

Environmental and Social Management Plan ESMP Framework is provided as Chapter 9 of the EIA. EEPGL has elected to submit these components as one document. The Environmental Impact Assessment Guidelines Volume 1 Rules and Procedures for Conducting and Reviewing EIAs November 2004 includes as Appendix 2 an EIA Review Checklist. Provided below in Table 12 is an EIA roadmap that shows where all of the Checklist Items Evaluated can be found in this EIA.

Table 12 EIA Review Checklist Roadmap	EIA Review Checklist Items
1. Adherence to the ToR	Corresponding EIA Reference Adherence to the ToR confirmed Adherence to the ToR must be verified simply by checking that all items and information requested in the ToR have been presented regardless of the or quality of such information.
2. Multidisciplinary Team	The accuracy of the EIA depends on the qualifications of the multidisciplinary team not only regarding the EIA process and methods but also regarding their knowledge of the several stages of the specific type of project. Therefore individual CVs should be submitted as part of the EIA Annexes. Signatures of each member of the team must be affixed.
3. Interdisciplinary Achievement	An EIA must present information regarding the interactions and integration between the physical biological and socioeconomic aspects of the environment in that particular area of the study.
4. Chapter 12 lists all team members and references Appendix A provides signatures and Appendix B includes all CVs. Chapter 7 includes assessment of all three categories of resources	EEPGL Environmental Impact Assessment Liza Phase 1 Development Project EIA Review Checklist Items
4. Executive Summary Chapter 1 Introduction	Corresponding EIA Reference Executive Summary included in EIS
5.01 see Chapter 2 5.02 see Section 2.3 Drilling 2.6 Installation Hookup and Commissioning 2.7 Production Operations and 2.9 Decommissioning	5.03 see Section 2.1 all stages occur within this same area 5.04 see Section 2.8 only onshore supply and support has any land requirements 5.05 see Section 2.10 5.06 see Section 2.10 5.07 see Section 2.10 5.08 Noise impacts are quantified in Section 7.2.5; thermal and liquid discharges are quantified in Section 7.1.4; and air gaseous emissions are quantified in Section 7.1.1 5.09 see Section 2.12 The Executive Summary also referred to as the nontechnical summary should provide a brief description of the project and

information regarding the potential impacts of the project arranged in order of significance along with the proposed mitigation/compensatory measures for each impact. The summary should end with the consultants' recommendations.

5. Project Description

The process of environmental impact assessment depends on the full understanding of the project proposal and accurate identification of the project actions. If actions are unclear, sufficiently detailed impacts are not likely to be identified with the accuracy and specificity needed to enable the development of appropriate mitigation measures.

5.01 Is the project proposal fully understood
5.02 Are all phases identified e.g. planning construction operation and decommissioning
5.03 Is the geographical area for each phase identified
5.04 Are the land use requirements for each phase identified
5.05 Is there an inventory of the nature and quantity of materials used in the production process
5.06 Are there inventories of the type and quantity of products byproducts and effluents expected to be produced by the project
5.07 Is there an inventory of the type and quantity of residues
5.08 Are the levels of emissions expected detailed with respect to Noise Vibration Light Heat Radiation Gases Liquids
Are the types and levels of any other emissions included
5.09 Is information on employment provided

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5 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 1 Introduction EIA Review Checklist Items Corresponding EIA Reference

6. Identification and Description of Alternatives

The assessment of sound alternatives is necessary to validate the EIA process. Therefore reasonable alternatives have to be fully and comprehensively considered. As a minimum one of the following alternatives must be considered location project layout technology scheduling project scale.

6.01 Did the developer consider alternatives
6.02 Was the no-project scenario considered
6.03 Were the environmental factors adequately presented for each alternative
6.04 Is the final choice adequate

6.01 see Section 2.16
6.02 see Section 2.16
6.03 see Section 2.16
6.04 see Sections 2.16 and 10

7. Definition and Justification of Physical Boundaries Direct and Indirect Area of Influence

See Section 5.1 Inconsistency in identifying the correct areas of influence will inevitably lead to inconsistency in the baseline data and the impact analysis. The indirect area of influence is the area likely to be affected by indirect secondary and/or long term impacts.

8. Analysis

of the Legal Aspects Involved The analysis of the legal framework involves more than a list of legal Acts. It involves assessing the consequences for the project of enforcing all the environmental legislation and regulations regarding the proposed site and sectoral requirements related to the proposed activity.

9. Identification of Other Existing Planned Activities or Projects in the Area of Influence This information is of utmost importance to ensure that landuse and other types of conflicts do not arise later during the project implementation.

9.01 Has the compatibility between the proposal and the identified existing activities been analysed

9.02 Are the activities compatible

9.03 Does the inventory of existing activities match what is observed See Sections 3.1 through 3.3 See Chapter 8 which discusses other activities in the AOI as part of the Cumulative Impact Assessment

9.01 see Section 8.1.2 9.02 see Section 8.1.2 9.03 see Section 8.1.2 May 2017 6 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 1 Introduction EIA Review Checklist Items Corresponding EIA Reference

10. Adequacy and Completeness of Relevant Baseline Data Baseline data must be specific and relevant to the area of influence. General and superficial information does not allow for the use of adequate impact prediction techniques.

10.01 Is the information presented specific and relevant

10.02 Were difficulties in attaining information if any documented

10.03 Have the impact indicators identified been adequately covered see Section 13

11. Appropriateness of EA Methods The use of appropriate EA methods is necessary to ensure reliability of the results of the EIA study. Each type of EA method has different strengths and vulnerabilities regarding its appropriateness to perform each step of the EIA study. Some EA methods are unable to provide the means of identification of causeeffect relationships; others do not enable the identification of indirect secondary and/or longterm impacts. Scientific and technical accuracy of the EIA methods used must therefore be evaluated to ensure the reliability of the conclusions drawn from the impact assessment.

12.1. Physical Impacts Have all the identified impacts on air water soil noise landscape and natural resources been checked against the relevant impacts defined in the ToR Are impacts characterized positiveneegative directindirect primarysecondary shortmediumlong term reversibleirreversible temporarypermanent

localregionalnationalstrategic avoidableunavoidable Have the magnitudes been estimated Have the impacts been assigned a significance Have the social implications of the impacts been assessed

12.2. Biological Impacts Have all the identified impacts on flora fauna rare endangered species sensitive ecosystems species habitats and ecological balance been checked against the relevant impacts in the ToR. May 2017 7 See Chapter 6 10.01 see Chapter 6 10.02 see Chapter 6 10.03 see Chapter 6 See Chapter 4 for a description of the EIA methodology See Chapter 7 which includes description of analytical approach for each resource See Section 7.1 which addresses impacts to physical resources See Section 7.2 which addresses impacts to biological resources

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Are impacts characterized positiveneegative directindirect primarysecondary shortmediumlong term reversibleirreversible temporarypermanent localregionalnationalstrategic avoidableunavoidable Have the magnitudes been estimated Have the impacts been assigned a significance Have the social implications of the impacts been assessed Have causeeffect relations been properly identified

12.3. Social and Health Impacts Have all the identified impacts on the social and health context been checked against the relevant impacts defined in the ToR Are impacts identified with respect to human health demographic and household characteristics employment opportunities size and distinguishing characteristics of resident population the provision of social services and infrastructure Are impacts characterized positiveneegative directindirect primarysecondary shortmediumlong term reversibleirreversible temporarypermanent localregionalnationalstrategic avoidableunavoidable Have the magnitudes been estimated Have the impacts been assigned a significance Have the social implications of the impacts been assessed Have causeeffect relations been properly identified To what extent does the project protectimprove human health To what extent does the project protectimprove human living conditions

12.4. Cultural Historical andor Archeological Impacts Have all the identified impacts related to cultural historical andor archeological sites and heritage been checked against the relevant impacts defined in the ToR Are impacts identified with respect to cultural heritage Are

impacts characterized positive/negative direct/indirect primary/secondary short/medium/long term reversible/irreversible temporary/permanent local/regional/national/strategic avoidable/unavoidable

Have the magnitudes been estimated? Have the impacts been assigned a significance? May 2017 8

See Section 7.3 which addresses impacts to socioeconomic resources. See Section 7.3.7 which addresses cultural heritage resources.

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Have the social implications of the impacts been assessed? Have cause/effect relations been properly identified?

12.5. Economic Impacts

Have all the identified impacts on the economy local/regional/national been checked against the relevant impacts defined in the ToR? Are impacts identified with respect to economic assets and activities? Are impacts characterized positive/negative direct/indirect primary/secondary short/medium/long term reversible/irreversible temporary/permanent local/regional/national/strategic avoidable/unavoidable? Have the magnitudes been estimated? Have the impacts been assigned a significance? Have the social implications of the impacts been assessed? Have cause/effect relations been properly identified? Are impacts identified with respect to income generation for the community and at the National Level? Are impacts characterized positive/negative direct/indirect primary/secondary short/medium/long term reversible/irreversible temporary/permanent local/regional/national/strategic avoidable/unavoidable? Have the magnitudes been estimated? Have the impacts been assigned a significance? Have the social implications of the impacts been assessed? Have cause/effect relations been properly identified?

12.6. Other impacts

Have all other impacts been checked against the relevant impacts defined in the ToR? Are impacts identified with respect to? Are impacts characterized positive/negative direct/indirect primary/secondary short/medium/long term reversible/irreversible temporary/permanent local/regional/national/strategic avoidable/unavoidable? Have the magnitudes been estimated? Have the impacts been assigned a significance? May 2017 9

See Section 7.3 which addresses economic resources combined with other socioeconomic resources. Other potentially impacted resources not specifically listed above have been included such as marine sediments, marine use and transportation and indigenous peoples. EEPGL

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Has the social distribution of the impacts been identified

Have causeeffect relations been properly identified 13. Cumulative Impacts There may be cases where an activityproject will contribute to a cumulative impact on the environment although individually it may not have a significant environmental impact. This may be as a result of the presence of similar activities within the vicinity of the project. 13.01 see Chapter 8 13.02 see Section 8.2 13.03 see Section 8.2 13.04 see Section 8.2 13.05 see Section 8.2 13.01 Have cumulative impacts been adequately identified and characterized 13.02 Have the magnitudes been estimated 13.03 Have the impacts been assigned a significance 13.04 Has the social distribution of the impacts been identified 13.05 Have causeeffect relations been properly identified 14. Impact Indicators Impact indicators are the parameters used to estimate the magnitude of the impacts. 14.01 Were the impact indicators used adequate for all the impacts identified 15. Prediction Techniques Impact prediction techniques are necessary to enable the estimation of the magnitude of the impacts. Without the use of adequate impact prediction techniques accurate impact analysis is not possible. 15.01 Have the impact prediction techniques used been described 15.02 Are they adequate 16. Magnitude of Impacts Magnitude is the estimate of the absolute measurevaluedimension of the difference between the environmental situation of a given parameter before and after the project is implemented. In the majority of cases physical biological and economic impacts it must be expressed in quantitative values. The estimation of the magnitude of each relevant impact is one of the most important steps in impact analysis. It ensures the accuracy of the EIA and allows for the May 2017 10 See Chapter 4 which outlines approach for characterizing magnitude of impacts See Chapter 7 which assesses magnitude for impacts 15.01 see Chapter 4 which describes the impact assessment methodology used; Chapter 7 describes methodology and results of analytical approaches for each resourcereceptor 15.02 see Chapter 4 See Chapter 4 which describes the approach for characterizing magnitude of impacts Chapter 7 assesses magnitude for impacts for each resourcereceptor

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Phase 1 Development Project Chapter 1 Introduction EIA Review Checklist Items identification of appropriate and costeffective mitigation measures. Have the magnitude of all the relevant impacts been adequately estimated refer to impact indicators Section 14 Corresponding EIA Reference 17.0 ImportanceSignificance of Impacts Usual methods involve objective criteria regarding the ecological and social relevance of the project 17.01 Is the relative importancesignificance of each impact with regard to the environmental factor affected and with regard to the other impacts given 17.02 Is the significance based on objective criteria in order to minimize subjectivity of judgments 17.01 see Chapter 4 which describes the approach for characterizing the importance and significance of impacts 17.02 see Chapter 7 which describes the methodology and results of analytical approaches for each resourcereceptor 18 Social Distribution of Impacts Identifies which social groups will be affected by the positive and the negative impacts. These groups are often not the same. The balance between positive and negative impacts cannot be done without the correct identification of the social distribution of the impacts because it would not have scientific and technical relevance. 19 Stakeholder Participation 19.01 Are the results of stakeholder participation such as the results of interviews hearings etc. clearly documented 19.02 Have questionnaires used been included 19.03 Are the extent and method of stakeholder participation adequate 19.04 Are the conclusions drawn valid based on available data See Chapter 7.3 which addresses impacts to socioeconomic resources specifies affected groups 19.01 see Section 4.5 19.02 No specific questionnaires were used but numerous Key Informant Interviews informal meetings capacity building workshops as well as two AgencySector scoping meetings and six public scoping meetings from Regions 16 were held. 19.03 see Section 4.5 19.04 see Section 4.5 20 Analysis and Selection of Best Alternative See Section 2.16 and Chapter 10 Selection must be based on criteria derived from the impact assessment and appropriate analysis and decisionmaking methods must be used. 21 Environmental Management Plan EMP May 2017 11 See Chapter 9 and the ESMP EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 1 Introduction EIA Review Checklist Items Corresponding EIA Reference An EMP is sometimes called an Impact Management Plan. It is a

necessary step to ensure that the developer is effectively committed to the implementation of the mitigation measures. It is also a useful corporate management tool. Does the EMP as a minimum present The set of mitigation remedial or compensatory measures A detailed description of each one with indication and criteria for their effectiveness Detailed budgets for each one Timetables for implementation Assignment of responsibilities including an Environmental Manager The Environmental Policy 22 Monitoring See Section 9.6 and the ESMP Monitoring is a necessary step to ensure costeffectiveness of the EMP. It is usually addressed under the EMP see Section 20 Does the monitoring plan as a minimum address What is going to be monitored impact indicators Where will samples be taken How the samples will be analysed methodtechnique Criteria used to evaluate the results Financial and human resources required 23 Implementation Plan for the Mitigation Measures and the Environmental Management Plan See Chapter 9 and the ESMP Implementation mechanisms must be in place to ensure effective implementation of the mitigation measures and all other recommendations that might arise from the EIA study. It usually involves the assignment of a person responsible for environmental management and an approved timetable for implementation of measures. May 2017 12 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description 2.0 PROJECT DESCRIPTION Previous seismic testing and exploratory drilling have determined the presence of a high porosity sandstone reservoir of crude oil with an estimated recoverable resource of 0.8 to 1.4 billion oilequivalent barrels in an area referred to as the Liza field located within the eastern half of the Stabroek Block. The purpose of this Project is to develop the Liza field and produce the oil in what is referred to as the Liza Project Development Area PDA. Phase 1 of the Project will consist of the drilling of approximately 17 development wells the installation and operation of Subsea Umbilicals Risers and Flowlines SURF equipment the installation and operation of a Floating Production Storage and Offloading FPSO facility and ultimately Project decommissioning. The Project will also involve onshore facilities and marineaviation services to support development drilling installation production operations and decommissioning. This section discusses the following information related to the Project Installation

hookup and commissioning activities; Project location; Overview of development concept; Drilling and well design; SURF; FPSO vessel including topsides facilities and the vessel mooring system; Production operations including offloading by conventional tankers; Onshore marine and aviation support; End of operations decommissioning; Materials emissions discharges and wastes; Embedded controls; Project workforce; Worker health and safety; Project schedule; and Project alternatives.

2.1 Project Location The Stabroek Block which covers an area of approximately 26800 km² is oriented roughly parallel to the Guyana coastline extending across the entire width northwest to southeast of Guyana territorial waters. Figure 11 illustrates the location of the Liza PDA which is located approximately 190 km 120 mi from the coastline northeast of Georgetown within the Stabroek Block. Figures 21 and 22 illustrate the preliminary conceptual layout of the FPSO SURF equipment and drill centers within the Stabroek Block; their proximity to the Liza1 Liza2 and Liza3 exploration wells; and the subsea and surface extents of the PDA respectively.

May 2017 13 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 21 Subsea Project Development Area for FPSO Installation SURF and Drill Centers within Stabroek Block Note Locations on figure subject to change.

May 2017 14 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 22 Surface Project Development Area for FPSO and Drill Centers within Stabroek Block Note Locations on figure subject to change.

May 2017 15 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description The locations of the future development wells will be finalized before Project implementation; however the decision has been made that the wells will be drilled from two main drill centers⁵. During the development drilling installation of the FPSOSURF facilities and production operations stages work may be performed in the area denoted on Figure 21 as the Subsea PDA covering an estimated 45005000 hectares ha. Most of this subsea area will not be physically disturbed; the estimated subsea area to be disturbed during installation of SURF equipment and the FPSO mooring system see Figure 21 is approximately 400000 m² 30 ha incorporating a 50 percent contingency factor. During the development drilling and FPSO production

operations stages work may be performed on the surface of the ocean within the area denoted on Figure 22 as the Surface PDA also covering an estimated 45005000 ha. As further described in subsequent sections and represented on Figure 22 some of the ocean surface would have operational constraints that would restrict unauthorized vessels from entering a defined safety exclusion zone during drilling installation and production operations. Note however that while Figure 23 shows four potential exclusion zones around the drilling locations a maximum of only two drill ships will be operating at any one time. The safety exclusion zones for the large installation vessels are not specifically denoted on Figure 22; however exclusion zones similar to those for the drill ships will be maintained for these vessels while working in the PDA.

2.2 Overview of the Development Concept

2.2.1 Development Concept

The Liza field will be developed during Phase 1 with approximately 17 development wells drilled from two drill centers each with separate production gas and water injection manifolds. Figure 23 illustrates the preliminary field layout of the proposed Liza field development which includes the development wells SURF and a spreadmoored FPSO vessel. The facility layout will continue to evolve during the design development process. The various components shown on Figure 23 are further described in the relevant Drilling SURF and FPSO sections in this chapter.

5 A drill center is defined as a group of wells including production water injection and/or gas injection wells clustered around one or more manifolds. Each drill center incorporates separate manifolds that are separated by several kilometers and are designed for production or injection. For example Drill Center 1 will be separated into 1P production and 1I injection components.

May 2017 16 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 23 Preliminary Liza Phase 1 Field Layout Chapter 2 Project Description February 2017 17 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description

The development wells consist of production wells water injection wells and gas injection wells. A portion of the associated gas i.e. gas entrained in the wellstream produced from the reservoir will be used onboard the FPSO as fuel gas and the remaining balance will be reinjected back into the reservoir via the gas injection wells. Alternative uses of gas for future

phases are being studied and would be addressed in a separate or amended EIA. Water injection will be used as needed to maintain reservoir pressure for optimal production over the life cycle of the Project. The Liza field will be developed using a spreadmoored FPSO see Section 2.5. The FPSO will be a converted double hull Very Large Crude Carrier VLCC that will support the topsides facilities process the produced wellstream from the production wells and store the processed crude oil. Offloading of the processed crude oil for export will occur directly to conventional tankers in a tandem configuration. Subsea production gas and water injection wells and manifolds will be tied back to the FPSO via flowlines and risers see Section 2.4.

2.2.2 Applicable Codes Standards and Management Systems

The various aspects of engineering design and operations will be carried out according to applicable Guyana statutory requirements applicable international design codes and standards as well as the EEPGL Operations Integrity Management System OIMS⁶ and the EEPGL Safety Security Health and Environment SSHE policies⁷. EEPGL and its contractors will have structured management systems to verify the ongoing application of all necessary codes standards procedures and SSHE management systems. An overview of the EEPGL OIMS Framework is included in Section 3.

2.3 Drilling and Well Design

2.3.1 Drilling Program

The Project proponent is considering the use of up to two drill ships similar to the drill ship shown on Figure 24 to drill the development wells during Phase 1. Both drill ships may be operated simultaneously. Drilling operations may occur prior to during and after the installation of the FPSO and SURF components.

6

<http://corporate.exxonmobil.com/company/about-us/safety-and-health/operations-integrity-management-system>

7 The SSHE policies are part of the overall Standards of Business Conduct policy <http://corporate.exxonmobil.com/en/company/about-us/guiding-principles/standards-of-business-conduct>

May 2017 18 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 24 Typical Drill Ship

Chapter 2 Project Description During the drilling process drill ships will require various tubulars instruments and devices collectively referred to as the drill string to conduct the well construction process which will be as follows drilling the borehole running and cementing casings

and installing the completion and production tubing. The drilling program will employ highangle and extended reach drilling technologies. These technologies allow wells to reach targets up to approximately 4 km 2.5 mi from the drilling seabed location. The wells will be clustered around two drill centers rather than distributed over the producing reservoir. This approach reduces the number of drilling locations thereby reducing the area potentially impacted by drilling operations including discharged drill cuttings⁸. The planned development drilling program and its cuttings management approach is consistent with industry practices considered protective of the environment and has been the basis for the Liza1 Liza2 and Liza3 exploration wells.

2.3.2 Typical Well Design

Once the borehole is started for a well pipe also known as casing must be inserted into the borehole and cemented in place to keep the well from collapsing and to seal the casing to the formation. As shown on Figure 25 various sized casings will be progressively set as the wells are drilled deeper. The size and strength of the casings to be used in the design of the well takes into account the peak reservoir temperature and pressure conditions that may be encountered during drilling and during production operations when the wells are flowing reservoir fluids. After each casing string cement job is completed pressure testing will be performed to confirm

⁸ Drill cuttings are the broken bits of solid material produced as the drill bit advances through the borehole in the rock or soil. The cuttings are usually carried to the surface by drilling fluid circulating up from the drill bit.

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integrity according to standard industry practices. A provisional well program and design including casing types and sizes setting depths drilling fluid types and discharge locations for the development drilling program is shown on Figure 25.

Figure 25 Provisional Casing Program for Development Drilling Program

The first i.e. most shallow section of each well also known as the structural casing section will be jetted or drilled with seawater. Drill fluids and cuttings from this section will be discharged to the sea at the mudline without treatment per standard industry practice. For each subsequent section of the well to be drilled the drill string will be removed and the casing will be lowered into the hole to prevent its collapse. Wet cement will then be pumped down the

May

Project Description casing and forced into the annular space between the hole and the outside of the casing as well as into the annular space between the present and previously set casing. The conductor casing which is designed to hold back seabed surface soils and support the weight of the entire well is then set and cemented back to the seabed. Drilling fluids and cuttings from this section will be discharged to the sea at the mudline per standard industry practice. A drilling riser will be deployed to connect the conductor casing and the drill ship and the blowout preventer⁹ BOP will be installed. Marine drilling risers with buoyant joints and tension will be used to connect the wells via the BOP to the drill ship. BOPs will be periodically tested during the well construction process. After this point all returns of drilling fluids and cuttings will be directed to the drill ship for treatment i.e. solids control and centrifugal cuttings dryer system to reduce solids in the fluids as well as the fluids retained on cuttings. After treatment the cuttings will be discharged to the sea from the drill ship. Based on prior analysis from the Liza¹ exploration program cuttings disperse in the ocean current as they descend through the water column which typically prevents significant accumulations of cuttings in any particular location on the seafloor. The surface casing will then be set and cemented in competent rock at a depth below the mudline to allow drilling to the top of reservoir. The production casing will be set and cemented at the top of reservoir and it is the casing string in which the production tubing is run. The production tubing carries the reservoir fluids from the production zone to the wellhead when the wells are flowing. The production tubing includes the subsurface safety valve SSSV which is designed to mitigate the uncontrolled release of fluids from the reservoir during the production process. The production tubing also protects the production casing from corrosion and deposition of byproducts such as sand paraffins and asphaltenes. After the production tubing is run the well will be suspended i.e. flow prevented by installing barriers to flow; the riser and BOPs will be removed; and the subsea tree will be installed and tested. At that point the well is ready for future connection to the SURF components. Figure 26 shows the various components of a typical subsea drilling system. ⁹ Blowout preventers are secondary safety devices that are installed

at the top of a well which may be closed in order to prevent the uncontrolled flow of liquids and gases in the event of a loss of well control during drilling operations.

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Figure 26 Typical Subsea Drilling System

2.3.3 Drilling Fluids

Two categories of drilling fluids will be used waterbased drilling fluids WBDF and low toxicity nonaqueous drilling fluids NADF in which the continuous phase is an International Oil and Gas Producers Association IOGP Group III nonaqueous base fluid NABF with low to negligible aromatic . WBDF will be used when drilling the upper sections of the well. To avoid formation of hydrates icelike crystals due to the cold water temperature and high pressure salt or organic inhibitors may be added to the WBDF. Based on wellbore stability analysis and experience gained from Liza1 and Liza2 drilling NADF will be required to maintain borehole stability while drilling all well sections below the conductor casing. Cuttings treatment equipment will be installed on the drill ships to allow recovery of NADF and reduce the percentage of NABF retained on cuttings BFROC. The cuttings will be discharged to the sea after treatment in accordance with standard industry practice. The use of cuttings dryers on other similar projects has significantly reduced the BFROC. During completion activities a solidsfree weighted brine composed of a fresh water base with watersoluble salts will be utilized. Viscosified brinebased fluid will be utilized during displacement and gravel packing operations. The brine will be filtered through diatomaceous earth and cartridge filters. Brine gravel pack fluids proppant diatomaceous earth fossilized skeletal remains of marine diatoms and filtered solids will be discharged to the sea in accordance with standard industry practice.

May 2017 22 Blowout Preventer BOP

Lower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJ

MudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOP

Lower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJ

MudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOP

Lower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser

[illegible]

Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJMudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOPLower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJMudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOPLower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJMudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOPLower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJMudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser TensionersBlowout Preventer BOPLower Marine Riser Package LMRPwith Lower Flex Joint LFJMarine Drilling Riser withbare joints pup joints and buoyant jointsUpper flex joint UFJMudlineMLSubsea Wellhead System SSWHLDTelescopic Joint Riser Tensioners

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Any unused or used and recovered drilling fluids and products will be reused recycled or disposed of in accordance with applicable regulations and best practices. A preliminary list of the types of drilling completion and treatment fluids that may be utilized can be found in Section 2.10.

2.3.4 Well Cleanup and Ancillary Processes To facilitate well cleanup development wells will be drilled completed and tiedback to the FPSO. Completion and treatment fluids and solids left in the wellbore will be flowed back to the FPSO where they will either be treated and discharged or collected for onshore disposal. The wells will not be cleaned up to the drill ship using temporary well test equipment; but rather all wells will be cleaned up through the subsea treeflowlinesproduction equipment on the FPSO. Such small quantities of fluids will be incorporated with the crude product from other wells. Resulting gas and water will be processed along with fluids from other wells. No well tests of the Phase 1 development wells are planned. Vertical Seismic Profile VSP data may be collected to improve velocity modeling and reduce uncertainty in reservoir mapping. VSP surveys can be used to correlate the surface seismic data to the information on the physical properties and characteristics of the hydrocarbons gained from drilling the well. VSP data provides further time depth information to improve knowledge and understanding of the structure and

stratigraphy of the reservoir. A VSP survey which can be conducted from a drill ship or other support vessel requires a sound source commonly compressed air and a receiver. Data is acquired by the receiver which is installed within the wellbore. The source may be located with zero offset from the well directly above the wellbore at a fixed offset a defined lateral distance from the well walk away at a range of offsets or walk above at zero offset to the down hole well location. The final scope of the VSP survey and specific geophysical tools to be used is still under review.

2.4 Subsea Umbilicals Risers and Flowlines

The SURF facilities concept for the Project is comprised of subsea production trees and gaswater injection trees clustered around subsea manifolds in two subsea drill centers. The risers flowlines and umbilicals¹⁰ will connect the subsea facilities on the seafloor to the FPSO. The production manifolds will consolidate the production fluid from the individual production wells to the flowlines and the injection manifolds will distribute injection gaswater to the individual gaswater injection wells. The subsea production control system on the FPSO will monitor and control the subsea facilities through an umbilical and subsea control distribution system that supplies power communication hydraulic fluid and chemicals. The hydraulic fluid for operating the subsea hydraulic valves will be a lowtoxicity water soluble hydraulic fluid. The SURF system will be designed to withstand the full shut in pressure from the production wells and the gaswater injection components will be designed to withstand the

¹⁰ An umbilical is a cable and/or hose that provides the electrical hydraulic chemical and communications connections needed to provide power and control between the FPSO and subsea equipment.

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highest required injection pressures. Overpressure protection will be provided on the FPSO in accordance with industry standards to protect the subsea systems. Figure 27 shows an illustration of a representative SURF system similar to what is currently being designed for the Project. Figure 27 Representative SURF System Note Schematic is not necessarily representative of number of drill centers or wells. The production drill centers will be connected to the FPSO with roundtrip piggable production flowlines. A pig is a specially designed device that is placed in the riser/flowline at a launcher at one end and pushed by

pressure until it reaches the receiving trap or catcher at the other end. Pigging is performed to aid and assist in the maintenance operations cleaning and inspection of flowlines. Figure 28 shows an example of a pig. Figure 28 Example of Wire Brush Cleaning Pig May 2017 24 EEPGL

Environmental Impact Assessment Liza Phase 1 Development Project 2.4.1 Well Flow Connections Chapter 2 Project Description Well flow connections between the subsea wells and the FPSO include several components. Each subsea development well is capped by a subsea tree which include several isolation valves and a choke valve to control production and water and gas injection. For a given set of wells tied to the same manifold the subsea trees are connected by well jumpers to the subsea manifold which is then connected by flowline jumpers to flowline end terminations FLETs located towards the drill center end of the flowline. A typical configuration of the subsea trees FLETs flowlines and manifolds expected at a drill center for the Project is indicated on Figure 29. Figure 29 Representative Subsea Trees FLETs Jumpers and Manifold From the drill center the rigid flowlines travel on the seabed to the vicinity of the FPSO and transition to vertical risers where they connect to the FPSO at the surface. The risers carry fluids up to the FPSO at the surface as shown on Figure 210. In the case of injection streams i.e. for gas and water injection the same configuration is used but flow is from the FPSO downward through the risers to the water or gas injection manifolds.

May 2017 25 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 210 Representation of Riser Connected to FPSO 2.4.2 FPSO Topside Subsea Control System The FPSO will provide power utilities cabling and tubing ties to subsea control equipment installed on its topsides to control the subsea equipment. The FPSO will be configured with backup power in the event primary power is lost. The subsea trees and manifolds will be monitored and controlled through the subsea control system on the FPSO via a dynamic and static steel tube umbilical. Subsea control system will accommodate typical monitoring requirements such as pressure and temperature measurement. 2.4.3 Risers Flowlines Umbilicals and Manifolds 2.4.3.1 Risers and Flowlines The Project will incorporate production water and gas injection flowlines and risers as shown on Figure 23. Flowline and umbilical lengths will range from

approximately 3.2 to 6.4 km 2 mi to 4 mi excluding risers in water depths of approximately 1500 to 1900 m. The current May 2017 26 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description design lengths are based on preliminary shallow hazard surveys and current field layout which may be adjusted during detailed design. 2.4.3.2 Umbilical The umbilical Figure 211 will be designed as an integrated bundle of tubes and cables to transport hydraulic fluid injection chemicals and electrical powercommunication. A single dynamic umbilical which will be connected to the FPSO at the surface and end at production Drill Center 1 DC1P will service the Liza field during Phase 1. Infield umbilicals will be used to further distribute these services to the other subsea equipment. Figure 211 Representative Integrated Dynamic Umbilical Cross Section 2.4.3.3 Manifolds Manifolds are gathering points or central connections made up of valves hubs piping sensors and control modules. Manifolds include a protective structural framework that rests on a seabed foundation where multiple trees jumpers and flowlines gather to consolidate flows before they are either transported to the FPSO on the surface as part of production or back down for injection of water and gas into the reservoir Figure 212. May 2017 27 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 212 Representative Subsea Manifold 2.4.3.4 Gas Lift System The FPSO riser support system will be designed for gas lift capability. The gas lift system is not required for initial startup and it will be installed at some time during the Project production operations stage based on the production characteristics of the Liza reservoirs. This system will include a riser and flowline to DC1P with connections to the production flowlines. 2.5 Floating Production Storage and Offloading Vessel 2.5.1 General Description The FPSO vessel to be utilized for the Project will be a VLCC tanker which utilizes a spread moored configuration to maintain station continuously for at least 20 years. The FPSO will be designed to receive the full production wellstream from the development wells and will process crude oil at a design rate of 100000 barrels of oil per day BOPD with potential to safely operate at sustained peaks of up to approximately 120000 BOPD. For the purposes of this EIA potential impacts generated by the Project will be based on the highest potential oil production

volume which is conservatively based on 144000 BOPD¹¹. The FPSO hull will be capable of storing a minimum of 1.6 million barrels of stabilized crude oil. The FPSO will be able to offload approximately 1 million barrels to a tanker in a period of approximately 28 hours. ¹¹ 144000 BOPD is 20 over the sustained peak volume of 120000 BOPD. May 2017 28 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description The FPSO will also have the capability to process dehydrate compress and reinject the gas produced from the reservoir. The FPSO will be configured to treat seawater used for facility cooling purposes for injection into the reservoir and to treat produced water for disposal overboard into the sea. Living quarters and associated utilities will be provided in order to support the operations on the FPSO. Table 21 provides an estimate of the design rates for the FPSO facility. Although the Project nameplate oil production capacity is 100000 barrels per day bpd the Project facilities will have the potential to safely operate at sustained peaks above the design rate. For purposes of this EIA potential impacts generated by the Project e.g. air emissions were based on a potential peak production volume of 144000 bpd to be conservative in the analysis. Table 21 FPSO Key Design Rates

	Oil Production bpd	Produced Water bpd	Total Liquids bpd	Produced Gas Mscfd	Gas Injection Mscfd
Design Rate ¹	100000	100000	150000	180	160

assumes 20 Mscfd of produced gas will be used as fuel gas for the FPSO 190000 Water Injection bpd Notes bpd barrels per day Mscfd million standard cubic feet per day ¹ All design rates are presented as the peak annual average. ² The facilities will have the potential to safely operate at sustained peaks of oil production up to approximately 120000 bpd. For the purposes of the EIA 144000 bpd has been used as the basis to analyze potential impacts from the Project. Key FPSO design features include the following The FPSO will be designed to remain moored for at least 20 years without drydocking and will include facilities to support inwater hullstructural surveys and repair and maintenance. The FPSO will be designed to operate in extreme 100year return period environmental conditions associated wind waves and current. The FPSO will be designed to reinject the produced gas back into the reservoir except during times of injection system unavailability which will require temporary nonroutine flaring.

A computer simulated picture of the planned FPSO and a general schematic of a converted FPSO topsides and hull are provided on Figures 213 and 214 respectively. May 2017 29 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description

Figure 213 Computer Simulated Picture of Planned Liza Phase 1 FPSO May 2017 30 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description

Figure 214 General Schematic of a Converted FPSO Topsides and Hull May 2017 31 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description

2.5.2 FPSO Topsides

The FPSOs topsides design employs an interconnected module concept where process equipment is packaged in modules. The design concept maximizes precommissioning and functional testing of the modules prior to arrival offshore Guyana. The FPSO will arrive for installation hookup and commissioning in the Stabroek Block fully fabricated preassembled and most facilities modules components and systems pretested. The principal functions of the topsides process facilities will be To receive separate and process the produced reservoir fluids to provide o a crude oil product for offloading onto conventional tankers o produced water from the reservoir to be of sufficient quality for environmentally acceptable discharge to the sea and o produced gas to meet requirements for FPSO turbine generator fuel gas and for reinjection into the reservoir; To treat seawater to provide a suitable supply of injection water to support the reservoir depletion plans; and To provide support systems for the safe accommodation of approximately 80120 personnel involved in the operation of the production facilities and on occasion personnel involved with the drilling program. Temporary accommodations may also be utilized during key activities including hookup commissioning and maintenance operations to increase accommodations capacity up to approximately 140 personnel.

2.5.3 FPSO Process Systems

The process facilities on the FPSO topsides are shown schematically on Figure 215 and are described in the subsequent sections. May 2017 32 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 215 Process Flow Diagram Chapter 2 Project Description

Notes GI Gas reinjection WI Water injection HP High pressure IP Intermediate pressure LP Low

pressure SRU Sulfate Removal Unit 2.5.3.1 Oil Water Gas Separation and Oil Desalting An inlet manifold will receive full wellstream fluids consisting of oil gas and water from the production flowlines and will route the fluids to the FPSO processing facilities. The wellstream fluids will be separated into oil water and gas phases in a single train of separation. The separation train consists of three stages high intermediate and low pressure of flash separation to produce a stabilized crude product. Fresh water will then be added to the stabilized crude product to remove dissolved salts as part of oil desalting. The final crude oil product from the flash separation stabilization process will be treated to meet the specifications for sale prior to being sent to the crude product storage tanks in the FPSO hull. Further processing of the water and gas streams from the separation process and the process for treating seawater for injection are described below. May 2017 33 LP Flare HP Flare

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 2.5.3.2 Gas Processing Chapter 2 Project Description For Phase 1 the Project will reinject produced gas that will not be consumed as fuel gas on the FPSO back into the reservoir. The purpose of the FPSO gas processing system is to condition the associated produced gas which is not consumed as FPSO fuel gas to the appropriate specification prior to reinjection into the reservoir. It comprises systems to compress gas dehydrate gas and direct gas to be reinjected. During equipment maintenance and process upsets including startup and shutdown scenarios part or all of the offgas from the separationstabilization process will be sent to the High Pressure HP or Low Pressure LP Flare Systems. Flaring will be temporary and nonroutine. Flaring is discussed in more detail in Section 2.5.4.3 below. 2.5.3.3 Produced Water Treatment The produced water treating system will be designed to collect produced water from the FPSO processing facilities and treat the water for discharge overboard per standard industry practice. The system will consist of primary and secondary treatment. Primary treatment will consist of either a skim vessel or hydrocyclones for removal of large oil droplets from the produced water. Secondary treatment will consist of a gas flotation for removal of small oil droplets in order to meet the discharge specification. Produced water that does not meet the overboard discharge specification will be routed to an appropriate tank

in the hull for further treatment. 2.5.3.4 Seawater Treatment and Water Injection System Water injection will be used for reservoir pressure maintenance to enhance oil production. Seawater used for injection water will be treated prior to injection into the producing reservoirs per standard industry practice. The seawater treatment system will include sea lift pumping filtration deaeration and sulfate removal. Seawater lift pumps on the FPSO will be used to pump seawater from depths up to 100 meters below the surface in order to access colder seawater than what is available from the ocean surface. The filtration system will consist of both coarse filtration strainers and fine filtration multimedia filtration for removal of particulate from the incoming seawater. Following filtration seawater will be vacuum deaerated for removal of oxygen. The deaerated seawater will then be pumped through a membrane system for removal of sulfate ions from the seawater as the final treatment step. The treated seawater will then be pumped to the necessary pressure for injection into the producing reservoir. A portion of the treated seawater will be further treated through a reverse osmosis system to make fresh water. Fresh water is required for removal of salt from the crude product as part of oil desalting as described in Section 2.5.3.1. May 2017 34 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 2.5.4 FPSO Utility Systems Chapter 2 Project Description This section discusses the utility system requirements for the FPSO. For the most part the utility systems designed to support the process facilities will be located above deck. Marine utility systems may be used to support topside systems where appropriate. 2.5.4.1 Process Cooling Cooling of process streams via a closed loop waterbased cooling medium system is required to dissipate heat generated by the oil and water treating systems the compression systems and miscellaneous utility systems. The seawater lifting system described in Section 2.5.3.4 will also supply the required seawater for cooling. Process hydrocarbon fluids do not come into contact with this seawater. Treated seawater will be disposed of overboard at a suitable temperature so as not to significantly impact marine life. 2.5.4.2 Process Heating A process heating system is required as part of the crude oil treatment process to achieve the required crude oil product specifications. A closed loop waterbased heating medium system will be used to add heat to the

incoming production. Waste heat from the power generation system will be used as the source of heat.

2.5.4.3 Flaring System EEPGL intends to reinject all operationally produced gas under routine conditions except that which will be utilized for FPSO operations e.g. fuel gas. A flare system will be provided for the collection and safe disposition of produced hydrocarbon gases resulting from unplanned nonroutine relief and blowdown events. Relief events occur to prevent overpressure scenarios in the process equipment. Blowdown events occur to depressure the facilities in a controlled manner as a result of emergency shutdown events. In addition temporary nonroutine flaring will occur during equipment maintenance process upsets and startup. The flare system will include both an HP and LP flare sharing a common flare tower as shown on Figure 215. The flare tower has elevated flare tips for both high and low pressure flares which provides for the safe ignition of hydrocarbon gases. Both flares will support highefficiency combustion and will utilize pilots that have minimal emissions.

2.5.4.4 Topsides and Subsea Chemical Injection The FPSO will have storage and injection facilities to inject the required amounts of chemicals and methanol into the production fluids to support production operations both for subsea chemical injection requirements and for topsides chemical injection requirements. These chemicals are further described in Section 2.10. Table 26 provides a summary of the key effluent characteristics for planned discharges to water.

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2.5.4.5 Air Chapter 2 Project Description An air compression system will be provided to supply FPSO hull and topsides equipment. Compressed air is primarily required for the operation of control valves and other process instrumentation requirements.

2.5.4.6 Nitrogen Instrument air will feed the nitrogen generation system. Nitrogen will be provided as required for purging i.e. removing residual amounts of products inerting i.e. introducing nonflammable gas to prevent ignition blanketing i.e. filling vapor space in tanks with nonflammable gas to prevent ignition and as required for miscellaneous utilities.

2.5.4.7 Drains The FPSO topsides shall be equipped with the following drain systems

Nonhydrocarbon open drain. Used to collect drain fluids e.g. rainwater from nonhydrocarbon areas and to route them to the slop tank in the FPSO hull or direct overboard.

Hydrocarbon open drain. Used to collect drain fluids e.g. oil contaminated water from hydrocarbon areas and to route them to the slop tank in the FPSO hull.

2.5.4.8 Other Two deck cranes will be provided for supply boat offloading and materials handling and to support general maintenance activities. Workshops a laboratory capable of checking the properties of the produced and injection fluids as well as select discharges for compliance medical facility and storage facility for supplies and spare parts will also be provided. Heating Ventilation and Air Conditioning HVAC systems will be provided for buildings and enclosures.

2.5.5 Power Generation System The required power for the FPSO will be generated by three systems as follows The main power generation system will be gas turbine driven generator sets with spares available in the case of unplanned downtime. All generator sets will be dual fuel diesel produced gas capable to allow for restoring power to the facility i.e. black start. The essential services power generation system will be a diesel driven generator set. Essential services include systems required for facility restart and for flow assurance hydrate mitigation activities after an unplanned shutdown. The vessel emergency power generator set will be diesel driven and will provide power to both the hull and topsides emergency systems e.g. safety systems including emergency lighting telecommunication.

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Additionally for backup power during emergency situations the uninterruptible power supply UPS system will be provided to power equipment such as the Integrated Control and Safety System ICSS and subsea controls among others.

2.5.6 Integrated Control and Safety System ICSS Monitoring and control of the FPSO production operations will be performed by an ICSS. Located in the main control room of the FPSO the ICSS will include process shutdown emergency shutdown and fire and gas systems to protect the facilities and personnel. These systems will interface to a public address and general alarm system PAGA to provide distinct audible and visual alarm notification. The ICSS includes the Process Control System PCS Safety Instrumented System SIS the Fire and Gas FG system the Alarm Management System AMS the Operator graphics consoles; and the thirdparty interfaces to packaged systems such as compressors subsea and marine among others.

2.5.7

Communication Systems Telecommunications equipment will be installed on the FPSO to enable safe operation of the facilities in normal and emergency conditions. This equipment will allow communication with the shorebase support vessels helicopters and tankers as well as communication on the FPSO.

2.5.8 Additional Vessel Systems

2.5.8.1 FPSO Cargo Systems

The main purpose of the FPSO cargo system will be To receive distribute and store onspecification crude oil from the process facilities into the FPSO cargo tanks; To receive and store offspecification crude oil from the process facilities into a designated FPSO cargo tank; and To offload the crude oil stored in the FPSO cargo tanks into a conventional tanker at regular intervals. In addition to the FPSO cargo tanks there will be a slop tank to receive stripping water from the cargo tanks and discharge from the topsides nonhazardous and hazardous drain system. The oil and water will be gravityseparated by a minimum residence and retention time. Once separated the oil will be skimmed off the top and sent to the cargo tanks and the water will be discharged overboard to specification. The FPSO cargo tanks will be blanketed with inert gas. As depicted on Figure 215 a tank vent system will be provided to release vapor and inert gas from the cargo tanks to a safe location toward the bow of the FPSO to prevent an overpressure event in the tanks.

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The marine cargo system supports the following routine activities Flushing of the crude oil offloading export hose; Emergency and temporary ballasting of FPSO cargo tanks with seawater; and Inspection and maintenance of FPSO cargo tanks and piping systems between offloading operations.

2.5.8.2 Custody Transfer Meter

For offloading crude will be pumped from the FPSO hull storage tanks through a custody transfer metering package on the topsides and into the offloading system at a rate sufficient to achieve transfer of approximately 1 million barrels of oil in up to 28 hours up to a VLCC class tanker size.

2.5.8.3 Crude Oil Offloading Export

of the crude oil from the FPSO will be via a floating hose to the midship manifold of a conventional tanker. The FPSO will be configured for tandem offloading to a conventional tanker which will be ownedoperated by others. The separation distance between the stern of the FPSO and the conventional tanker will be

approximately 120 m 390 ft. The maximum conventional tanker size envisioned is a VLCC class. During offloading operations the conventional tanker will maneuver and hold station relative to the FPSO with the aid of up to three assistance tugs as shown on Figure 216. Crude will be transported to buyers final location by the conventional tankers after each offloading operation. Figure 216 General Offloading Configuration May 2017 38 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 2.5.8.4 Ballast System Chapter 2 Project Description Ballast water will be required during the transit from the shipyard to the site. Once on site the unneeded ballast water from the FPSO may be discharged overboard. 2.5.8.5 Spread Mooring System The FPSO will be permanently moored by fixed spread mooring with up to a 20 point mooring line system each connected to their respective anchor pile embedded into the seafloor. The anchor piles will be either suction piles or driven piles. The mooring system will be designed to maintain the FPSO on station for a 100year environmental condition. 2.5.9 Safety and Personnel Protection Systems FPSO safety systems will include Firewater System The firewater system will have one pump each located at the fore and aft ends of the FPSO with one pump serving as a redundant backup. Fire and Gas Detection Systems Fire and smoke detectors will be located throughout the topsides and living quarters and will be wired centrally with alarms sounding in the central control room CCR which will activate the general alarm system on the FPSO. Gas detectors will be placed in areas where gas might be released or could accumulate. Blanket Gas Generation To prevent fires the cargo tanks will be operated with an inert gas blanket at all times except during tank entry. The inert gas for cargo tanks will be supplied by an inert gas system utilizing flue gas from the marine boilers. To provide gas blanketing for other spaces including the methanol and xylene tanks inert gas will be provided by routing compressed air through the nitrogen membrane package. Lifeboats and Life Rafts The FPSO will be provided with lifeboats on either side of the accommodation having a capacity on each side for 100 percent of the personnel on board POB. A fast rescue boat will also be provided complete with a davit launching and retrieving system. 2.6 Installation Hookup and Commissioning The sequence and duration of each FPSO and SURF installation hookup and commissioning activity

will be further defined as part of ongoing Project planning and development. The final sequence and durations of activities will depend on a number of factors including but not limited to final Project design marine vessel and equipment availability mobilization times and weather among other factors. Key installation hookup and commissioning activities will include FPSO Mooring Installation Installation of the FPSOs anchor piles and mooring lines. Following installation the mooring lines will be staged on the seafloor until arrival of the FPSO. May 2017 39 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description FlowlineRiser Installation Installation of the production water injection and gas injection flowlines and risers. These components will be cleaned and tested to verify and ensure integrity after installation and then staged on the seafloor until arrival of the FPSO. FPSO Positioning and Mooring Connection Positioning of the FPSO using support tugs followed by retrieval of the FPSO mooring lines from the seafloor and hookup of the FPSO to its mooring system. ManifoldDrill Center Installation Installation of the manifolds manifold foundation piles jumpers Subsea Distribution Units and flying leads at the drill centers followed by integrity testing and verification. Umbilical Installation Installation of the umbilical and umbilical termination unit. Riser Connection Retrieval from the seafloor pullin and connection of the risers to the FPSO. Testing and Commissioning Testing and commissioning of the connected integrated FPSO and SURF production systems including testing and dewatering displacing flowlines and umbilicals with commissioning fluids which are further discussed in Section 2.10 and testing SURF control and shutdown systems. Some of these commissioning fluids may be discharged to the sea per standard industry practice as shown in Section 2.10.2 Table 26. Any unused or used and recovered commissioning fluids and products will be reused recycled or disposed of in accordance with applicable regulations and best practices. The above activities will be executed in an optimal sequence with activities completed in parallel where possible. During the FPSOSURF installation stage a remotely operated vehicle ROV may be periodically utilized to support the above mentioned activities e.g. underwater observations connections and sampling among others. 2.7 Production Operations The Project will include a leased FPSO owned and

operated by the FPSO contractor and a subsea development owned by EEPGL and operated by the FPSO contractor under the direction of EEPGL. Throughout production operations EEPGLs personnel will perform oversight and monitoring of the FPSO contractor to ensure that management systems pertinent to safety the environment and operations integrity are properly implemented. To accomplish this EEPGL plans to utilize an onboard representative OBR supported by operational and technical specialists to monitor and direct as necessary operation of the FPSO and SURF facilities. Operating processes will include flowing the hydrocarbon well stream from the reservoir to the FPSO where further fluid separation stabilization storage and management will occur prior to offloading the crude oil to the conventional tankers. General maintenance of the FPSO and SURF components will also be performed offshore during production operations. Some industry standard chemicals will be required as part of the processing and handling of the oil and associated gas on the FPSO as well as treating produced water prior to discharge. Both the FPSO and SURF facilities will also require the use of industry standard additives to provide

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flow assurance and prevent corrosion scale hydrate and asphaltene formation as previously noted in Section 2.5.4.4 and described in Section 2.7.1. These subsea and topsides chemicals will separate into the oil water or gas phases of the process stream depending on their solubilities and applications. Therefore residual quantities of these chemicals may be contained in the processed crude oil discharged with produced water or emitted to the atmosphere with vented and fugitive gases. The final chemical requirements and quantities will be determined as part of the ongoing FPSO and SURF facilities design work and a preliminary list is provided in Table 22. Any unused or used and recaptured production chemicals will be reused recycled or disposed of in accordance with applicable regulations and best practices. The objective of the following sections is to provide a general overview of the flow assurance challenges and strategies.

2.7.1 Common Flow Assurance Additives

2.7.1.1 Hydrates

Ambient seafloor temperatures in the Liza area are sufficiently cold that hydrates could form in the FPSO and SURF equipment. To prevent the formation of hydrates a

combination of inhibitor methanol thermal insulation and operating practices will be utilized. 2.7.1.2 Paraffin and Asphaltenes The insulation needed for hydrate mitigation is sufficient to prevent Paraffin wax deposition in the subsea production system. Paraffin inhibitor can be injected along with downhole asphaltene inhibitor downhole if needed. Asphaltene precipitation and/or deposition are expected at near wellbore and in production wells. Asphaltene deposition will be mitigated with continuous asphaltene inhibitor downhole. In case asphaltene deposition cannot be mitigated by asphaltene inhibitors production wells will be soaked with xylene as remediation. Pigging operations with or without xylene may also be used for remediating any asphaltene deposition in the production flowline and riser. 2.7.1.3 Scale Control Scale formation will be managed using scale inhibitor downhole and by sulfate reduction with Sulfate Removal Unit SRU at topsides. 2.7.1.4 Corrosion Control Internal corrosion of the subsea facilities shall be managed by a combination of material selection and injection of inhibitor. Components in the production path upstream of the flowlines will be fabricated from corrosion-resistant alloys suitable for the intended service. The carbon steel flowlines and risers will be protected by the injection of corrosion inhibitor at the subsea production manifold headers. May 2017 41 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description 2.7.2 Hydrogen Sulfide H₂S Management The concentration of H₂S will be extremely low for the initial stage i.e. 510 years of FPSO SURF production operations. There may be potential for the reservoir to sour over time which influences material selection and corrosion inhibition for certain FPSO SURF and drilling systems. In the unlikely event that concentrations of H₂S increase to a level that could represent potential health or safety concerns for the Projects offshore workforce additional management measures will be implemented as appropriate e.g. training programs personal protective equipment response planning and equipment for leak detection and alarms. 2.7.3 Marine Safety The Maritime Administration MARAD of the Ministry of Public Infrastructure is responsible for issuing notices to mariners concerning safety at sea. MARAD will be advised of the location of drill ships during the drilling of the development wells and the performance of well workovers in the PDA and of the

location of installation vessels during major installation activities so that mariners are aware of these activities. Safety exclusion zones with a 500 m 1640 ft radius will be established around drill ships during drilling operations and around drill centers during well workovers as well as around major installation vessels in accordance with industry standards and practices as represented on Figure 217. Authorizations for inwater activities will be obtained from MARAD and notices to mariners will be issued for all marine vessels including the FPSO supply and support vessels tugs and those vessels employed during the FPSOSURF installation hookup and commissioning stage. The Project will also communicate major vessel movements to commercial cargo commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and where possible communicate Project activities to those individuals to aid them in avoiding Project vessels through the stakeholder engagement process. As also shown on Figure 217 during the production operations stage the FPSO will have a 2 nautical mile nm radius encircling the vessel where marine support and tanker offloading will occur. No unauthorized vessels will be allowed to enter this approximately 4000 ha operational marine safety exclusion zone. EEPGL will use radar and visual surveillance of the marine safety exclusion zones to monitor vessel traffic. Any vessels that may inadvertently enter the marine safety exclusion zone without authorization will be contacted via radio and instructed to leave the area. If EEPGL is unable to contact the vessel by radio a Project supply vessel will approach the encroaching vessel and notify them that they have entered a marine safety exclusion zone. If the encroaching vessel ignores these instructions EEPGL will contact the Guyana Coast Guard for support.

May 2017 42 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 217 Preliminary Safety Exclusion Zones during Drilling Installation and Offloading Operations

2.7.4 Offloading Tankers

Conventional tankers supporting offloading operations typically arrive anywhere from one day to several hours ahead of the scheduled loading time as a function of weather and ocean conditions. When the conventional tanker is ready to approach a Mooring Master will board the vessel approximately 2 km 1 mi from the FPSO in order to guide it to the FPSO for offloading. The conventional tankers will export the

crude oil to the buyers final location after offloading operations have been completed. May 2017 43

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description 2.8 Onshore Marine and Aviation Support 2.8.1 Onshore Supply and Support Activities

Shorebases laydown areas pipe yards warehouses fuel supply heliport and waste management facilities in Guyana will be utilized to support development drilling FPSOSURF installation production operations and ultimately decommissioning. These onshore facilities will be ownedoperated by others and will not be dedicated to the Project. The specific shorebases and onshore support facilities e.g. warehouses laydown yards to be utilized in Guyana have not yet been identified by EEPGL. A preliminary footprint estimate for onshore staging and storage in Guyana is approximately 3000050000 m2. However the final area required will be determined as the Project development plan progresses. Accordingly ERM has performed the impact assessment on the basis that the Project will utilize existing shorebases located in Georgetown that meet this minimum requirement. Should any new or expanded shorebases or onshore support facilities be utilized the constructionexpansion and any required dredging as well as the associated permitting of such facilities would be the responsibility of the owneroperator and such work scope would not be included in the scope of the EIA. A typical shorebase quay is shown in Figure 218 and a typical laydown yard is shown in Figure 219. Where existing Guyana shorebases do not have the technical andor capacity requirements to support Project activities EEPGL will potentially consider the use of other onshore support facilities and services in Guyana as identified and deemed necessary. Additional logistical support may be provided by other regional suppliers outside of Guyana as informed by inputs from EEPGL contractors after contract award to address Project needs e.g. deepwater port access in Trinidad. Onshore support facilities will include pierportquayside space with sufficient draft for receipt of cargo vessels bringing materials to and from the shorebases. Marine support vessels will service the offshore activities and operations. A marine berth and secure warehousing space for indoor and outdoor storage of materials and goods trucking stevedoring freight forwarding customs logistics receiving inspection and associated container handling and

storage operations will also be utilized. Daily activities and operations to be performed at the shorebases will generally include Storage of pipe equipment and spares; Loading and unloading cargo from trucks and marine vessels; Use of cranes and other lifting equipment; Bulk storage of chemicals fuels and industrial consumables; Potential operation of a cement and drilling and completion fluids plant to support offshore drilling operations; and Secure handling and storage of wastes pending final recycling treatment or disposal. May 2017 44 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Most of the major SURF equipment will be shipped preassembled and pretested directly to the offshore Project site from their points of origin. Other minor equipment supplies and materials may be temporarily staged at the shorebases and associated laydown yards and warehouses until transferred offshore for installation or use. The owners/operators of these contracted facilities will be required to seek environmental authorization for any changes to current operations e.g. bulk storage of chemicals and fuels or facility expansions. Figure 218 Typical Shorebase Quay May 2017 45 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 219 Typical Laydown Yard Chapter 2 Project Description Support and supply vessels will require sufficient water depths to transit between the Liza field and the shorebases. There is potential for some initial and periodic maintenance dredging to be performed by the shorebase owner/operators with any required permitting being the responsibility of the shorebase owner/operators. 2.8.2 Logistical Support An average of 10 roundtrip helicopter flights is currently being made per week to support ongoing exploration drilling activities. It is estimated that during development drilling and FPSO/SURF installation an incremental 20 to 25 helicopter flights per week will be added for a total of 30 to 35 roundtrip flights per week. During FPSO/SURF production operations an estimated 20 to 25 roundtrip helicopter flights per week will be necessary to support FPSO/SURF production operations and development drilling activities. There will be a variety of marine and aviation support equipment supporting the FPSO installation vessels and drill ships as shown on Figure 220. The support vessels will consist of Platform Supply Vessels PSVs conducting resupply trips to the FPSO and drill

ships Tug Vessels TVs supporting tanker offloading activities and MultiPurpose Vessels MPVs supporting subsea installation and maintenance activities. Based on current drilling activities and past experience with similar developments it is estimated that during development drilling and FPSOSURF installation an average of 12 vessel trips per week may be made to the PDA. During FPSOSURF production operations it is estimated that this number will be reduced to approximately 7 vessel trips per week. The vessels are planned to be loaded and offloaded at shorebase facilities in Guyana and/or Trinidad. Figure 221 depicts a conceptual diagram and May 2017 46 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description estimated number and types of logistical support equipment that will be utilized to support the Project. Figure 220 Typical Logistics Support Vessels May 2017 47 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 221 Potential Drilling and Operations Stage Peak Fleet Profile May 2017 48 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description 2.9 End of Operations Decommissioning In advance of the completion of the Phase 1 production operations stage EEPGL will prepare a decommissioning plan for the facility in compliance with the laws and regulations in effect at that time while also considering the most appropriate technology available at that time. The decommissioning plan and strategy will be based on a notice of the intent for decommissioning the production facilities and plugging and abandonment of the development wells which will be provided to the GGMC and EPA to obtain approval in accordance with the requirements of the Guyana Petroleum Exploration and Production Act 1998 and EP Act Cap. 20:05. EEPGL will perform inspections surveys and testing to assess and report to the EPA the conditions that will provide the basis and required information to prepare a plan for decommissioning. All risers pipelines umbilicals subsea equipment and topside equipment will be safely and properly isolated deenergized and cleaned to remove hydrocarbons and other hazardous materials to a suitable level prior to being taken out of service. Near the time of decommissioning EEPGL will work with the EPA and the GGMC to select the final decommissioning strategy based on a comparative assessment which is

designed to evaluate the potential safety environmental technical and economic impacts and associated mitigation measures in order to finalize the decommissioning plan. Wells will be permanently plugged and abandoned PA by restoring suitable cap rock to prevent escape of hydrocarbons to the environment. PA barriers will be installed in the wellbore of adequate length to contain reservoir fluids and deep enough to resist being bypassed by fracturing. The number of barriers required will depend on the distribution of hydrocarbonbearing permeable zones within the wellbore. It is expected that the risers pipelines umbilicals subsea equipment FPSO mooring lines and anchor piles will be disconnected and abandoned in place on the seafloor unless an alternative strategy is selected based on the results of the comparative assessments. The FPSO will be disconnected from its mooring system removed from the production location and towed to a new location for reuse or decommissioning. Selected waste streams associated with decommissioning activities including hazardous and nonhazardous wastes will be managed and disposed of in accordance with standard industry practice and applicable regulations. Methods may include injection downhole into the reservoir separation and incineration offshore or transport to onshore waste management facilities for management and disposal.

2.10 Materials Emissions Discharges and Wastes

This section describes the materials i.e. primarily chemicals used across the various stages of the Project as well as the Projects planned emissions discharges and wastes. The Project may potentially produce small amounts of Naturally Occurring Radioactive Material NORM from the reservoir over the life of the production operations stage. The Project may also utilize radiography periodically to support installation and maintenance activities

May 2017 49 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description e.g. nondestructive examination of materials for quality control purposes. The Project will follow standard industry practices to manage any workforce exposure to NORM or radiography. Any equipment containing such sources will be registered strictly tracked controlled and returned to the vendor at the end of their use or if they must be replaced at any time. The Project will not generate any meaningful vibration which impact resourcesreceptors. EEPGL will manage airborne sound through

engineering controls through administrative controls and by providing appropriate Personal Protection Equipment PPE to its Project workforce as described in Section 7.1.2. Underwater sound is discussed as part of the Marine Mammal impact evaluation see Section 7.2.5. The Project generates heat primarily in the form of a cooling water discharge to the sea which is discussed as part of the Marine Water Quality impact evaluation see Section 7.1.4. The Project generates light which is discussed as part of the Seabird and Marine Turtle impact evaluations see Sections 7.2.4 and 7.2.6 respectively.

2.10.1 Materials Inventory Offshore oil development is primarily an extractive process e.g. producing oil from the Liza field. This extractive process will however require the use of various equipment described in this chapter e.g. drill ships pipes flowlines FPSO as well as some chemicals used to facilitate well drilling oil recovery wastewater treatment pipeline maintenance and other purposes which have been described in prior sections of this chapter. The required volumes of these chemicals are yet to be determined. Table 22 below provides preliminary inventories of the primary chemicals that would be used as part of the Projects drilling installation commissioning and production operation stages respectively. Residual quantities of drilling and production chemicals may be discharged to the sea as components of drilling fluid or produced water injected into the reservoir or emitted to the atmosphere as described in prior sections of this chapter. Unused or used and recovered chemicals will be reused recycled or disposed of in accordance with applicable regulations and best practices. All chemicals will be stored either at the shorebases or on the drill ship or FPSO in appropriate storage containers with either secondary containment or appropriate drainage control.

May 2017 50 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Table 22 Project Materials and Chemicals

Project Phase	Primary Chemical Materials	Products
Waterbased drilling fluid	WBDF	Water seawater or inorganic salts Barite Clays Watersoluble biopolymers and modified biopolymers
Thinner	Shale Inhibitors	Calcium Carbonate
Lost circulation material	Caustic Soda	Soda Ash
Nonaqueous drilling fluid	NADF	Base Oil IOGP Group III Barite Calcium chloride brine
Organophilic clay	Emulsifier	Wetting Agent Viscosity modifiers Fluid loss modifiers Lime

Calcium Carbonate Completion Treatment Fluids Cement Inorganic and Organic As Brines Barite Water Soluble Polymers Calcium Carbonate Caustic Soda Surfactants Hydrate Inhibitor Oxygen Scavenger Corrosion Inhibitor Lowtoxicity water soluble hydraulic fluid Nitrogen Hydrate inhibitor e.g. methanol ethylene glycol Corrosion inhibitor Scale inhibitor Asphaltene inhibitor Xylene Methanol Deemulsifier Defoamer Cement class G Extender Accelerator Defoamer Retarder Dye Surfactant Marine gas oil Bioe Oxygen scavenger Corrosion inhibitor Polyelectrolyte Triethylene glycol Hydrogen sulfide scavenger Oxygen scavenger Bioe Clarifiercoagulant Hydraulic fluid Drilling SURF Equipment Commissioning Production Operations February 2017 51 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description 2.10.2 Emissions The Project will include several sources of atmospheric emissions. The principal sources of atmospheric emissions from the Project operations can be divided into four main categories Combustion Emissions generated from combustion of liquid fuel or natural gas during aviation and marine support and installation activities operation of the FPSO and drill ships waste incineration and nonroutine flaring of gas that is not reinjected into the reservoir; Venting Emissions consisting of emissions related to tank storage operations flashing emissions standingworkingbreathing losses dominated by FPSO product storage tanks but also including other tank storage; Vessel loading emissions dominated by emissions released during the transfer of crude oil from FPSO to tankers but also including fuel transfer operations; and Fugitive Emissions leakage through process equipment components e.g. valves flanges and potential unplanned CFC releases from the HVAC and refrigeration systems. Table 23 provides estimated maximum annual Project atmospheric emissions in three distinct periods selected to account for differing activity levels over the Project life. Primary activities in each of these periods to which the corresponding emissions can be attributed are as follows 2018 2019 Drilling SURF installation and commissioning and operation of related support vessels 2020 2021 Drilling FPSO startup and associated temporary nonroutine flaring beginning of production operations tanker loading 2022 2040 Production operations following cessation of drilling including temporary nonroutine flaring operation of related support vessels and

tanker loading. May 2017 52 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Table 23 Annual Air Emissions Summary Pollutant Source Category Nitrogen Oxides NOx Annual Emissions Tonnes unless otherwise specified 20222040 20202021 20182019 FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources12 Drill ship Total FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill Ship Total FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill Ship Total FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill ship Total 0 0 0 2385 1255 3640 0 0 0 85 45 130 0 0 0 170 90 260 0 0 0 500 265 765 1635 375 135 1125 1670 4945 45 0 110 40 60 250 45 15 10 80 120 210 425 2030 30 235 350 3070 1545 175 140 1125 0 2975 50 5 115 40 0 205 35 5 10 80 0 130 405 940 30 235 0 1610 Sulfur Dioxide SO2 Particulate Matter PM Carbon Monoxide CO Other Pollutants Hydrogen Sulfide H2S FPSO Flaring temporary nonroutine All Sources na 1 1 Volatile Organic Compounds VOCs Greenhouse Gases GHGs [kilotonnes CO2equivalents] Note The annual estimated totals currently reflect the preliminary Project schedule which could change. All Sources 10250 1510 195 95 10720 980 12 Area Sources are mobile equipment such as aviation and marine support vessels besides the FPSO and drill ships used during drilling installation production operations and decommissioning. May 2017 53 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 2.10.3 Discharges Chapter 2 Project Description The Project will have several planned discharges to water related to the operations and maintenance of the drill ships FPSO installation and commissioning activities. These planned discharges based on the preliminary design information are listed in Table 24. Potential discharges include drill cuttings and fluids well completion and treatment fluids produced water cooling water sulfate removal and potable water processing brines topsides drainage hydrostatic test water ballast water BOP testing fluids and sanitary and domestic wastewater as described below. All Project vessels will be equipped to comply with the water pollution control standards required by the International Maritime Organization IMO International Convention for the Prevention of Pollution by Ships 1973 as modified by the Protocol of 1978 MARPOL 7378. Drill Cuttings and

Fluids WBDF as listed in Table 22 and associated cuttings will be discharged to the sea without treatment per standard industry practice. The process for treating and discharging cuttings with residual NABF as listed in Table 22 is described in Section 2.3.3. Cement Cement slurry returns are only expected during the cementing of the first casing string for each development well. The excess spacer and lead slurry will be discharged directly to the seafloor immediately around the well. Excess unused cement will be discharged to the sea. Well Completion and Treatment Fluids Well completion and treatment fluids will be treated and discharged to the sea or shipped to shore for appropriate treatment/disposal per standard industry practice. Produced Water The produced water treating system will collect produced water from process facilities and treat the water prior to discharge overboard as described in Section 2.5.3.3. Cooling Water Seawater is used to dissipate heat generated by the oil and water treating systems the compression systems and miscellaneous utility systems. Process hydrocarbon fluids do not come into contact with this seawater. Cooling water will be disposed of overboard at a suitable temperature so as not to significantly impact marine life. Sulfate Removal Potable Water Processing Brines These brine disposal streams are byproducts of the membrane processes used offshore to generate sulfate-free water for injection and to generate fresh water for crude desalting and for living quarters requirements. No treatment of these streams essentially seawater is required prior to discharge. Topsides Drainage The topsides will have a nonhydrocarbon and hydrocarbon drain system. The hydrocarbon drain system will direct drainage to a slop tank where oil and water will be gravity separated. Once separated the oil will be skimmed off the top and sent to the cargo tanks and the water will be discharged overboard in accordance with treatment specifications. The nonhydrocarbon drain system e.g. rainwater will route the drain fluids to the slop tank in the FPSO hull or directly overboard. Hydrostatic Test Water Seawater treated with chemicals e.g. biocides will be injected in the flowlines and risers to ensure the lines are sealed properly during installation prior to the flow

May 2017 54 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description of hydrocarbons. The treated seawater used for hydrostatic testing of the water and gas injection lines

will be discharged near the seafloor per standard industry practice. The treated seawater used for hydrostatic testing of the production lines will be roundtrip pigged to the FPSO and will be treated and discharged overboard with produced water. Commissioning Fluids A hydrate inhibiting substance e.g. methanol or ethylene glycol will be used to prevent formation of hydrates during commissioning of the production and gas injection lines. The fluid used for the gas injection line will be discharged at the seafloor and the fluid used for the production lines will be returned to the FPSO treated and discharged from the overboard water line. Ballast Water Discharges of ballast water will be required for initial FPSO installation and recurring tanker offloading. BOP Testing Fluids During periodic testing approximately every two weeks of the BOP system approximately 30 barrels of lowtoxicity power fluid i.e. fluid used to hydraulically move the preventers will be discharged near the seafloor. The typical composition of this fluid is 97 percent water with 3 percent bioelubricationcorrosion protection chemicals. Gray WaterBlack WaterFood Preparation Wastes The Project will provide wastewater treatment for sanitary wastes black watersewage and food preparation wastes in accordance with MARPOL requirements. Gray water will be discharged overboard. Table 24 summarizes drillingrelated discharges and Table 25 summarizes commissioning and productionrelated discharges. Table 24 Summary of Drilling and CompletionRelated Discharges Fluid Type Estimated Discharge Per Well bbl a Drill Cuttings Discharges WaterBased Drilling Fluid WBDF Discharges NonAqueous Base Fluid NABF retained on cuttings Cement Returns Completion and Treatment Fluids a Values based on deepest well May 2017 55 6000 13000 400 3800 6000

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Table 25 Summary of Commissioning and ProductionRelated Discharges Type of Discharge and Effluent Characteristics Expected Discharge VolumeRate Discharge Criteria Treatment Required to Meet Criteria SURF FPSO Installation Commissioning Discharges 500000 bbl total Ballast Water FPSO initial deballasting Hydrostatic Test Water Bioe 500 ppm Oxygen scavenger 100 ppm Corrosion inhibitor 100 ppm 25000 bbl total volume for all flowlines and risers occurring throughout SURF commissioning phase No 1 Perform

discharge in accordance with IMO requirements 2 No visible oil sheen on receiving water No visible
 oil sheen on receiving water No Gas Injection Line Commissioning Fluids 400 bbl total None NA
 Hydrate inhibitor e.g. methanol or ethylene glycol Production Discharges Produced Water Oil
 Grease Residual production and water treatment chemicals Cooling Water Hypochlorite 5 ppm
 Sulfate Removal Potable Water Processing Brines Hypochlorite 1 ppm Electrolyte 1 ppm Bioe 5
 ppm Oxygen Scavenger 10 ppm Scale Inhibitor 5 ppm 100000 bpd 700000 bpd Yes Oil in water 29
 mg/L monthly average; 42 mg/L daily maximum Temperature rise 3C at 100 m from discharge No No
 visible oil sheen on receiving water Temperature rise 3C at 100 m from discharge 100000 bpd None
 NA Subsea Hydraulic Fluid Discharge 5 bpd None NA Water soluble lowtoxicity May 2017 56
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 Description Type of Discharge and Effluent Characteristics Expected Discharge VolumeRate
 Discharge Criteria Treatment Required to Meet Criteria FPSO Bilge Water Inert Gas Generator
 Cooling Water FPSO Slop Tank Water 1800 bpd Negligible Negligible Oil in water 15 mg/L Yes NA
 Yes None Oil in water 29 mg/L monthly average; 42 mg/L daily maximum Miscellaneous Discharges
 including Boiler Blowdown Desalinization Blowdown Lab Sink Drainage 10 bpd None NA 1100000
 bbl total at each tanker crude loading No 1 Perform in accordance with IMO requirements 2 No
 visible oil sheen on receiving water 30 bbl every two weeks None Rainfall dependent 5000 bpd 4000
 bpd 30 bpd NA NA NA Yes No visible oil sheen on receiving water None Total residual chlorine as
 low as practical but not less than 1 ppm Macerated to 25 mm diameter Yes Tanker Ballast Water
 BOP System Testing WaterSoluble Low Toxicity Hydraulic Fluid Rain WaterDeck DrainageWash
 Down Water Gray Water Black Water sewage Food Preparation Wastes Notes bbl barrels bpd
 barrels per day 2.10.4 Waste Management The Project will generate a variety of solid wastes
 including both hazardous and nonhazardous wastes which vary over time by Project stage. As Table
 26 indicates waste will begin to be generated when drilling commences as early as 2018 per the
 current project schedule. Waste volumes generated will increase as drilling activity increases in
 2019 and 2020. Additional waste will be generated from SURF installation and FPSO

commissioning and hookup activities in the 2019/2020 timeframe. Waste volumes will then begin to decrease as drilling activity declines in 2021 and significantly decrease during the production operations stage once drilling activity is complete 2022 to 2039. When production operations cease some waste will be generated from decommissioning activities.

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Table 26 Summary of Estimated Annual Project Waste Generation and Management Methods

Representative Waste Streams	2018	2019	2020	2021	2022	2039	Totals by Classification
Nonhazardous wastes ²							
Hazardous wastes							
Plastic glass paper scrap metal Used oil paint waste oilcontaminated cement							
Wood paper cardboard Used NADF oil sludge unused chemicals General trash incinerator ash							
Totals by Management Method							
Offshore Incineration Onshore Treatment Incineration Onshore Landfill all nonhazardous ² Recycle into Process Recycle all nonhazardous Used oil oily water							
Plastic glass scrap metal	1850	4220	5870	2480	400	330	1770 4050 5470 2170 190 210 250 600
	830	360	80	1670	3820	5140	2014 140 110 140 1610 3630 5030 2080 280 230 0 90 0 220 20 320
	30	170	30	70	20	60	1

The annual totals reflect the current preliminary Project schedule see Section 2.14 which could change. 2 Nonhazardous volumes include estimated quantities of residue from treatment of hazardous waste Solid waste generated offshore will be reduced recycled treated and disposed offshore i.e. incinerated and accounted for in Table 24 under FPSO source where practicable with the remainder directed for onshore treatment recycling reuse or disposal. For the exploration drilling program EEPGL is currently utilizing a regional supplier who is operating an existing onshore waste treatment/incineration facility at a local shorebase in Georgetown Guyana see Figures 222 and 223. The Project is planning to utilize similar facilities in Guyana or the region during the development drilling FPSO/SURF production operations and decommissioning stages. To the extent that solid wastes are being disposed of by a Guyanese licensed onshore disposal facility i.e. landfill incinerator in accordance with their permit then impacts from the proper disposal of these

wastes are not further discussed in this EIA. All Project waste streams will be managed in accordance with the Waste Management Plan that will be part of the Project Environmental and Socioeconomic Management Plan ESMP. May 2017 59 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 222 Typical Waste Management Facilities at a Local Shorebase Figure 223 Vertical Infrared Unit with Wet Scrubber and Oxidizer at Typical Waste Management Facilities May 2017 60 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 2.11 Embedded Controls Chapter 2 Project Description EEPGL has incorporated the embedded controls¹³ provided in Table 27 into the Project ResourcesReceptors Benefitted Marine sediments water quality mammals turtles fish and benthos Marine sediments water quality mammals turtles fish and benthos Marine mammals marine turtles Air quality marine sediments marine water quality protected areas sensitive species coastal habitats coastal wildlife and shorebirds marine mammals turtles fish benthos ecology and ecosystems Table 27 List of Embedded Controls Embedded Control Measures Drilling and SURFFPSO Installation and Commissioning Utilize WBDF to the extent reasonably practicable and in other cases use lowtoxicity IOGP Group III NABF. When NADF is used utilize a solids control and cuttings dryer system to treat drill cuttings prior to discharge such that end of well maximum weighted mass ratio averaged over all well sections drilled using nonaqueous fluids shall not exceed 6.9 percent wet weight base fluid retained on cuttings. For VSP activities commence such operations during daylight hours after a suitable prewatch by Marine Mammal Observers MMOs is performed and begin with soft start procedures which incrementally increase source sound levels in order to allow marine mammals and turtles time to move away from the activity before full sound source energy is utilized in accordance with JNCC guidelines. With respect to prevention of spills of hydrocarbons and chemicals during the drilling stage o Change liquid hydrocarbon transfer hoses periodically o Utilize drybreak connections on liquid hydrocarbon bulk transfer hoses o Utilize a liquid hydrocarbon checklist before every bulk transfer o Perform required inspections and testing of all equipment prior to deploymentinstallation; o Utilize certified Blowout Prevention BOP equipment; o Regularly test

certified BOP equipment and other spill prevention equipment; o Utilize overbalanced drilling fluids to control wells while drilling; o Perform operational training certification including well control training for drill ship supervisors and engineers; o Regularly audit field operations on the drill ships FPSO and shorebases to ensure application of designed safeguards; and o Controls for mitigating a failure of the dynamic positioning system on the drill ships and maintain station keeping which include 13 Embedded controls are engineering specifications components and/or operational procedures that are planned as part of the Project.

May 2017 61 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Embedded Control Measures Chapter 2 Project Description Resources/Receptors Benefitted Use of a Class 3 Dynamic Positioning DP system which includes numerous redundancies; Sea trials and acceptance criteria; Rigorous personnel qualifications and training; Continuous DP proving trials; Continuous DP failure consequence analysis; and Establishment of well-specific operations guidelines. System Failure Mode and Effects Analysis; During pile driving activities gradually increase the intensity of hammer energy to allow sensitive species to vacate the area before injury occurs i.e. soft starts. Maintain marine safety exclusion zones with a 500 m 1640 ft radius around drill ships and major installation vessels to prevent unauthorized vessels from entering potentially hazardous areas. Production Operations Reinject produced gas which is not utilized as fuel gas on the FPSO to avoid routine flaring. With respect to non-routine flaring the following measures will be implemented o Monitor flare performance to maximize efficiency of flaring operation; o Ensure flare equipment is appropriately inspected and function tested prior to production operations; and o Ensure flare equipment is appropriately maintained and monitored during production operations. Treat produced water on the FPSO to limit oil and grease (OG) to 29 mg/L monthly average and 42 mg/L daily maximum. Design produced water and cooling water processes to avoid increases in ambient water temperature of more than 3°C at 100m 328 ft from the FPSO when discharging. Perform onboard waste incineration for certain categories of waste. Utilize a Mooring Master from the FPSO located onboard the offloading tanker to support safe tanker approach/departure and offloading operations. Utilize

support tugs to aid tankers in maintaining station during approach/departure from FPSO and during offloading operations. Utilize a hawser with a quick release mechanism to moor the FPSO to the tanker at a safe separation distance during offloading operations. FPSO offloading to tankers will occur within an environmental operating limit that is established to ensure safe operations. In the event that adverse weather occurs during offloading operations that is beyond May 2017 62 Marine mammals Marine use and transportation safety Air quality Marine water quality mammals turtles fish and benthos seabirds ecology and ecosystems Marine water quality mammals turtles fish and benthos seabirds ecology and ecosystems Land use Marine use and transportation safety Marine use and transportation safety Marine sediments water quality mammals turtles fish benthos and EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Embedded Control Measures the environmental operating limit the tanker will cease the offloading operations and may disconnect and safely maneuver away from the FPSO as appropriate. Utilize a marine bonded doublecarcass floating hose system certified by Class or other certifying agency that complies with the recommendations of OCIMF Guide to Manufacturing and Purchasing Hoses for Offshore Moorings GMPHOM 2009 Edition or later. Utilize breakaway couplers on offloading hose that would stop the flow of oil from FPSO during an emergency disconnect scenario. Utilize a load monitoring system in the FPSO control room to support FPSO offloading. Utilize leak detection controls during FPSO offloading which include o Leak detection for breach of the floating hose that complies with the recommendations of OCIMF GMPHOM 2009 Edition or later; o Utilization of instrumentation/procedures to perform volumetric checks during offloading. Chapter 2 Project Description Resources/Receptors Benefitted seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Provide trained medical personnel on board the FPSO and major installation vessels to minimize reliance on medical infrastructure and facilities in Guyana. Utilize marine safety exclusion zone of 2

nautical miles around the FPSO to prevent unauthorized vessels from entering potentially hazardous areas. Project vessels will conduct ballasting operations in accordance with IMO regulations.

General Measures

Maintain equipment marine vessels and helicopters in good working order and operate in accordance with manufacturers specifications in order to reduce atmospheric emissions and sound levels to the extent reasonably practicable.

Community health and wellbeing

Marine use and transportation safety

Ecological Balance and Ecosystems

Air quality water quality marine mammals marine turtles Regularly inspect and service shorebase cranes and construction Air quality equipment in order to mitigate the potential for spills and to maintain air emissions at optimal levels. Shut down or throttle down sources of combustion equipment in intermittent use where reasonably practicable in order to reduce air emissions.

Air quality Utilize secondary containment for bulk fuel storage drilling fluids and Water quality hazardous materials where practical. Regularly check pipes storage tanks and other equipment associated Water quality with storage or transfer of hydrocarbons chemicals for leaks. Perform regular audits of field operations on the drill ship FPSO and shorebase to ensure application of designed safeguards.

Air quality water quality May 2017 63

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Treat sewage to applicable standards under MARPOL 7378. For those wastes that cannot be reused treated or discharged disposed on the drill ship or FPSO they will be manifested and safely transferred to appropriate onshore facilities for management. Waste management contractors will be vetted prior to utilization. If deficiencies in contractors operations are noted an action plan to address the identified deficiencies will be established. Utilize oilwater separators to limit oil in water in bilge water to 15 parts per million ppm; per MARPOL. Provide standing instruction to Project dedicated vessel masters to avoid marine mammals and turtles while underway and reduce speed or deviate from course as needed to reduce probability of collisions.

Chapter 2 Project Description

Resources

Receptors

Benefitted Marine sediments water quality mammals turtles fish benthos and seabirds Land use Marine sediments water quality mammals turtles fish benthos and seabirds Marine mammals marine turtles Provide standing instruction to Project dedicated vessel

masters to avoid Seabirds any identified rafting seabirds when transiting to and from PDA. Observe standard international and local navigation procedures in and around the Georgetown Harbour and Demerara River as well as best shipkeeping and navigation practices while at sea. Project workers will be subject to health screening procedures to minimize risks of communicable diseases. Utilize an established SSHE program to which all Project workers and contractors will be required to mitigate against risk of injury/illness to workers. All workers and contractors will receive training on implementation and will be required to adhere to its principles. Marine use and transportation safety Community health and wellbeing Occupational and community health safety and wellbeing Maintain an OSRP to ensure an effective response to an oil spill including maintaining the equipment and other resources specified in the OSRP and conducting periodic training and drills. Where practicable direct lighting on FPSO and major vessels to required operational areas rather than at the sea surface or skyward. Provide screening on FPSO and drill ships for seawater intakes to minimize the entrainment of aquatic life where practical. All resources and receptors Seabirds and marine turtles Marine fish

2.12 Project Workforce Preliminary workforce estimates are provided in Table 28. These estimates have been slightly revised since submittal of the Application for Environmental Authorisation. May 2017 64 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Table 28 Workforce Estimates Project Stage Development Drilling Installation including FPSO and SURF Mobilization and Hookup Commissioning Production Operations including FPSO and conventional tanker Decommissioning Chapter 2 Project Description Estimated Workforce Approximately 600 persons offshore at peak when utilizing up to two drill ships concurrently Dependent upon final drill ships and support vessels selected Approximately 600 persons offshore at peak Dependent upon final installation and support vessels selected Approximately 100 to 140 persons offshore at peak an additional 25 to 30 persons would be onboard the tanker Dependent upon conventional tanker schedule Approximately 60 persons offshore at peak In addition to the offshore components there will also be personnel providing shorebase and marine logistical support onshore approximately 100/150 persons some of whom will be Project dedicated while others will be

shared resources. The onshore logistical support staff will ramp up gradually through the installation stage until reaching a peak during the development drilling campaign and FPSOSURF installation activities and then will diminish during FPSOSURF production operations. The logistical support onshore staff level is expected to increase again briefly during decommissioning.

2.13 Worker Health and Safety EEPGL and its parent company ExxonMobil are committed to protecting the safety security and health of its employees contractors and the public with a goal of Nobody Gets Hurt. It has a robust and effective management system to protect its Project workforce. EEPGL will implement its Operations Integrity Management System OIMS see Section 2.2 during each Project stage. This program is designed to manage occupational risks to Project workers and therefore occupational health and safety are not discussed further in this EIA.

2.14 Project Schedule At this time the proposed Project schedule is still being refined. The Project life cycle will include development drilling installation production operations and decommissioning as well as associated logistics and onshore support. The engineering stage will precede FPSO and SURF installation and development drilling operations and will include frontend engineering and design FEED and detailed engineering. The execution stage will include procurement fabrication and construction drilling installation hookup commissioning and startup. Operations and maintenance will follow startup and will be the longest stage of the Project.

May 2017 65 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description Figure 224 provides a preliminary schedule for the major Project components and activities. As depicted on Figure 224 oil production and export from the Project is planned for approximately mid2020. To support this goal development well drilling from up to two drill ships is planned to start in early 2019 with the potential for mobilization in 2018. The installation of the SURF components and the FPSO are planned to commence in 2019. Production will continue for at least 20 years. The milestones are still being refined and are subject to change. This schedule provides for simultaneous development drilling and FPSOSURF production operations which will involve bringing the initial production wells online as subsequent development wells are being drilled.

Figure 224 Preliminary Project Schedule

2.15

Project Benefits The Project will generate benefits for the citizens of Guyana in several ways Through revenue sharing with the Government of Guyana although the details of this revenue sharing is confidential. The type and extent of benefits associated with revenue sharing will depend on how decision makers in government decide to prioritize and allocate funding for future programs which is unknown and outside the scope of the EIA; By procuring select Project goods and services from Guyanese businesses to the extent reasonably practicable; and By hiring Guyanese nationals where reasonably practicable although the potential magnitude of hiring will be limited. In addition to direct revenue sharing expenditures and employment the Project would also likely generate induced economic benefits as other nonProject related businesses benefiting from direct Project purchases or worker spending will reinvest locally or expand spending in the area thereby also generating more local valueadded tax. These beneficial multiplier impacts will occur throughout the Project life.

May 2017 66 FPSO SURF Logistics FPSO SURF Installation Hookup Commissioning Development Drilling Startup Production 2016 2017 2018 2019 2020 Liza Phase 1 Project Preliminary Schedule Engineering Engineering Shorebase Support SURF FPSO Installation HUC Engineering Fabrication Manufacturing and Transportation Procurement Tow Drilling up to 2 Drill Ships

EEPG Environmental Impact Assessment Liza Phase 1 Development Project 2.16 Alternatives Chapter 2 Project Description This section describes the alternatives to the proposed Project that were considered Location alternatives; Development concept alternatives; Technology and process alternatives; and Nogo alternative.

2.16.1 Location Alternatives The location of the Project and the development wells in particular is driven by the location of resource to be recovered. There are no meaningful location alternatives for the FPSO SURF equipment and drill centers within the PDA.

2.16.2 Development Concept Alternatives Given the water depth and distance to shore of the Liza field the development alternatives for Phase 1 are primarily limited to floating production systems e.g. FPSO semisubmersible tension leg platforms. With the exception of the FPSO concept the other deepwater production systems would necessitate the use of a separate Floating Storage and Offloading FSO vessel for oil storage and offloading in order to enable export of the oil to

buyers. The use of an FSO would significantly increase the Project offshore infrastructure which would increase Project impacts on air quality e.g. increased air emissions marine water quality e.g. additional wastewater discharges marine benthos e.g. increased disturbance of the seafloor FSO for mooring system marine use and transportation e.g. expanded exclusion zones for other marine vessels. Therefore the FPSO was chosen as the preferred concept for Phase 1 because it is a more efficient standalone solution for deepwater oil processing and storage and it also provides for fewer environmental impacts. Three primary alternatives were considered for addressing associated gas produced during Phase 1 operations gas reinjection gas export and continuous flaring. Gas reinjection was determined to be feasible for Phase 1 and it also provides benefits in reservoir management and reduced air emissions. As such produced gas not used as fuel gas on the FPSO will be reinjected under normal operations. Continuous flaring of gas on a routine basis is not preferred primarily due to the associated air emissions. Gas export alternatives for future development continue to be evaluated particularly given challenges related to commercialization of associated gas. The FPSO has been designed to allow for future gas export should an export alternative be identified.

2.16.3 Technology Alternatives EEPGL is using the most appropriate industryproven technology in developing the Project in terms of well drilling drilling fluids equipment selection development concepts and environmental management. EEPGLs parent company ExxonMobil and its contractors have extensive experience in delivering offshore deepwater development projects around the world May 2017 67 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 2 Project Description particularly with FPSO and SURF components and are applying that knowledge experience and technology in the development of the Project in Guyana.

2.16.4 Nogo Alternative The nogo alternative means that the proposed Project would not be executed. If this alternative is applied the existing conditions described in Chapter 6 would remain unaffected by the Project and the potential positive and negative impacts assessed in Chapter 7 would not be realized. Therefore evaluating the nogo alternative means evaluating the tradeoff between positive and negative impacts.

2.16.5 Summary of Alternatives EEPGL considered

a reasonable range of alternatives to the Project and their environmental impacts and has selected the best action alternative which is also the environmentally preferred alternative for use during Phase 1. The FPSO and SURF production system is a proven development concept for deepwater oil developments and would leverage both operator and industry proven technologies and experiences.

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3.0 ADMINISTRATIVE FRAMEWORK

The Project must comply with applicable policies guidelines and legislation in Guyana see Section 1.1 Purpose of the EIA. This chapter reviews the relevant legislations and policies in Guyana that are applicable to the Project and is divided into three sections Section 3.1 describes Guyanas national legal framework focusing on laws that apply to environmental issues in a general context such as the Constitution of Guyana as well as specific national laws and regulations that focus on environmental issues such as the EP Act Cap. 20:05 and the Environmental Protection Authorisation Regulations of 2000 and petroleum development issues. It also identifies several resourcespecific environmental laws that are more narrowly focused and are directly or indirectly relevant to the Project. Section 3.2 describes the elements of the national policy framework that apply to the Project. These strategies and policies articulate the governments goals with respect to various environmental issues. Section 3.3 describes the various international and regional conventions and protocols to which Guyana is a signatory that are applicable to the Project. In addition to these Guyana regulations Section 3.4 discusses EEPGLs Operations Integrity Management System OIMS which establishes common expectations to address risks inherent in its business.

3.1 National Legal Framework

This section provides an overview of the key legislation currently in force in Guyana that pertains to resources that could be affected by the Project.

3.1.1 National Constitution of Guyana

Guyana is governed according to the Constitution of the Cooperative Republic of Guyana as amended. The constitution took effect in 1980 and expressly provides for protection of the environment. Article 25 establishes improvement of the environment as

a general duty of the citizenry. 3.1.2 The Environmental Protection Act In 1996 the EP Act Cap. 2005 was ratified to implement the environmental provisions of the Constitution. The EP Act Cap. 2005 is Guyanas single most significant piece of environmental legislation because it articulates national policy on important environmental topics such as pollution control the requirements for environmental review of projects that could potentially impact the environment and the penalties for environmental infractions. It also provides for the establishment of an environmental trust fund. Most importantly the EP Act Cap. 2005 authorized the formation of the EPA and establishes the EPA as the lead agency on environmental matters in Guyana FAO 2013. The EPA is one of the agencies included within the Ministry of Natural Resources. The EP Act Cap. 2005 further mandates May 2017 70 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework the EPA to oversee the effective management conservation protection and improvement of the environment EPA 2012. It also requires the EPA to take the necessary measures to ensure the prevention and control of pollution assessment of the impact of economic development on the environment and the sustainable use of natural resources. The EPA has issued an official guidance document entitled Environmental Impact Assessment Guidelines which describes the general components and of a typical EIA. This EIA has been prepared consistent with the recommendations in this document see Table 12. 3.1.3 The Guyana Geology and Mines Commission Act The Guyana Geology and Mines Commission Act was enacted in 1979 and authorized the government to establish the GGMC which is within the Ministry of Natural Resources. The GGMC promotes and regulates the exploration and development of the countrys mineral resources. The GGMC has a dedicated Petroleum Unit charged specifically with regulatory supervision of the oil and gas sector; however petroleumrelated activities also occur in other divisions such as the Geological Services Division and the Environment Division. 3.1.4 The Petroleum Act The Petroleum Exploration and Production Act was enacted in 1986 to regulate the prospecting for and production of petroleum in Guyana including the territorial sea continental shelf and exclusive economic zone. This act identifies persons allowed to hold prospecting licenses

establishes the process for obtaining prospecting licenses and specifies requirements for further resource development in the event petroleum resources are discovered. The GGMC has a dedicated Petroleum Unit charged specifically with regulatory supervision of the oil and gas sector; however petroleum-related activities also occur in other divisions such as the Geological Services Division and the Environment Division. In 2012 the Commonwealth Secretariat was commissioned by the Government's then Ministry of Natural Resources and Environment now the Ministry of Natural Resources to prepare recommendations to reform Guyana's regulatory regime that governs the upstream petroleum sector. In September 2015 the Minister of Governance via the GGMC's Petroleum Unit announced plans to upgrade the country's upstream oil and gas policy which was originally crafted in 2012 and finalized in 2014. In June 2016 the Ministry of Natural Resources completed a new national oil and gas policy and announced pending revisions to the Petroleum Act. These revisions were due for consideration by Guyana's National Assembly before the end of 2016 (Kaieteur News 2016) but had not been presented for approval as of February 2017. In late January 2017 Guyana's Government Information Agency GINA announced the Ministry of Natural Resources plan to conduct a national outreach program to provide information to the public and answer questions on the emerging oil and gas sector (GINA 2017).

May 2017 71 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework 3.1.5 Other Resource-Specific National Environmental and Social Laws

Several additional Guyanese environmental laws with more narrowly defined scopes pertain to specific biological or physical natural resources. Other laws which primarily have a public health related focus are also indirectly related to the environment. Several of Guyana's environmental statutes were enacted prior to the 1980 Constitution and were subsequently incorporated into the newly formed national legal framework but most were enacted after 1980. Table 31 identifies these laws and summarizes their relevance to the Project.

Table 31 Resource-Specific Environmental and Social Laws

Objective	Relevance to the Project	Title
Biological Resources	Fisheries Act 2002 Regulates fishing and related activities in Guyana territorial waters. The Fisheries Act authorizes the prohibition and/or	

regulation of deposition or discharge of substances harmful to fish. Would primarily affect the of routine discharges from Project vessels and the FPSO. Sections 3 and 6 prohibit knowingly wounding or killing wild birds listed in the First and Second Schedule of the Act and establishes penalties. Provides for wildlife protection conservation and management. Provides a supportive mechanism cognizant of the national goals for wildlife protection conservation management and sustainable use. Wild Birds Protection Act 1987 Protects listed wild birds in Guyana. Species Protection Regulations 1999 Wildlife Management and Conservation Regulations 2013 recently supplemented by passing of Wildlife Conservation and Management Bill 2016 Provides for the establishment of a Management Authority and a Scientific Authority in compliance with the Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES. Provides for the establishment of a Management Authority and the management of the countrys flora and fauna. May 2017 72 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework Physical Resources Environmental Protection Water Quality Regulations 2000 Focused on setting effluent standards reporting requirements penalties for violations of standards and permitting requirements for discharges. Environmental Protection Air Quality Regulations 2000 Environmental Protection Hazardous Waste Regulations 2000 Toxic Chemicals Control Act No. 13 of 2000 as amended in 2007 Environmental Protection Noise Management Regulations 2000 Sets ambient air quality standards reporting requirements penalties for violations of standards and permitting requirements for stationary and mobile sources. Establishes requirements for generating handling and disposing of hazardous waste as well as penalties for violations of these requirements. Provides for the formation of a Pesties and Toxic Chemicals Control Board. Establishes requirements for registration licensure and trade in pesties and toxic chemicals. Amended in 2007 to provide rules for the exportation of pesties and toxic chemicals. Establishes general provisions for noise avoidance and restrictions from multiple commercial and industrial sources including sound making devices night clubs equipment tools and construction activities. Regulates discharges of listed substances which could include substances

used during the Project. Would affect the concentrations of certain constituents primarily metals but including others such as nitrogenous compounds fluoride and sulfate that could be discharged in the routine discharges from the Project. Regulates discharges that could be emitted during the Project including smoke particulates and carbon monoxide CO. Identifies wastes subject to regulation including several types of waste that could be produced by the Project. Establishes regulations pertaining to the use of toxic chemicals and pesticides. Pesticides will not be required for this Project but small amounts of chemicals may be used. The Act would regulate the importation registration and use of these chemicals. Tools and equipment includes pile drivers steam shovels pneumatic hammers pumps vent or valve devices and any other similar equipment. A regulated facility includes any offshore installation and any other installation whether floating or resting on the seabed. May 2017 73 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework Draft Guyana Standard Requirements for Industrial Effluent Discharge into the Environment 2015 Compulsory standard used for monitoring of effluents into freshwater estuarine and marine water resources. Public Health Occupational Safety and Health Act 1997 Food Drug Regulations Food and Drug Act Social Cultural Resources National Trust Act Legally defines the responsibilities of workers and management with respect to keeping workplaces safe. Regulates the sale advertisement preparation and handling of food products. Regulates the manufacture advertisement trade and administration of pharmaceuticals. Provides the Ministry of Health authority to inspect facilities to establish compliance with sanitation standards. Stewardship of historic resources and places of cultural significance. Sets limits for key parameters in discharges of industrial effluent. Would affect the concentrations of many of the same constituents in routine discharges that would be regulated under the Environmental Protection Water Quality Regulations 2000. Would also dictate the general water chemistry parameters e.g. temperature biological oxygen demand pH of these discharges. Would generally apply to workers and Project-related activities on the Project sites. Governs the preparation of food and provision of medications at Project facilities. Governs the management of any building structure object or other manmade or natural feature that

is of historic or national cultural significance that could be impacted by the Project. Includes shipwrecks and other marine features. Would only apply to the Project in the event of a chance find in which case the Act would require EEPGL to work cooperatively with the National Trust to manage any resources discovered. Most recently the Minister of Natural Resources who functions as the sponsoring Minister for the Oil and Gas industry announced plans in September 2015 to upgrade the countrys upstream oil and gas policy which was originally crafted in 2012 and finalized in 2014 indicating an evolving policy and regulatory framework surrounding the oil and gas industry in Guyana. May 2017 74 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework To date there are 16 laws concerning oil and gas in Guyana. The majority of these laws are housed with the EPA National Advisory Council on Occupational Safety and Health Guyana Revenue Authority GRA GGMC or Guyana National Bureau of Standards. 3.2 National Policy Framework Guyanas government has articulated national policies on several environmental and social topics that are relevant to the Project. This section provides an overview of the key government policies applicable to the Project. 3.2.1 National Development Strategy The National Development Strategy NDS recommends priorities for Guyanas economic and social development policies for the next decade. The draft document contains technical analysis of problems and future prospects in all sectors of the economy and in areas of social concern. The NDS contains six volumes. Volumes 3 and 5 are the most relevant to the Project. Volume 3 of the NDS sets government policy with regard to the environment as well as social equality issues. It identifies 12 distinct features of Guyanas natural resources and environment and sets policies governing the management of each feature. Relevant features to this Project covered under Volume 3 include the coastal zone fisheries waste management pollution control and environmental impacts of privatesector activities NDS 1997. Volume 5 of the NDS relates in part to the energy sector. It describes the condition of the energy sector in Guyana reviews past government policies related to the energy sector identifies challenges facing the energy sector in Guyana and describes the governments vision for development and regulation of the

sector into the future NDS 1997. 3.2.2 National Environmental Action Plan Guyanas National Environmental Action Plan NEAP articulates the national governments approach to managing the environment from the perspective of economic development. The NEAP considers the issues of environmental management economic development social justice and public health to be inextricably linked. It identifies deforestation pollution and unregulated gold mining as historically minor but with growing environmental problems and identifies private sector investment as one of the primary opportunities to generate the necessary capacity within Guyana to 1 provide an appropriate level of public services to its citizens; 2 reduce andor eliminate the avoidable environmental degradation that occurs when resource development occurs in a regulatory vacuum; and 3 reduce unsustainable uses of natural resources due to the socioeconomic pressures of widespread poverty. The NEAP is directly relevant to the Project in several ways. It identifies the coastal zone which will support Project activities as an area in need of focused management due to the concentrated human population along the coast and the susceptibility of the coastal environment to both natural and humaninduced degradation. It identifies private sectorled development projects as a mechanism to build capacity and ultimately support more May 2017 75 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework responsible environmental management. Finally it identifies petroleum resources as a potential target for development. 3.2.3 Integrated Coastal Zone Management Action Plan Guyanas Integrated Coastal Zone Management ICZM process is an ongoing initiative to promote the wise use development and protection of coastal and marine resources; enhance collaboration among sectorial agencies; and promote economic development. In 2000 after two years of study the ICZM Committee produced an ICZM Action Plan which was approved by the Cabinet in 2001. The ICZM Action Plan addresses policy development analysis and planning coordination public awareness building and education control and compliance monitoring and measurement and information management GLSC 2006. Other coastalzone related tasks currently being undertaken by the Government include strengthening the institutional setup for ICZM; conducting a public awareness

campaign to increase public understanding of the vulnerability of the coastal zone to sea level rise and climate change; and creating a database of coastal resources to facilitate improved ICZM. Currently the EPA is mandated to coordinate the ICZM program and coordinate the development of the ICZM Action Plan through the ICZM Committee. Under the Caribbean Planning for Adaptation to Climate Change project Guyana has also conducted a socioeconomic assessment of sealevel rise as part of a wider vulnerability assessment and developed a Climate Change Adaptation Policy and Implementation Strategy for coastal and lowlying areas.

3.2.4 Protected Areas Act

The Protected Areas Act was enacted in 2011. It provides for protection and conservation of Guyanas natural heritage and natural capital through a national network of protected areas and established a Protected Areas Commission to oversee the management of this network. It also highlights the importance of maintaining ecosystem services of national and global importance and public participation in protected areas and conservation and it establishes a protected areas trust fund to ensure adequate financial support for maintenance of the network. Other functions of this Act include promoting national pride in and encouraging stewardship of Guyanas natural heritage recognizing the conservation efforts and achievements of Amerindian Villages and Amerindian Communities and promoting the recovery and rehabilitation of vulnerable threatened and endangered species.

3.2.5 Guyanas National Biodiversity Strategy and Action Plan NBSAP

Guyanas current National Biodiversity Strategy and Action Plan was formally adopted in 2015 and is the third iteration of the NBSAP. It establishes the national vision for biodiversity which is to sustainably utilize manage and mainstream biodiversity by 2030 thereby contributing to the advancement of Guyanas biosecurity and socioeconomic and low carbon development. It is intended to guide national policy with respect to biodiversity through 2020. It recognizes the May 2017 76

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework importance of biodiversity to the growing ecotourism industry and other economic sectors. It also simultaneously recognized the importance of the mining industry to the national economy and the potential for conflicts between the mining industry and ecotourism if land

degradation is associated with mining activity is not appropriately managed. The NBSAP set forth nine strategic objectives intended to promote conservation and sustainability on a national scale improve biodiversity monitoring harmonize legal and policybased mechanisms across all levels of government to support biodiversity conservation and prioritize funding to meet these objectives.

3.2.6 Low Carbon Development Strategy and the Green Economy In June 2009 the Government of Guyana announced the Low Carbon Development Strategy LCDS. The LCDS aims to protect and maintain the forests in an effort to reduce global carbon emissions and at the same time attract payments from developed countries for the climate services that the forests provide. In 2013 the LCDS was updated to focus on two main goals 1 transforming the national economy to deliver greater economic and social development by following a low carbon development path while simultaneously combating climate change 2 providing a model for the world of how climate change can be addressed through low carbon development in developing countries. The LCDS identifies Reducing Deforestation and Forest Degradation Plus as a primary mechanism for achieving the goals of the strategy. Although there is no formal government plan for achieving a green economy the Government of Guyana has expressed interest in the concept. President David Granger has defined the green economy as consisting of the four pillars of energy environmental security ecological services and enterprise and employment Kaieteur News 2016. The LCDS provides the conceptual framework for implementing the green economy.

3.2.7 Guyana Energy Agency's Strategic Plan The Guyana Energy Agency GEA was established by the Guyana Energy Agency Act of 1997 with a mandate to advise the Prime Minister on energy related issues develop a national energy policy improve energy efficiency monitor the energy sector and educate the public on energy efficiency and renewable energy GEA undated. The GEAs Strategic Plan for 2014-2018 specifically charges the Agency with monitoring the production importation distribution and utilization of petroleum and petroleum products.

3.3 International Conventions and Protocols Guyana is signatory to a number of international agreements and conventions relating to environmental management and community rights although not all of these agreements have been translated into national

legislation. The key agreements relevant to the Project to which Guyana has acceded or is a signatory are listed in Table 32. Guyana is a member state of two organizations that administer multiple international treaties and conventions the International Labour Organization ILO and the International Maritime Organization IMO. The ILO has established eight fundamental conventions which provide May 2017 77 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework certain general protections to workers in signatory states such as the right to organize standards for remuneration restrictions on child labor including minimum ages to work and protection from forced labor. In addition to these fundamental agreements Guyana is signatory to several specific agreements that would govern certain specific aspects of the Project as they relate to labor. The IMO is a similar organization whose member states have agreed to one or more conventions related to maritime activities. These include three key conventions the International Convention for the Safety of Life at Sea the International Convention for the Prevention of Pollution from Ships and the International Convention on Standards of Training Certification and Watchkeeping for Seafarers as well as several other agreements concerning more specific aspects of maritime activity such as safety and security at sea maritime pollution and liability for maritime casualties. Guyanas Maritime Administration manages compliance with the requirements of the agreements Guyana is signatory to under the IMO with technical assistance from the IMOs Regional Maritime Advisory Office in Port of Spain Trinidad. The agreements to which Guyana is party through its membership in the ILO and IMO are identified in bold in Table 3.2. Table 32 International Agreements Relevant to Environmental and Socioeconomic Issues in Guyana Agreement Convention Objective Status Relevance to Project Climate Change Air Quality United Nations Framework Convention on Climate Change Promote international cooperation to limit average temperature increases and resulting changes in climate. Promote international cooperation to adapt to these impacts. Kyoto Protocol Vienna Convention on the Protection of the Ozone Layer Montreal Protocol on Substances that Deplete the Ozone Layer Extends the UNFCCC and commits countries to reduce greenhouse gas emissions. Provides a

framework for the protection of the ozone layer. Is a protocol to the Vienna Convention and is designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. Acceded and Ratified in 1994 Acceded in 2003 Acceded in 1993 Acceded in 1993 Provides for controls on greenhouse gas emissions within Guyanas territory maritime and land and establishes national policy regarding adaptation to climate change. Establishes national emission reduction targets. Establishes measures for protecting the ozone layer. Prohibits the use of several groups of halogenated hydrocarbons that may deplete the ozone layer. May 2017 78 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework Acceded in 1997 Would protect Guyanas rights to respond to an oil spill if such an event were to occur. Pollution Prevention International Convention for the Prevention of Pollution from Ships International Convention for Safe Containers International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties International Convention on Civil Liability for Oil Pollution Damage Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal Regulates various forms of marine pollution including oil and fuel noxious liquid hazardous substances sewage garbage air emissions and ballast water. Acceded in 1997 Acceded in 1997 Promote the safe transport and handling of containers through generally acceptable test procedures and related strength requirements and facilitate the international transport of containers by providing uniform international safety regulations equally applicable to all modes of surface transport. Confirms the right of coastal member states to take specific actions when necessary to prevent pollution from oil following a maritime casualty Establishes vessel owners liability for damages caused by pollution from oil spills and provides for compensation would be available where oil pollution damage was caused by maritime casualties involving oil tankers Reduce and control the movements of hazardous waste between nations and discourage transfer of hazardous waste from developed to less developed countries. Acceded in 1997 Acceded in 2001 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade Provides a

mechanism for formally obtaining and disseminating decisions of party nations as to whether they wish to receive future shipments of listed chemicals and for ensuring compliance with these decisions by exporting party nations. Acceded in 2007 May 2017 79 Impacts the handling and disposition of controlled substances from the drill ships FPSO and support vessels. Regulates the manufacture use and integrity of containers used on board the drill ships FPSO and support vessels. Would not apply directly to EEPGLs activities but would apply to potential spills from tankers that had received oil from the FPSO. Would apply to the Project only if hazardous waste generated in Guyana were disposed outside Guyana or if hazardous waste was brought into Guyana from a foreign state for disposal during execution of the Project. Would apply to the Project only if chemicals and/or pesticides listed under the convention were shipped into or out of Guyana.

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Stockholm Convention on Persistent Organic Pollutants POPs as amended Requires party nations to take measures to eliminate or reduce the release of persistent organic pollutants. Acceded in 2007 Establishes measures for dealing with marine oil pollution incidents Ratified in 1997 International Convention on Oil Pollution Preparedness Response and Cooperation Chapter 3 Administrative Framework Would apply to the Project only if POPs were released to the environment during the course of Project-related activities in Guyana. Requires ships to have a shipboard oil pollution emergency plan. Provide framework for international protection and development of the marine environment across the Caribbean region. Ecological/Environmental Quality/Cultural Heritage The Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region Protocol on Specially Protected Areas and Wildlife Protocol supplementing and supporting the Cartagena Convention. Requires signatories to adopt an ecosystem approach to conservation. Provides mechanism for compliance with the Convention on Biological Diversity. Promotes biological conservation within the framework of sustainable development and use of biological resources and the fair and equitable sharing of benefits of genetic resources. Convention on Biological Diversity Acceded and Ratified in 2010 Sets general goals for protection for the marine

environment especially from pollution. Acceded and Ratified in 2010 Elaborates on the wildlife goals established in the Cartagena Convention and Convention on Biological Diversity. Signed in 1992 Ratified in 1994 Discourages activities that would negatively impact biodiversity. May 2017 80

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Administrative Framework United Nations Convention on the Law of the Seas Defines nations rights and responsibilities in terms of their use of oceans and provides guidance on environmental and natural resource management. Concluded in 1982 and ratified in 1994 Defines legal status of subsea mineral resources as the common heritage of humankind encourages resource development to be done in a way that supports healthy global economic growth and trade balance and mandates that states take measures to prevent control and reduce pollution of the oceans. Restricts collection and trade of endangered species. Convention on International Trade in Endangered Species of Wild Flora and Fauna UNESCO Convention on the Protection of the Underwater Cultural Heritage LaborHealthSafety International Convention for the Safety of Life at Sea Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation Dock Work Convention Protects endangered plants and animals from international trade. Acceded in 1977 Protects all traces of human existence having a cultural historical or archaeological character that have been under water for over 100 years. Specifies minimum standards for the construction equipment and operation of vessels compatible with their safety. Allows governments of participating states to inspect vessels flagged in other participating states to ensure compliance. Promotes safety at sea by criminalizing actions that would endanger a vessel or its cargo or contributing to activities that would do so. Ratified in 2014 Applies to shipwrecks. Acceded in 1997 Affects construction operation and equipment on board the drill ships FPSO installation vessels and support vessels. Acceded in 2003 Would apply to any activity intended to endanger vessels while at sea conducting permitted activities related the Project. Would apply to loading and offloading activities at the shorebase. Regulates activities associated with the loading and unloading of cargo ontofrom oceangoing vessels when at port. Acceded 1983 May 2017 81 EEPGL Environmental Impact Assessment Liza

Phase 1 Development Project Repatriation of Seafarers Convention Revised Seafarers Identify Documents Convention Convention on the International Regulations for Preventing Collisions at Sea International Convention on Standards of Training Certification and Watchkeeping Convention on Facilitation of International Maritime Traffic Requires vessel owners/operators to repatriate at the operators expense seafarers that have successfully concluded a minimum period of service onboard a vessel minimum time to qualify for this benefit to be determined by the member state but not to exceed 12 months Requires signatory states to issue identity cards to seafarers and for other signatory states to allow holders of these cards entry to their territories for the purposes of shore leave joining a crew or repatriation after completing a voyage. Officially recognizes the importance of traffic separation in the marine environment and codifies basic measures to accommodate traffic separation including safe speed signaling conventions and general vessel conduct. Obligates crews operating vessels flagged in signatory states to adhere to minimum standards relating to training certification and watch keeping. Requires signatory states to submit detailed information to the International Maritime Organization concerning administrative measures taken to ensure compliance with the convention. Prevent unnecessary delays in maritime traffic arising from burdensome documentation requirements and establish uniform formalities and other procedures to permit transboundary maritime commerce and travel. Acceded 1996 Acceded 1966 Acceded in 1997 Acceded in 1997 Chapter 3 Administrative Framework Would apply to workers onboard both EEPGL owned/operated vessels their contractors and tankers receiving oil from the FPSO. Would apply to seafarers entering or egressing Guyana prior to or following employment on vessels operated by EEPGL or its contractors and to seafarers on shore leave while employed by EEPGL or its contractors. Governs operation of drill ships FPSO installation vessels and support vessels. Impacts required capabilities of crew on board the drill ships FPSO installation vessels and support vessels and provides for inspection by authorities to ensure compliance. Acceded in 1998 Facilitates entry of drill ships FPSO installation vessels and support vessels into Guyana. Guyana also belongs to other international organizations such as the Organization of American States the International Monetary

Fund and the Caribbean Community. To highlight Guyanas adherence to international standards and guidelines relevant to the oil and gas sector in May 2010 the country announced its commitment to the implementation of May 2017 82 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework the Extractive Industries Transparency Initiative and in September 2015 the country recommitted its support to the ILO. 3.4 EEPGLs Operations Integrity Management System The Company and its affiliates including EEPGL are committed to conducting business in a manner that is compatible with the environmental and economic needs of the communities in which it operates and that protects the safety security and health of its employees those involved with its operations its customers and the public. These commitments are documented in its Safety Security Health Environmental and Product Safety policies. These policies are put into practice through a disciplined management framework called OIMS. EEPGLs OIMS Framework¹⁴ establishes common expectations used by Company affiliates worldwide for addressing risks inherent in its business. The term Operations Integrity OI is used to address all aspects of its business that can impact personnel and process safety security health and environmental performance. Application of the OIMS Framework is required across all Company affiliates with particular emphasis on design construction and operations. Management is responsible for ensuring that management systems that satisfy the OIMS Framework are in place. Implementation will be consistent with the risks associated with the business activities being planned and performed. Figure 31 provides a high level description of the OIMS Framework and its 11 essential

Elements.

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<http://corporate.exxonmobil.com/company/about-us/safety-and-health/operations-integrity-management-system>¹⁵ The European Nature Information System EUNIS is a habitat classification system developed by the European Environment Agency EEA in collaboration with international experts. The EUNIS includes all types of natural and artificial habitats both aquatic and terrestrial. May 2017 83 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 3 Administrative Framework Figure 31 Operations Integrity Management System May 2017 84 EEPGL

Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology

Preparing for the Environmental Impact Assessment 4.0 METHODOLOGY FOR PREPARING THE ENVIRONMENTAL IMPACT ASSESSMENT

The purpose of this EIA is to assess the potential physical biological and socioeconomic including social economic community health and cultural impacts of the Project. This chapter provides a summary of the approach and methodology used to assess the potential impacts associated with the Project. The EIA has been undertaken in a manner consistent with the Guyana Environmental Impact Assessment Guidelines Volumes 1 and 2 2000 and 2004 respectively. This chapter also describes the process used to conduct the EIA. The EIA was prepared to provide an independent sciencebased evaluation of the potential impacts associated with the development drilling installation production operations and decommissioning stages of the Project. The EIA is also intended to share those findings with stakeholders and decisionmakers so they can make informed decisions regarding the potential benefits and impacts of the Project as well as the measures proposed to enhance these benefits and mitigate these impacts. that This EIA has been undertaken following a systematic process that evaluates the potential impacts the Project could have on physical biological and socioeconomic resourcesreceptors and that identifies measures that EEPGL will take to avoid reduce and remedy adverse impacts. For the purposes of the EIA an impact is defined as any alteration of existing conditions adverse or beneficial caused directly or indirectly by the Project. The EP Act Cap. 2005 defines an adverse impact as meaning one or more of the following Harm or material discomfort to any person; An adverse effect on the health of any person; Rendering any property or plant or animal life unfit for use by human or unfit for its role in Impairment of the quality of the natural environment or any use that can be made of it; Injury or damage to property or to plant or animal life; Impairment of the safety of any person; the ecosystem; Loss of enjoyment of normal use of property; and Interference with the normal conduct of business. Information on potential impacts including potential cumulative impacts related to the Project was obtained by ERM from various primary and secondary sources including consultation and key informant interviews with the EPA

GGMC and other stakeholders; environmental impact assessments for other similar projects worldwide; and scientific research and literature. The key stages for this EIA approach are Screening; Scoping and Terms of Reference; Assessing Existing Conditions; Project Description and Interaction with Design and DecisionMaking Process; May 2017 85 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Stakeholder Engagement; Assessment of Impacts and Identification of Mitigation; Mitigation Management and Monitoring; and Disclosure and Reporting. The methodologies for the key stages are described in the subsequent sections.

4.1 Screening The first stage of the EIA process involved the EPA screening the Project to determine the appropriate level of analysis to support the Application for Environmental Authorisation Application submitted by EEPGL. The EPA screens projects based on the information provided in the Application and determines the depth of environmental assessment type of document required to support the Application. Based on the results of its screening assessment the EPA may determine that the information included in the application is sufficient to support a permitting decision or it may require a Strategic Environmental Assessment Environmental Management Plan and/or an Environmental Impact Assessment. The EPA determined that the Project could result in potentially significant impacts and in accordance with the EP Act Cap. 2005 indicated on July 29 2016 that the Project requires an Environmental Impact Assessment to inform a decision to approve or reject the Project.

4.2 Scoping and Terms of Reference The key objectives of scoping are to Identify key sensitivities and those actions having the potential to cause or contribute to significant impacts on physical biological and socioeconomic resources receptors; Identify potential siting layout and technology alternatives for the Project; Obtain stakeholder views through consultation; and Help inform the Terms of Reference ToR for the EIA through consultation to ensure that the process and output are focused on the key issues. The ToR describes the scope technical approach and issues of importance to be considered in the EIA. EPA issued a draft ToR for the Project on September 8 2016 and its availability was advertised in the newspaper on September 9 2016. Sector Agency

Scoping Meetings were held on October 5 and 6 2016 to receive government agency comments on the draft ToR. Public Scoping Meetings were held in each of the six coastal regions as follows to receive public comments on the draft ToR Region 1 November 14 2016 Region 2 October 26 2016 Region 3 October 24 2016 Region 4 December 3 2016 Region 5 December 2 2016 Region 6 November 8 2016.

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Following the public scoping meetings the EPA required the submittal of an updated Project Summary which EEPGL submitted on January 13 2017. The EPA issued a public notice for the updated Project Summary with an additional 28day public comment period. EPA approved the Final ToR on February 17 2017. The Final ToR was developed to guide the preparation of the EIA and outline the requirements of the same. The Final ToR incorporated the concerns issues and suggestions garnered during the 28day Public Notification Period and the public and sector agency meetings described above.

4.3 Assessing Existing Conditions The description of existing physical environmental and socioeconomic conditions provides information on resourcesreceptors identified during scoping that have the potential to be significantly impacted by the Project. The description of existing conditions is aimed at providing sufficient detail to meet the following objectives Identify the key conditions and sensitivities in areas potentially impacted by the Project; Provide a basis for extrapolation of the current situation taking into consideration natural variability and development of future scenarios without the Project; Provide data to aid the prediction and evaluation of potential impacts of the Project; Understand stakeholder concerns perceptions and expectations regarding the Project; Provide a benchmark to inform assessments of future changes and of the effectiveness of Inform development of appropriate mitigation measures; and mitigation measures. Field studies conducted to document existing conditions for the EIA are described in Chapter 6.

4.4 Interaction with Design and DecisionMaking Process The interaction between the EIA team and the design and decisionmaking process was one of the key areas in which the EIA influenced how the Project would be developed. It included involvement in defining the Project and identifying those activities with the

potential to cause physical biological or socioeconomic impacts. Project planning decision making and refinement of the Project description continued throughout the assessment process in view of identified impacts and proposed mitigation measures. During the EIA process there was extensive communication between the impact assessment team and the Project design team with regard to identifying alternatives potential impacts and mitigation measures.

4.5 Stakeholder Engagement

Stakeholder engagement has been conducted to support the development of the EIA and associated ESMP. The objectives of the Projects stakeholder engagement activities are to Promote the development of respectful and open relationships between stakeholders and EEPGL during the Project life cycle; Identify Project stakeholders and understand their interests and concerns in relation to Project activities and incorporate such interests and concerns into the EIA and ESMP development processes and if appropriate the Project design; May 2017 87 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Provide stakeholders with timely information about the Project in ways that are appropriate to their interests and needs and also appropriate to the level of expected risks and potential adverse impacts; Satisfy regulatory and EEPGL expectations for stakeholder engagement; and Record feedback and resolve any grievances that may arise from Projectrelated activities through a formal feedback mechanism.

4.5.1 Stakeholder Engagement Plan

Project stakeholder engagement activities are guided by a Stakeholder Engagement Plan SEP which describes Stakeholders identified for engagement; A program of engagement and communications activities and their frequency throughout the Project life cycle; A dedicated phone line and email address through which stakeholders can contact EEPGL to voice concerns provide information or ask questions about the Project and its activities; and Mechanisms through which EEPGL will monitor and report on external engagement and communications. The SEP is a document that is updated periodically as the Project progresses to reflect new information changing conditions and additional stakeholders.

4.5.2 Stakeholder Identification and Engagement Strategy

Project stakeholders have been identified through a combination of desktop research and incountry

assessment and engagement. Stakeholder categories include but are not limited to government officials; communities including indigenous peoples; interest groups; nongovernmental organizations NGOs; the private sector; media; academic and research institutions; and professional business and worker associations. Building on the stakeholder identification and mapping analysis EEPGLs stakeholder engagement strategy identifies mechanisms and tools to facilitate stakeholder communications and public information sharing. These tools are divided into two tiers that interact to facilitate informed engagement. The first tier is information sharing in which EEPGL provides information about the Project to stakeholders to support their understanding of what is proposed to occur. The second tier is consultation in which EEPGL seeks to support open dialogue and to receive stakeholder feedback opinions concerns and knowledge regarding the way the Project may interact with the natural and social environment. The objective of the consultation is to ensure that EEPGL has identified key stakeholder issues and concerns. EEPGL may disseminate information through print and online publications media releases as well as presentations and open houses. The intent of these types of activities is to provide information to a broad audience or group of stakeholders as efficiently as possible. Consultation or dialogue activities involving a twoway flow or exchange of information May 2017 88 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment between stakeholders and the Project may include oneonone and small group meetings public meetings including a question and answer session and feedback mechanisms such as a dedicated email address guyanastaff@exxonmobil.com and phone line 592 231 2866 extension 12400. The intention of these activities is to allow for not only a twoway exchange of information but also a means for EEPGL to gather information concerning topics that are important to its stakeholders. These activities also help ensure stakeholders comments and opinions are heard and legitimate concerns can be addressed.

4.5.3 Stakeholder Engagement Process

Stakeholder engagement activities are an integral part of the Project lifecycle from the initial notification when the Project is proposed to the scoping of potential impacts to the EIA and throughout the life of the Project.

EEPGL has conducted a robust public consultation program to both inform the public about the Project and understand community and stakeholder concerns so they could be incorporated into the EIA. The different stages of the Project each require stakeholder engagement that is tailored in terms of its objectives and intensity as well as the forms of engagement used. The various engagements completed and/or planned specific to the EIA stage are summarized below. EEPGL has held many meetings and various workshops with the government and others on offshore oil and gas exploration and development. The submission of the Application was posted in the local newspaper on August 9 2016 by EPA Figure 41 and was subject to a 28-day public comment period. There were no comments received from the public in regards to the Application. EEPGL and/or ERM have held meetings or key informant interviews with over 30 Guyana government agencies/commissions many elected officials and Regional Administrators over 15 professional or business associations international and domestic nongovernmental organizations several universities and research institutes various religious and ethnic organizations and the media to inform stakeholders about the Project and to collect information needed for the EIA. Although questionnaires were not used these meetings are documented in the SEP and inputs from these engagements were incorporated into the existing conditions and impact assessment components of the EIA Chapters 6 and 7 respectively. The Draft ToR was developed and published by the EPA on their website on September 8 2016. Sector Agency Scoping Meetings were held with EEPGL the EPA and other government agencies on October 5 and 6 2016 with over 150 attendees of which approximately 100 were members of the general public to discuss the Draft ToR scope potential impacts and capture agency-level stakeholder feedback on the Draft ToR. Public Scoping Meetings for the purpose of scoping potential impacts and capturing stakeholder opinions from the general public on the Draft ToR were held in Regions 1 through 6 during October November and December 2016 with over 300 attendees of which over 200 were public participants Figure 42. May 2017 89

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Following the public scoping

meetings the EPA required the submittal of an updated Project Summary which EEPGL submitted on January 13 2017 that was followed by an additional 28day public comment period. The EPA approved the TOR for the Project on February 17 2017. Several select stakeholders were consulted following acceptance of the TOR including 50 business community stakeholders at the Marriott hotel in Georgetown on February 20 2017; the Guyana Oil and Gas Association on February 21 2017; and Once the EIA was submitted to the EPA on February 27 2017 the EPA administered a 60day public comment period during which the public was invited to submit comments to the EPA on the EIA. During the 60day public comment period EEPGL held a number of small group and individual meetings government agencies commissions and NGOs Regional Administrators and academic and ethnic religious institutions. The purpose of these meetings was to provide an overview of the EIA results and answer questions relating to the EIA process and results. stakeholders including various with During the 60day public comment period EEPGL also held public meetings in Regions 1 and 6. The meetings included an overview presentation of the EIA results and provided the public the opportunity to pose questions about the EIA and the Project. May 2017 90 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Figure 41 Environmental Application Invitation for Public Comment May 2017 91 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Figure 42 Sample Draft Terms of Reference Invitation for Public Comment Regions 2 and 3 May 2017 92 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Once the EIA process is complete and assuming EEPGL obtains environmental authorization and other approvals from EPA GGMC and EAB the Project will subject to a final investment decision transition into execution. Plans for stakeholder engagement during Project execution are described in the SEP and engagement activities will be adjusted to reflect evolving Project status and activity level as well as stakeholder concerns over the life of the Project. During Project execution the emphasis of

engagement shifts from input gathering to disclosure about planned activities as well as consultation including receipt of feedback on ongoing and planned activities. EEPGL will keep the public informed about the general progress of the Project e.g. completion of Project stages such as well drilling and will respond to any grievances e.g. specific concerns filed under the Projects Grievance Procedure which is described in the SEP. The Grievance Procedure will be in place throughout the life of the Project.

4.5.4 Stakeholder Comments and Considerations

This section summarizes the key comments and suggestions received from stakeholders during the EIA consultation processes to date and how these comments have been considered and addressed in the EIA Table 41. During the Projects EIA scoping phase the EPA led a series of eight scoping meetings two meetings attended by agency representatives and one public meeting each in Regions 16. These meetings served to inform stakeholders about and receive feedback on the EIA Terms of Reference ToR which were also made available on the EPA website throughout the scoping phase. The public was also made aware that comments could be submitted directly to the EPA during the 28day public comment period of the scoping phase. A total of 163 comments were received from public stakeholders over the course of the scoping phase. Some were raised in person at the scoping meetings while others were submitted via comment boxes at the meetings or by letter to the EPA. The largest number of comments 58 pertained to the EIA approach process and/or methodology including questions about the EIA timeline the company conducting the EIA delineation of the Area of Influence AOI data collected for the EIA stakeholder engagement efforts over the course of the EIA process and of the ESMP. There were also numerous questions and comments 37 about potential impacts of the Project including impacts to marine life and other biological resources fishing livelihoods air quality indigenous lands and potential for accidents. A total of 40 comments pertained to the Project Description including the project location life of the project processes for waste management use of produced gas and measures to prevent and address oil spills. A total of 19 comments were received about possible socioeconomic benefits of the Project including employment government revenues and local . Seven comments were received regarding the EPAs

role and capacity in the EIA process and three questions were received about the administrative framework regulating oil and gas development in Guyana. Table 41 below summarizes key themes raised by stakeholders during the EIA scoping phase and indicates how these have been considered in the EIA.

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Table 41 Themes in Scoping Comments Received and Consideration in EIA Key Theme Differences between Phase 1 and Phase 2 types of SURF and FPSO equipment and methods gas reinjection EIA methodology hierarchy data collection techniques types of surveys and studies limitations predictive analysis and considerations for mitigation Oil spill response OSR capabilities protection measures vessel information response capacity e.g. trained responders equipment notifications liability Area of Influence AOI determinations Timing for public comment period cutoff dates and how comments are incorporated into the EIA Credentials and experience of the company developing the EIA. Subcontractor management and monitoring logistical support requirements and onshore shorebases Decommissioning Alternatives analysis particularly as it pertains to Air Quality Strategic Environmental Assessment SEA details current and previous stakeholder engagement information Role of Marine Mammal Observers Potential socioeconomic benefits of the Project including employment and government revenue. Potential adverse impacts on livelihoods and economy including fishing livelihoods. Consideration in EIA Phase 2 has not been defined. Any future phases would be addressed through a separate permitting process. A Project Description is provided in Chapter 2. The methodology for the EIA including existing condition data collection assessment and mitigation analysis is discussed in Chapter 4. OSR planning is discussed in Chapter 7. Potential impacts as a result of an unplanned event such as an oil spill are assessed in Section 7.4. A separate Oil Spill Response Plan for the Project is being developed. The AOI for the Project is described in Chapter 5. Details related to the EIA process and the administrative frameworks are discussed in Chapter 3. Details related to the public comment period and how stakeholder feedback is incorporated into the EIA are discussed here in Section 4.5. A brief description of ERM and its

experience conducting EIAs for offshore oil and gas projects is presented in Section 1.0 of the EIA. Curriculum vitae for the key EIA team members are provided in Appendix B of the EIA. Details related to subcontractors and logistical support are described in Chapter 2. Decommissioning information is presented in Chapter 2. An alternatives analysis is included in Section 2. Further details pertaining to Air Quality Climate Change and the impact on receptors is discussed in Chapter 7. The SEA that was submitted to EPA in March 2014 and includes previous stakeholder information can be found on the EPA website. Information pertaining to marine mammal data collection can be found in Chapter 6. Socioeconomic benefits of the Project are discussed generally in Section 7.3.2 and Section 7.3.3 of the EIA. Opportunities for local employment and procurement are currently under study; details will be elaborated in a Projects specific local plan. Potential adverse impacts to employment livelihoods and economy are discussed in Section 7.3.2 Section 7.3.3. and Section 7.4.4. May 2017 94 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Key Theme Consideration in EIA Management and use of produced gas Use and disposal of hazardous substances Emissions and their impacts A description of the gas production rate and its management and use by the Project are described in Section 2.5 of the EIA. A list of chemicals that the Project intends to use is provided in Section 2.10.1 of the EIA. Management of wastes including hazardous waste is provided in Section 2.10.4. An estimated annual emissions summary is provided in Section 2.10.2 of the EIA while assessments of Project emissions on ambient air quality and climate are provided in Section 7.1.1. Waste streams and their management and discharge Descriptions of the Project vessels discharges and management disposal systems and practices are provided in Sections 2.10.3 and 2.10.4. Possible effects on coastal resources including mangroves and artisanal fisheries Assessment of impacts to coastal resources is provided in Section 7.2.1 Section 7.2.2 Section 7.2.3 Section 7.4.3 and Section 7.4.4 of the EIA. Possible effects on marine life An assessment of impacts to biological receptors including marine wildlife can be found in Section 7.2 and Section 7.4.3 of the EIA. Possible effects on fishing livelihoods Assessment of

impacts to fishing livelihoods can be found in Section 7.3.3 and Section 7.4.4. Impacts to indigenous people lands and resources A discussion of indigenous people and resources and their potential to be affected by the Project is provided in Section 7.3.10 and Section 7.4.4.8. Oil spill potential impacts and impacted locations Oil spill modeling results and assessment of potential impacts of an oil spill are discussed in Section 7.4 of the EIA. Potential for social changes such as trafficking prostitution drug trade etc. Potential impacts to community safety are assessed in Section 7.3.4 of the EIA. Principles and of the Environmental and Social Management Plan ESMP The guiding principles and an overview of general structure and of the ESMP are discussed in Chapter 9 of the EIA. Type of anchor mooring on offshore vessels The type of anchor mooring or other positioning mechanism to be utilized by Project vessels is discussed in Section 2.

May 2017 95 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Some questions were raised during the scoping meetings that were outside the scope of an EIA e.g. the potential for an oil refinery in Guyana and/or are confidential such as the details of EEPGLs agreement with the Government of Guyana and are therefore not discussed in Table 41. During the Projects 60day public comment period EEPGL conducted a series of individual and small group meetings as well as two public consultations one in Region 1 and one in Region 6. The stakeholders that were engaged during this period include Environmental Protection Agency Ministry of Indigenous Peoples Affairs Ministry of Natural Resources National Trust of Guyana Maritime Administration Department Conservation International Guyana Civil Defense Commission World Wildlife Fund Guyana Ministry of Agriculture Department of Guyana Marine Conservation Society Fisheries Guyana Geology and Mines Commission University of Guyana Ministry of Health Guyana Hindu Dharmic Sabha Region 2 Administration Region 1 public consultation Ministry of Communities Region 6 public consultation Stakeholder comments were documented over the course of these engagement events. Comments and questions related to a range of topics including potential impacts on fishing livelihoods potential impacts to marine biodiversity potential impacts on air emissions and how these were assessed

financial responsibility in the event of an oil spill application of the mitigation hierarchy Project employment opportunities and other socioeconomic benefits and the Projects stakeholder engagement process. EEPGL compiled comments received over the course of the 60day public comment period that could necessitate changes to the EIA and ESMP. In addition the EPA received written comments from stakeholders during the public comment period which were forwarded to EEPGL. Upon conclusion of the public comment period EEPGL thoroughly considered all comments received and updated the EIA and ESMP as relevant and appropriate.

4.6 Assessment of Impacts and Identification of Mitigation

The primary purpose of an EIA is to predict the potential impacts resulting from a proposed Project and to identify and evaluate the efficacy of measures to avoid reduce or remedy these impacts. ERM uses a standard impact assessment methodology for evaluating the impacts and May 2017 96 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment significance of projects around the world the ERM Impact Assessment Standard. This methodology the sensitivityvulnerabilityimportance of the resourcereceptor to determine the significance of the impact see Table 42 which is described in more detail below. into consideration both the magnitude of an impact and takes Table 42 Evaluation of Impact Significance Impacts can be direct indirect or induced as defined below Direct Impacts that result from a direct interaction between the Project and a resourcereceptor e.g. disturbance of a benthic community habitat on the seafloor; Indirect Impacts that follow indirectly from the direct interactions between the Project and its environment as a result of subsequent interactions within the environment e.g. impacts to marine fish who feed off a directly impacted benthic community; and Induced Impacts that result from other activities that are not part of the Project that happen as a consequence of the Project e.g. influx of job seekers. May 2017 97 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment The assessment of impacts proceeded through an iterative fourstep process as illustrated in Figure 43. Figure 43 Impact Prediction and Evaluation Process Step 1 Predict Impacts The EIA evaluates potential Project

impacts by predicting and quantifying to the extent possible the sensitivity/vulnerability/importance of the impacted resources/receptors. resources/receptors magnitude impacts those and on of

Magnitude is a function of the following impact characteristics

Type of impact i.e. direct/indirect/induced; avoidable or unavoidable

Nature of the change what is impacted and how; positive or negative; Size scale or intensity; Geographical extent and distribution e.g. local/regional/national/international; Duration and/or frequency e.g. temporary/short term/long term/permanent; and Reversibility reversible or irreversible.

Magnitude therefore describes the change that is predicted to occur in the resource/receptor e.g. the area and duration over which air or groundwater may become polluted the level of increase in concentration the degree and probability of impact on the health or livelihood of a local community.

The magnitude of impacts are predicted and evaluated using a variety of different methods appropriate to the resources/receptors potentially impacted by the Project. For example models are used to evaluate potential impacts on physical resources e.g. water quality/oil spill/air dispersion and underwater sound models.

Table 51 provides additional information on the analytical methods used in assessing impacts for resources/receptors.

The magnitude of an impact takes into account all the various dimensions of a particular impact in order to make a determination as to where the impact falls on the spectrum in the case of adverse impacts including Negligible/Small/Medium and Large.

Some impacts can result in changes to the environment that may be immeasurable/undetectable or within the range of normal natural variation. Such changes can be regarded as essentially having little or no impact and are thus characterized as having a Negligible magnitude.

Other impacts may result in changes that are substantial and/or extremely widespread and these are characterized as May 2017/98 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment having a Large magnitude.

In the case of positive impacts this EIA does not attempt to characterize magnitude.

In determining the magnitude of impacts on resources/receptors embedded controls are taken into consideration. For example the assessed magnitude of impacts on seawater quality from proposed produced water discharge considers the

efficacy of produced water treatment measures that are part of the Project design. The sensitivityvulnerabilityimportance of the impacted resourcereceptor is characterized by considering the nature of the resourcereceptor as well as other factors including legal protection government policy stakeholder views and economic value. The definitions for Low Medium and High sensitivityvulnerabilityimportance designations will vary on a resourcereceptor basis.

Step 2 Evaluate Impacts For routine aspects of the Project the significance for each impact was assigned based on the evaluations of the magnitude of the impact and the sensitivityvulnerabilityimportance of the resourcereceptor using the matrix shown in Table 42 above. This matrix applies to all resourcesreceptors. The assignment of a significance rating enables decisionmakers and stakeholders to understand key potential Project impacts. The following considerations are provided to clarify what the various significance designations represent.

An impact of Negligible significance is one where a resourcereceptor will not be impacted by a particular activity or the predicted impact is deemed to be imperceptible or is indistinguishable from natural background variations or small magnitude impacts are predicted only to low sensitivity receptors. impact but An impact of Minor significance is one where a resourcereceptor will experience a the noticeable resourcereceptor is respectively of Medium or Low sensitivityvulnerability importance. An impact of Moderate significance has an impact magnitude that falls somewhere in the range from a threshold above which the impact is Minor up to a level that might be just short of being considered Major. is Small or Medium andor impact magnitude the An impact of Major significance is one where the impact magnitude is Medium or Large for a resourcereceptor of High sensitivityvulnerabilityimportance or Large magnitude for a Medium sensitivityvulnerabilityimportance resourcereceptor. An impact of Positive significance is one that has been identified as having a positive impact on the receptorresource. This EIA does not attempt to characterize magnitude for positive impacts. The specific criteria used to evaluate significance of impacts for each resourcereceptor are presented in Chapter 7. Nonroutineunplanned events related to the Project e.g. oil spills traffic acents or other events with a low probability of occurrence do not lend themselves readily to the analysis described

above. For these types of events understanding the significance of the risk requires understanding of the May 2017 99 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Consequence potential of the event if it were to occur; and Likelihood of the event occurring. As such for these unplanned events a Risk Table Table 43 based on event consequence and likelihood is used to assess the significance of impacts associated with the events. Table 43 Evaluation of Risk Consequencesseverity takes into consideration the magnitude as defined for Step 1 of the potential impact if the unplanned event were to occur. Likelihood reflects the probability of occurrence and is defined as follows Unlikelyconsidered a rare event and there is a small likelihood that an event could occur; Possiblethe event has a reasonable chance to occur at some time during normal operating conditions; and Likelythe event is expected to occur during the life of the facility. Likelihood is estimated on the basis of experience and/or evidence that such an outcome has previously occurred. It is important to note that likelihood is a measure of the degree to which the unplanned event is expected to occur not the degree to which an impact is expected to occur as a result of the unplanned event. The latter concept is referred to as uncertainty and this is typically dealt with in a contextual discussion in the impact assessment rather than in the impact significance assignment process. Step 3 Mitigation and Enhancement The next step in the process for this EIA is the identification of measures that can be taken to mitigate as far as reasonably practicable the identified potential impacts of the Project. A mitigation hierarchy is used where preference is always given to avoid the impact before considering other types of mitigation. The preferred hierarchy of measures followed in this EIA is Avoidremove the source of the impact by employing alternative designs or operations to avoid risks related to environmental and socioeconomic impacts; Reducelessen the probability and/or consequence of impacts that cannot be avoided e.g. reduce the size of the project footprint; and Remedyif significant impacts cannot be avoided or reduced then repair the consequences of the impact after it has occurred through rehabilitation reclamation restoration compensation and/or offsets. May 2017 100 EEPGL Environmental Impact Assessment

Liza Phase 1 Development Project Chapter 4 Methodology Preparing for the Environmental Impact Assessment Management measures are generally not developed for potential adverse impacts that are assessed as Negligible. Practicable measures as available are adopted for higher levels of impact significance.

Step 4 Determine and Manage Residual Impacts The final step in the iterative impact evaluation process for this EIA is the determination of residual impacts i.e. impacts that are predicted to remain after both embedded controls and committed mitigation measures have been taken into consideration. This typically involves pursuing elements of Step 1 and Step 2 to reevaluate the magnitude and then the significance of the potential impact now considering the implementation of proposed mitigation measures. If significant residual impacts remain efforts aligned with Step 3 are made to identify additional or alternative cost-effective and practicable mitigation measures. The management emphasis for Moderate and Major impacts is on reducing the impact to a level that is as low as reasonably practicable. This does not necessarily mean for example that impacts of Moderate significance have to be reduced to Minor but rather that impacts are being managed effectively and efficiently. Although a goal of an impact assessment is to eliminate Major residual impacts through impact avoidance or other measures for some resources/receptors there may be Major residual impacts after all practicable mitigation options have been exhausted. Decisionmakers must weigh such negative factors against the positive ones such as employment in reaching a decision on the Project.

4.7 Mitigation Management and Monitoring In support of the EIA process ERM and EEPGL developed a Project ESMP as summarized in Chapter 9 that includes Management measures identified in the impact assessment; Summary of how the measures will be implemented; and Monitoring strategy to evaluate the effectiveness of the management measures. The management strategy uses an adaptive approach during the Project life cycle to ensure that recommended management measures are implemented as planned and produce the desired outcomes. This adaptive approach provides the Project in consultation with the EPA and other stakeholders the opportunity to Address unanticipated adverse impacts that are encountered through the addition of new management measures following the avoid-reduce-remedy

hierarchy; Adjust or replace existing management measures when appropriate during the Project life cycle to address evolving impacts; and Retire existing management measures when no longer demonstrating value. EEPGL recognizes that demonstrating capacity to manage nonroutine unplanned events such as oil spills is an important and integral component of the impact management process. As such the ESMP includes an Oil Spill Response Plan OSRP to address the possibility of nonroutine unplanned events.

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5.0 SCOPE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The scope of the EIA includes all Phase 1 Project stages i.e. development drilling installation hookupcommissioning production operations and decommissioning as described in Chapter 2 and planned activities listed in Section 5.2. The EIA also addresses nonroutine unplanned events e.g. spills and releases. This EIA builds on the previous Strategic Environmental Assessment prepared for EEPGLs original Exploration Drilling in the Stabroek Petroleum Prospecting License Area March 2014 and the Environmental Management Plan prepared for EEPGLs Liza Field Multiwell Exploration Program February 2016. The collection of additional data and completion of further analyses however were required to evaluate the potential environmental and socioeconomic impacts of all stages of the Project which are addressed in this EIA.

5.1 The Area of Influence

The area potentially impacted by a project is referred to as its Area of Influence AOI. For purposes of this impact assessment the Project AOI was divided into a direct and an indirect AOI as described below

Direct AOI within which the Project is expected to have direct impacts Figure 51. This area includes

- 1 the PDA i.e. the Liza Phase 1 area including the subsea wells SURF equipment and the FPSO;
- 2 the marine transit corridors between the PDA and shorebased activity centers in Guyana and Trinidad; and
- 3 the city of Georgetown; and

Indirect AOI within which the Project is expected to have indirect impacts Figure 52. This area includes

- 1 coastal areas and marine waters within the territorial boundary of Guyana that could

potentially be impacted by an unplanned event i.e. an oil spill; see Section 7.4 for more details on oil spill modeling and 2 coastal Regions 1 to 6 who could be impacted to a greater extent by the Project than the other regions because of their subsistence and commercial marine fisheries e.g. potential impacts on fish and marine transport and increased exposure to Project socioeconomic impacts. Although all 10 regions of Guyana would potentially benefit from the shared government revenue stream from the Project the Indirect AOI does not include the entire country because the extent to which any specific region could benefit from the revenues is dependent on the governments policies rather than on EEPGLs activities as assessed in this EIA. As described in Section 8 cumulative impacts on environmental and socioeconomic resources could potentially result from incremental impacts of the Project when combined with other past present and reasonably foreseeable future projectsdevelopments within the AOI. The geographic area of concern for the cumulative impacts analysis is generally consistent with the Project AOI.

May 2017 103 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 51 Direct Area of Influence Chapter 5 Scope of the EIA NOTE Map does not represent a depiction of the maritime boundary lines of Guyana.

May 2017 104 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 52 Indirect Area of Influence Chapter 5 Scope of the EIA NOTE Map does not represent a depiction of the maritime boundary lines of Guyana.

May 2017 105 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the EIA 5.2 Project Interactions with Environmental and Socioeconomic Receptors In order to define the scope of the environmental and socioeconomic impact analysis it is necessary to identify the potential interactions between the Project and the resourcesreceptors within the AOI. These interactions are the mechanisms that could trigger Projectrelated impacts on resourcesreceptors. Each of the Project activities and potential unplanned events listed below has the potential to interact with existing resourcesreceptors in the AOI which could potentially create environmental or socioeconomic impacts.

Development
Drilling Stage o Drill ship and drilling operations
Power generation
Drill cuttings discharges
Drilling fluids discharges
Wastewater discharges
Offshore waste treatment and disposal including

incineration o VSP o ROV operations o Onshore waste management recycling treatment and disposal Installation of FPSOSURF Components Stage o Marine installation vessels and FPSO Power generation Install mooring system e.g. driven or suction piles for FPSO and select SURF equipment Discharge of hydrostatic test water hydrate inhibitor ballast water Wastewater discharges Limited waste incineration o ROV operations and installation of SURF equipment o Hookup and commissioning of FPSO and SURF equipment o Onshore waste management recycling treatment and disposal Production Operations Stage o FPSO Vessel Operations Power and heat generation Nonroutine temporary flaring Produced water discharges Brine discharges from sulfate removal and potable water processing Sanitary wastewater discharges Ballast water discharge one time at mobilization Nonhydrocarbon contact cooling water discharges Gas reinjection into reservoir Seawater intake May 2017 106 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the EIA Seawater injection into reservoir Chemical use topsides subsea downhole o Oil Offloading to Conventional Tankers Tanker power generation Venting of cargo tanks during oil loading Seawater intake for ballast operations Tanker ballast water discharge on arrival Tanker domestic wastewater discharge o Offshore waste treatment and disposal including waste incineration o Onshore waste management recycling treatment and disposal Decommissioning Stage o Marine decommissioning vessels and FPSO Power generation Disconnection of mooring system and SURF equipment Wastewater discharges Limited waste incineration o Onshore waste management recycling treatment and disposal Logistical Support across all Project stages o Supply and support vesselaircraft operations o Onshore fuel transfers from suppliers o Utilization of shorebases including pipe yards and warehouses o Onshore waste management recycling treatment and disposal Nonroutine Unplanned Events o Oil spill or release FPSOSURF production operations o Oil spill or release Well control event o Other oil spills or releases o Other unplanned events 5.3 ResourcesReceptors Assessed in the EIA One of the purposes of the scoping process is to identify which resourcesreceptors could potentially be significantly impacted by the Project and which resourcesreceptors would not have the potential to

be significantly impacted by the Project. Based on the Project Description and understanding of existing conditions at the time of scoping Table 51 lists those resources/receptors that were identified as having the potential to be impacted by the Project subject to further assessment. These resources/receptors were retained for further consideration in the EIA. May 2017 107 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the EIA Table 52 lists those resources/receptors that have been identified as unlikely to have the potential to be impacted by the Project and the rationale for this determination. These resources/receptors are excluded from further consideration in the EIA. May 2017 108 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the Environmental Impact Assessment Table 51 Summary of Resources/Receptors Retained for Further Consideration in EIA and Corresponding Potential Impacts Primary Sources of Potential Impacts and Analytical Approach

Resource or Receptor	Potential Impacts	Primary Sources of Potential Impacts	Analytical Approach
Physical Resources	Air Quality and Climate	Air emissions resulting from the Project have the potential to change ambient air quality in the Project AOI on a localized basis. Air quality is important for health of humans and wildlife. Potential impact of greenhouse gas emissions from the Project on climate change.	Power generation Other combustion sources Nonroutine temporary flaring Fugitive emissions from storage and loading Waste incineration Helicopter and aviation emissions To describe actual air quality conditions in the vicinity of the Project ambient air quality data were collected at the proposed Project site approximately 190 km 120 mi offshore of Guyana including measurements of particulate matter PM ₁₀ carbon monoxide CO sulfur dioxide SO ₂ hydrogen sulfide H ₂ S nitrogen dioxide NO ₂ and volatile organic compounds VOC. Measurements were taken onboard a research vessel. Air emission inventories were prepared for these pollutants and a screening level analysis was conducted to identify potential air quality impacts associated with Project activities. Dispersion modeling was conducted to assess potential impacts to ambient air quality. Potential impacts were described. Estimated greenhouse gas GHG emissions for the Project were calculated. Sound Auditory impacts on Project workers. Equipment/machinery operating

onboard the FPSO or drill Managing occupationalrelated risks through appropriate PPE. Marine Geology and Sediments Marine Water Quality The Project will disturb marine geology and sediments on a localized basis in the PDA and could impact sediment quality from nonaqueous base fluid NABF on drill cuttings discharges. The Project could have localized impacts to marine water quality in the PDA from discharge of drill cuttings and from routine operational and hydrotesting discharges. The Project could potentially impact marine water quality in the Project AOI as a result of nonroutine unplanned events. ships Drilling of development wells Installation of FPSO and SURF components Drilling of development wells cuttings and fluid discharge Cooling water discharges Installation of FPSO and SURF components Wastewater discharges Produced water discharges Hydrotesting discharges Nonroutine unplanned event e.g. spill or release Biological Resources Protected Areas and Special Status Species The Project is not expected to impact Protected Areas during routine planned operations and activities in the Project AOI. The Project could potentially impact Protected Areas in the Project AOI as a result of nonroutine unplanned events. The Project could potentially impact some special status species e.g. endangered or listed species in a localized manner in the PDA as a result of underwater sound light seawater withdrawal and changes in marine water quality. The Project could potentially impact special status species in the Project AOI as a result of nonroutine unplanned events. Nonroutine unplanned event e.g. spill or release Underwater sound generated by marine component operations and activities Lighting on offshore facilities e.g. FPSO drill ships Seawater intake by FPSO Wastewater discharges Drilling of development wells cuttings and fluid discharge Cooling water discharges Produced water discharges Hydrotesting discharges Vessel movements A fate and transport model GIFT was used to evaluate cuttings and drilling fluid deposition surrounding the development wells. The physical differences between the native seafloor and the accumulated drill cuttings as well as the distribution of residual NABF on drill cuttings were described based on the results of the modeling analysis. A fate and transport model GIFT was used to evaluate total suspended solids TSS concentrations resulting from discharge of drilling fluid and cuttings based on global ocean currents data. USEPAs

CORMIX model was used to simulate the mixing zone around the drill ships and FPSO and to support an analysis of impacts on marine water quality from routine production operations discharges and onetime hydrotesting discharges. Oil spill modeling was used to estimate concentrations of dissolved hydrocarbons that might result from different unplanned event scenarios. Oil spill modeling was used to simulate the trajectory of an oil spill and assess the risk of oiling impacting any designated Protected Areas. Consistent with the approach taken for marine mammals turtles and fish without special status designation the scientific literature was reviewed for information on the impacts of planned offshore activities on special status species including marine turtles fish and marine mammals. Oil spill modeling was used to assess potential spill-related impacts. Underwater sound was modeled to assess potential auditory impacts associated with marine activities. USEPA's CORMIX model was used to simulate the mixing zone around the drill ships and FPSO and to support an analysis of impacts on marine water quality from routine operational discharges and onetime hydrotesting discharges. The GIFT model was used to evaluate TSS concentrations resulting from discharge of drilling fluid and cuttings based on global ocean currents.

May 2017 109 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the Environmental Impact Assessment Resource or Receptor Coastal Habitats Coastal Wildlife and Shorebirds Seabirds Marine Mammals Marine Turtles Marine Fish Marine Benthos Potential Impacts

The Project is not expected to impact beaches mangroves or wetlands in the Project AOI during routine planned operations and activities. The Project could potentially impact beaches mangroves and wetland habitats in the Project AOI as a result of nonroutine unplanned events. The Project is not expected to impact coastal wildlife or shorebirds during routine planned operations and activities in the Project AOI. The Project could potentially impact coastal wildlife and shorebirds in the Project AOI as a result of nonroutine unplanned events. The Project could potentially impact seabirds in a localized manner in the PDA as a result of light i.e. disorientation. The Project could potentially impact seabirds in the Project AOI as a result of nonroutine unplanned events. The Project could potentially impact some marine mammals in a

localized manner in the Project AOI as a result of underwater sound and ship strikes. The Project could potentially impact marine mammals in the Project AOI as a result of nonroutine unplanned events. The Project could potentially impact some marine turtles in a localized manner in the Project AOI as a result of underwater sound ship strikes and light. The Project could potentially impact marine turtles in the Project AOI as a result of nonroutine unplanned events. The Project could potentially impact some marine fish as a result of underwater sound light seawater withdrawal and changes in marine water quality in the PDA. The Project could potentially impact marine fish in the Project AOI as a result of nonroutine unplanned events. The Project could potentially disturb some benthic habitat and organisms in a localized manner in the PDA.

Primary Sources of Potential Impacts

Nonroutine unplanned event e.g. spill or release Analytical Approach Oil spill modeling was used to simulate the trajectory of an oil spill and assess the risk of oiling beaches mangroves or wetlands. Nonroutine unplanned event e.g. spill or release Oil spill modeling was used to simulate the trajectory of an oil spill and assess the risk of impacting coastal wildlife and shorebirds. Drill ship FPSO and support vessel operations Lighting on offshore facilities e.g. FPSO drill ships Nonroutine temporary flaring Waste incineration Nonroutine unplanned event e.g. spill or release Underwater sound generated by marine component operations and activities Ship strikes Changes in forage availability Lighting on offshore facilities e.g. FPSO drill ships Seawater intake by FPSO Wastewater discharges Drilling of development wells cuttings and fluid discharge Cooling water discharges Produced water discharges Hydrotesting discharges Nonroutine unplanned event e.g. spill or release

The scientific literature was reviewed for information on the impacts of lighting from planned offshore activities on seabirds. Oil spill modeling was used to assess potential spillrelated impacts on seabirds. The scientific literature was reviewed for information on the impacts of planned offshore activities on marine mammals turtles and fish. Analyses were performed based on expected marine mammal and turtle presence and Project vessel transits to assess likelihood of vessel strikes. Oil spill modeling was used to assess potential spillrelated impacts. Underwater sound was modeled to assess potential auditory impacts associated with marine activities. USEPA's CORMIX model was

used to simulate the mixing zone around the drill ships and FPSO and to support an analysis of impacts on marine water quality from routine operational discharges and onetime hydrotesting discharges. A fate and transport model GIFT was used to evaluate total suspended solids TSS concentrations resulting from discharge of drilling fluid and cuttings based on global ocean currents. Oil spill modeling will be used to assess potential spillrelated impacts on marine mammals turtles and fish. Drilling of development wells cuttings discharge and deposition Installation of FPSO mooring structures and SURF components Nonroutine unplanned event e.g. spill or release Fate and transport model GIFT was used to predict the extent and thickness of cuttings discharged on the seafloor surrounding the development wells. The physical differences between the native seafloor and the accumulated drill cuttings as well as the distribution of NABF containing cuttings and potential for toxicity impacts were described based on the results of the modeling analysis. Impacts from planned activities were evaluated in terms of the percentage of benthic habitat impacted by disturbance. May 2017 110 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Resource or Receptor Ecological Balance and Ecosystems Potential Impacts The Project could have indirect impacts on ecological functions in the Project AOI particularly if special status species or trophic relationships are disturbed. Chapter 5 Scope of the Environmental Impact Assessment Analytical Approach The scientific literature was reviewed to determine the ecological relationships between major marine taxonomic groups. Oil spill modeling was used to assess potential spillrelated impacts on marine organisms. Primary Sources of Potential Impacts Underwater sound generated by marine component operations and activities Lighting on offshore facilities e.g. FPSO drill ships Seawater intake by FPSO Installation of FPSO and SURF components Installationrelated disturbances to seafloor Wastewater discharges Ballast water discharges Waste incineration Nonroutine unplanned event e.g. spill or release Socioeconomic Resources Economic Conditions Employment and Livelihoods The Project is generally anticipated to have a positive impact on the economy of Guyana as a result of government revenue sharing from the Project as well as employment and local procurement opportunities. Potential adverse

impacts may include potential shorter term increases in the cost of living as a result of increased demand for specific goods and services. Potential adverse impacts to income from agriculture and fisheries could also occur as a result of nonroutine unplanned events. The Project is expected to build capacity in the local labor force increase demand for skilled labor and increase demand for service industries beneficial impact. There is also the potential for limited adverse impacts to fishing activities as a result of marine safety exclusion zones or marine traffic and nonroutine unplanned events. Community Health and Wellbeing Marine Use and Transportation Most Project activities will be located offshore in the PDA and would have no direct impacts on communities in Guyana. Introduction of limited levels of foreign labor could potentially have health and socioeconomic impacts. The Project could potentially impact community health and wellbeing in the Project AOI due to onshore traffic social interaction or as a result of nonroutine unplanned events. The Project may result in increased marine shipping and general marinerelated traffic which could potentially contribute to marine vessel congestion in port areas. Government revenue sharing from Project Local Project purchases of select materials goods and services Limited local Project employment direct and indirect Increased spending on select materials goods and services indirect multiplier impacts for localregional population Government reports were reviewed and key informant interviews were conducted to identify key economic drivers in the national regional and local economies and determine the likely Projectrelated impacts on these economic factors. A particular emphasis was placed on industrial sectors that are important to coastal communities. Local employment for Installation vessels o Drill ships o o FPSO topside equipment and operations o Marine support and supply vessels o Tankers o Tugs and support vessels o Aviation operations Marine safety exclusion zones Projectrelated marine traffic Drilling; FPSOSURF installation hookup and commissioning; and FPSO and support vessel operations aspects relating to occupational health and safety for Project workforce Nonroutine unplanned event e.g. spill or release Increased traffic as a result of Project activities at the Guyana shorebase locations Social interaction between Project workers and residents Pressure on wages from introduction of foreign workers and

increased competition for skilled labor Noise and light near shore by Project marine and aviation operations Nonroutine unplanned event e.g. spill or release Marine vessel operations Project workforce projections and types of labor requirements were assessed against data obtained through key informant interviews on the existing service industry within Guyana. The potential for adverse impacts to fishing activities was assessed by taking into consideration the distance from shore at which different fishery types typically operate in comparison to the locations and durations of Projectrelated marine activity and marine safety exclusion zones. Potential occupational hazards to Project workforce working onshore and offshore were assessed. Potential risks to safety and health of local communities posed by shorebase operations were assessed. Key informant interviews were conducted to characterize existing road marine and air traffic safety conditions as well as coastal agriculture aquaculture and offshorecoastal fishing activities. Oil spill modeling was used to simulate the trajectory of an oil spill and to assess potential spillrelated impacts on community health and wellbeing. Key informant interviews were conducted to characterize communities dependent on marine transportation for livelihoods e.g. speedboat operators and fisherpersons and to characterize existing marine vessel and safety conditions in the Projects AOI.

May 2017 111 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the Environmental Impact Assessment Resource or Receptor Social Infrastructure and Services Cultural Heritage Land Use Ecosystem Services Indigenous Peoples Potential Impacts The Project will use public infrastructure and services and thus could potentially compete with other existing businesses and consumers across a range of services e.g. roads medical and emergency response accommodation and utilities. The Project may result in increased vehicular traffic in Georgetown which could potentially contribute to vehicular congestion in certain areas. The Project has the potential to adversely impact cultural heritage through localized disturbance of archaeological or historical sites related to Project development. These resources have conservation cultural and other values to stakeholders. The Project could potentially impact cultural heritage in the Project AOI as a result of nonroutine unplanned events. No new Projectdedicated land disturbance is planned.

There is the potential that thirdparty onshore facilities may elect to expand or impact adjacent land as a result of supporting Projectrelated needs; however these impacts are outside the scope of this EIA. Projectrelated impacts on natural resources could lead to shorter term direct or indirect impacts on the services and/or values derived from natural resources and ecosystems in the AOI. The Project is not expected to directly cause any changes to population and demographics in indigenous communities. The Project could potentially impact indigenous peoples in the Project AOI as a result of nonroutine unplanned events.

Primary Sources of Potential Impacts

Project demand requirements for selected infrastructure and services which could overburden existing capacity and supply

Shorebase operations

Ground transportation operations

Analytical Approach

Key informant interviews and review of government reports were conducted to assess existing demand on public infrastructure transportation networks vehicular traffic and public services and to determine the impact access and safety that any additional demand on these resources would have on impacted communities.

Drilling of development wells

Installation of FPSO and SURF components

Nonroutine unplanned event e.g. spill or release

AUV and other geophysical surveys were conducted to map seabed objects in the PDA. Oil spill modeling was used to simulate the trajectory of an oil spill and to assess the potential for a release from an unplanned event to contact terrestrial archaeological sites.

Shorebase operations

Pipe yards Warehouses Bulk fuel storage and transfer facilities

Onshore waste recycling treatment and disposal facilities

Direct or indirect impacts derived from one or more of the impacts on physical biological or socioeconomic resources described above

Nonroutine unplanned event e.g. spill or release

Land use in the area surrounding onshore facilities planned for Project use was reviewed and assessed with respect to the potential for significance of land use changes as a result of the Project. The use of natural resources by local communities including indigenous communities was examined to identify specific dependencies on resources that could be impacted by the Project. Where dependencies on natural resources that would be impacted were identified the direct and indirect impacts of Project activities on local communities access to and use of impacted resources was assessed. Coastal communities including indigenous

communities in the Project AOI were mapped. Key informant interviews were conducted to characterize socioeconomic conditions in communities and their reliance on natural resources. Oil spill modeling was used to simulate the trajectory of an oil spill and to assess the potential for oil to contact lands and natural resources of coastal communities.

May 2017 112 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 5 Scope of the Environmental Impact Assessment Table 52 Resources and Receptors Excluded from Further Consideration in the EIA

Resource/Receptor	Coastal	Onshore
Resources	Onshore geology/soils	Topography/Landscape
Groundwater quality	Terrestrial vegetation	Freshwater habitats
Marine Resources	Aquatic plants	Physical Resources
Natural hazards	Vibration and radiation	Rationale for Excluding

The Project will not result in any onshore disturbance to geology and soils. The Project will not require any excavation fill or other landbased activities that could change topography or landscapes. The Project will not require any changes in land use that could impact ground water quantity or quality. The Project will not require any clearing or disturbance of terrestrial vegetation. Even in the case of an unplanned event such as a spill only estuarine vegetation e.g. mangroves would be expected to be potentially impacted. Terrestrial vegetation should be unaffected by a spill event. The Project is offshore with no new onshore disturbance so will not have any impact on freshwater habitats. The marine aspects of the Project will occur in an area that is too deep to support vascular marine plants. The Project is not located within an area that is known to have a high level of seismic activity or susceptibility to other natural hazard with the potential to affect Project facilities. The Project will not generate any vibration or radiation that would be expected to impact resources/receptors. See Section 2.10

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May 2017 114 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment 6.0 DESCRIPTION OF THE EXISTING ENVIRONMENT 6.1 Physical Resources 6.1.1 Air Quality and Climate

This section describes the existing air quality conditions and climate in the Project AOI. Air quality in a geographic area is determined by the

presence of background concentrations due to natural and distant sources the type and amount of pollutants emitted locally into the atmosphere the topography of the area and the weather and climate conditions. The levels of pollutants and pollutant concentrations in the atmosphere are typically expressed in units of ppm parts per billion ppb or micrograms per cubic meter $\mu\text{g}/\text{m}^3$ averaged over various periods of time.

6.1.1.1 Methodology

Climate Information on meteorological conditions in coastal Guyana was obtained from publicly available sources and technical literature. Parameters discussed include rainfall offshore wind direction air temperature and relative humidity. To develop more specific information regarding the conditions in the PDA EEPGL and ERM have deployed oceanographic moorings in the PDA to collect information on existing oceanographic and meteorological conditions in the area to support design development. The meteorological moorings are equipped with a Datawell Direction Wavescan Buoy which measures wave and atmospheric conditions. With respect to atmospheric conditions the instrument measures and logs wind direction speed two anemometers record 10 minute average wind speeds and gusts air temperature atmospheric pressure solar radiation precipitation and relative humidity.

Air Quality

Since the PDA is located approximately 190 km 120 miles offshore in the Atlantic Ocean and far removed from any anthropogenic sources of emissions other than intermittent marine traffic ambient air quality is determined primarily by regional influences rather than by local emission sources or topographic influences. ERM has conducted offshore air monitoring including the collection of air samples to analyze existing ambient concentrations of relevant air quality pollutants in the PDA; the samples were collected from onboard a research vessel within the Stabroek Block and PDA. The pollutants collected include inhalable particulate matter i.e. that fraction with aerodynamic diameter of less than 10 micrometers PM_{10} carbon monoxide CO sulfur dioxide SO_2 hydrogen sulfide H_2S nitrogen dioxide NO_2 and volatile organic compounds VOC.

May 2017 115 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment 6.1.1.1 Regional or National Setting

Context Climate

Guyana has a wet tropical climate characterized by two pronounced wet seasons and yearround warm temperatures. The bimodal wet/dry regime is caused

by the annual migration of the InterTropical Convergence Zone ITCZ which changes latitude based on the Earth's position and angle in relation to the sun. Northward movement of the ITCZ occurs as energy from the sun is strongest in the Northern Hemisphere during the Northern Hemisphere's summer thereby increasing solar heating in that hemisphere. The relative changes in solar heating slightly shift the atmosphere's primary circulation cells which cause the area of trade wind convergence closest to the Equator to migrate seasonally. In the areas closest to the ITCZ one can expect increased thunderstorm activity and heavy rainfall between mid-April and the end of July with peak rainfall in June. This period is known in Guyana as the primary wet season. The secondary wet season occurs during the southward migration of the ITCZ from mid-November to the end of January with peak rainfall in December. The intervening periods January to April and mid-August to mid-November are relatively dry but rain can occur at any time of the year. Average annual rainfall totals range between 70 inches and 110 inches 180 cm to 280 cm Hydromet 2014. During El Niño years Guyana's long dry season is often drier and warmer than normal and La Niña years bring wetter and cooler conditions than normal during the long wet season McSweeney et al. 2010. Although the ITCZ moves seasonally it is generally located between 5 degrees North and 5 South latitude. North and south of the ITCZ atmospheric circulation and the Coriolis effect create global wind patterns including the Northern Hemisphere's trade winds and westerlies NOAA 2008. Guyana's coastal zone is located approximately between 6 and 8 latitude and the Stabroek Block is located between 7 and 8 latitude both within the southern portion of the area impacted by the trade winds. The influence of the trade winds produces a strongly dominant northeast wind offshore of Guyana which gives rise to the afternoon sea breeze that usually blows inland across coastal Guyana from the ocean. Annual average temperatures in coastal Guyana are relatively constant with an annual average daytime maximum temperature of 29.6 degrees Celsius C 85.3 degrees Fahrenheit [F] and an annual average night time minimum temperature of 24.0 C 75.2F. The average daily temperature is approximately 27 C 81F. Relative humidity is high at 80 percent or more year round in the coastal zone. Air Quality For purposes of this EIA relevant literature was used to identify appropriate ranges

of concentrations to represent existing conditions. Based on the estimated Project emissions profile the principal relevant air pollutants of interest are PM_{2.5} and NO₂. Yale University 2016 published a report that ranked Guyana 6th from the best out of 180 countries in air quality. As part of this study Yale University 2015 published an online mapping tool which estimates that the average concentration of PM_{2.5} in onshore Guyana is 2.5 gm³. No values were found in the literature for onshore air quality existing conditions for NO₂. May 2017 116 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment 6.1.1.2 Existing Conditions in Area of Influence Climate In general climate conditions within the Project AOI should be similar to those described above for Guyana. The results of the ERMs offshore monitoring effort to further characterize climate conditions within the PDA have been incorporated into Appendix L of the EIA. Air Quality The PDA is well offshore and far removed from any existing stationary anthropogenic sources of airborne pollution. In addition the prevalent wind direction is from the northeast open ocean; therefore ambient air quality within the PDA is expected to be good. This assumption was confirmed by the results of a 20day ambient air quality measurement program conducted aboard the Research Vessel Proteus. Those measurements found that air pollutant levels were generally below detection levels with the exception of PM₁₀. Chemical analysis of particulate matter samples found that the most of the collected mass was composed of sodium chloridethe most likely source of which is sea salt. 6.1.2 Sound This section includes a summary of the desktop review of existing underwater sound conditions in the Project AOI. It also describes the different metrics commonly used to represent underwater acoustic fields. A description of the modeling study used to predict underwater sound levels associated with Project activities in the PDA is discussed in Section 7.2.5 Marine Mammals. This analysis is limited to underwater sound because the Project is located approximately 190 km 120 mi offshore from Georgetown so airborne sound and groundborne vibration from offshore Project activities will not impact onshore community or public receptors in Guyana. Offshore the principal airborne sound receptors of potential concern will be the Project workforce on the Project vessels who will be provided with appropriate Personal

Protective Equipment PPE including ear protection when engineered controls must be augmented to manage sound exposure. The Project will not measurably impact any airborne sound or groundborne vibration at the onshore shorebase pipe yards and warehouse locations. Therefore airborne sound and groundborne vibration are not discussed further in this section.

6.1.2.1 Underwater Acoustic Metrics

Underwater sound amplitude is measured in decibels dB relative to a fixed reference pressure p_0 1 micro Pascal Pa or reference energy level 1 Pa²s. Three common descriptors are the peak Sound Pressure Level peak SPL measured in dB re 1 Pa Root Mean Square SPL RMS SPL measured in dB re 1 Pa and Sound Exposure Level SEL measured in dB re 1 Pa²s. The peak SPL metric is the maximum instantaneous SPL in a stated frequency band attained by an acoustic event. The peak metric is commonly quoted for impulsive sounds but does not May 2017 117 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment account for the duration or bandwidth of the sound. At higher intensities the peak SPL can be a valid criterion for assessing whether a sound is potentially injurious or may cause behavioral implications to a marine receptor. The RMS SPL is a measure of the average pressure or the effective pressure over the duration of an acoustic event such as the emission of one acoustic pulse from a seismic source e.g. vertical seismic profiler. This level is the root mean square pressure level of the pulse. The SEL is a measure of the total acoustic energy contained in one or more acoustic events and is often used as an indication of the energy dose over a specific event or time. The SEL metric measures the sound energy to which an organism at that location would be exposed. Sound loudness is a subjective term describing the strength of the ears perception of a sound. It is a complex interaction between the sound pressure level and the hearing ability of an individual receptor for that sound how well the sound can be detected. Because the loudness of impulsive sound is not generally proportional to the instantaneous acoustic pressure the peak SPL is a poor indicator of perceived loudness. As such several other sound level metrics such as RMS SPL and SEL are commonly used to evaluate the loudness of impulsive sound and its impacts on marine life. More information on the underwater acoustic metrics described above

including the analytical formulation of these metrics is provided in the document Underwater Sound Associated with Liza Phase 1 Project Activities prepared by JASCO Applied Sciences in December 2016 JASCO 2016.

6.1.2.2 Methodology Ambient underwater sound levels were based on literature values for coastal Guyana. Research has indicated that with the exception of localized or short term events that may cause acute exposure e.g. passage of a single ship intense rain events or whale vocalizations underwater sound levels do not vary much in the open ocean. Human activities are minimal in the PDA principally related to commercial fishing and other ocean going vessels. Therefore the use of literature values from coastal Guyana should be a reasonable representation of underwater sound conditions in the PDA.

6.1.2.3 Regional or National SettingContext Ambient underwater sound levels can serve as existing conditions from which to measure potential disturbance impacts associated with Project activities. Sound in the ocean is the result of both natural and anthropogenic sources. Examples of notable sound levels produced by natural sources include snapping shrimp peak SPL of individual snaps vary from 183 to 189 dB re 1 Pa at 1 m with a typical peak spectrum between 2 and 5 kHz and energy extending to 200 kHz waves breaking at 50 Hz due to sea surface agitation 61 to 76 dB re 1 Pa depending on the sea state and waves breaking at 25 kHz due to sea surface agitation 32 to 47 dB re 1 Pa depending on the sea state Hildebrand 2009. Examples of notable sound levels produced by human or mechanical sources include cargo vessels at 16 knots 173 m length; 192 dB RMS re 1 Pa at 1 m with typical spectrum between 40 and 100 Hz small boat May 2017 118 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment outboard engine at 20 knots 160 dB RMS re 1 Pa at 1 m with typical spectrum between 1000 and 5000 Hz seismic array 260 dB RMS re 1 Pa at 1 m with typical spectrum between 5 and 300 Hz and subbottom profiler 230 dB RMS re 1 Pa at 1 m with typical spectrum between 3000 and 7000 Hz Hildebrand 2009.

6.1.2.4 Existing Conditions in Project Development Area Guyanas entire continental shelf and slope including the Stabroek Block are influenced by the Guiana Current which transports warm turbid water north from the mouth of the Amazon River across the coast of northern South America. There are currently no notable

sources of mechanical or human-generated background sound in the PDA other than sporadic instances of commercial vessels and other ocean-going vessels. Considering the natural sources such as the Guiana Current and other features of the PDA e.g. depth distance from shoreline existing underwater sounds in the PDA are not expected to exceed 120 dBrms.

6.1.3 Marine Geology and Sediments

6.1.3.1 Coastal Geology

Guyana's continental shelf occupies an area of 18790 mi². The average width of the continental shelf is approximately 113 km (70 mi) (NDS 1997). The shelf is widest near the borders of Suriname and Venezuela and slightly narrower near the center. Guyana's coastline is approximately 431 km (268 mi) long (NDS 1997). The Guyana Coast is a sedimentary plain that has formed from successive deposits of sediment with a series of coastal ridges crossing the coast from east to west. These ridges are connected with submarine features that move across the shallow continental shelf in a northward direction driven by the nearshore current.

6.1.3.2 Marine Stratigraphy

The Guyana basin has been described as a passive margin basin associated with the rifting and opening of the Equatorial Atlantic Ocean. Part of the Guyana Basin is onshore but most of it occurs offshore. Table 61 summarizes the age and composition of the major geologic formations listed in descending order from ground surface that comprise the Guyana Basin (Workman 2000; CGX 2009).

Formation	Age	Composition
Corentyne	Pleistocene	Sandstone and shale
Pomeroon	Pliocene	Sandstone and shale
Georgetown	Miocene	Sandstone and shale
New Amsterdam	Eocene	Sandstone and shale
Canje	Maastrichtian	Sandstone and shale
Potoco	Lower Tertiary	Sandstone and shale
Stabroek	Santonian to Turonian	Sandstone and shale
	Aptian	Sandstone and shale
	Cretaceous	Sandstone and shale
	Barremian	Sandstone and shale

Organic shale, nonorganic shale and sandstone, Carbonates, Basal shales and sandstones of continental origin.

May 2017 119 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Formation Precambrian Basement Proterozoic/Hadean Age Composition Metamorphic rock

6.1.3.3 Marine Sedimentology

Fine clay and mud sediment are transported from the mouth of the Amazon River and are deposited approximately 21 to 60 km (13 to 37 mi) offshore to an average thickness of approximately 20 m (65 ft).

along Guyanas continental shelf CGX Resources 2009. Moving further out to sea i.e. toward the edge of the continental shelf sand gradually becomes the dominant sediment layer. The bathymetric profile of the continental shelf forms a generally smooth gradual slope from nearshore to shelf edge but a series of low mud ridges or mudbanks are located approximately 21 to 60 km 13 to 37 mi offshore Figure 61. Figure 61 Typical Distribution of Mudbanks and Mangroves on Guyanas Coast Source Institutional Capacity Building Activities on Guyana Sea Defenses 2005. Although the Essequibo and several other smaller rivers e.g. the Demerara Corentyne and Berbice Rivers discharge large quantities of fine sediment which are subsequently transported seaward and westward across the continental shelf analysis of the humic nutrient composition and ratio of surface area to mass of Guyanese marine sediments indicates that they are nearly identical to Amazonian sediments and unlike continental Guyanese sediments Eisma and van der Marel 1971. This evidence strongly indicates that from a sedimentary perspective the Guyanese continental shelf functions as a marine extension of the Amazonian delta system. At greater depths calcarenite coral fragment substrates become more prevalent Strmme and Stersdal 1989. The Stabroek Block occupies the transition area between the Amazonianinfluenced zone and the older deeper calcarenite zones. In the PDA the foundation zone of the seabed sediments comprises a hemipelagic drape of very soft to soft clay irregularly interbedded with interpreted coarsegrainprone turbidites. The mud of the sediments averaged 60.8 percent and the sand averaged 39.1 percent across the 2016 survey area. The surficial layer is underlain by a regional Mass Transport May 2017 120 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Complex MTC consisting of a heterogeneous clayprone matrix material with intact blocks. The thickness of the surficial soft clay varies across the PDA from approximately 4.5 m 15 ft to 41 m 135 ft. These features could influence the design or siting of certain subsea components that will rest on the seafloor although they do not present structural or operational hazards to the Project Fugro 2016. 6.1.3.4 Sediment Quality Sediment samples were collected from the Stabroek Block offshore Guyana as part of two environmental baseline surveys EBS. The

surveys were conducted prior to EEPGL exploration drilling activities in April and May of 2014. Maxon Consulting Inc. and TDI Brooks International Inc. 2014 and during later EEPGL exploration drilling activities in March of 2016. FUGRO EMU Limited 2016. Sediment samples were collected from 10 sampling stations as part of the 2014 survey and from 25 sampling stations as part of the 2016 survey; these locations are collectively referred to as the Study Area in this section; the stations include locations within the PDA as well as locations outside the PDA but within the southeastern portion of the Stabroek Block. A discussion of the results from both surveys is provided below. Summaries of the results for metals and hydrocarbon concentrations in the sampled sediments are presented in Table 62 and Table 63 respectively.

Table 62 Summary Results for Sediment Metals

Reported in g/g dry weight

Parameter	Mean	Minimum	Maximum	2014 Liza EBS n10	Mean Background ¹	Effects Range Low ²	Effects Range Median ³	Aluminum	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Nickel	Vanadium	Zinc
	11.4	95	6.1	98.9	0.125	14.9	13.1	19130	11.6	0.042	21.4	23.5	45.5	8100	4.5	57.4	0.102	8.6	9.9
	13500	8.3	0.026	14.1	18.1	26.9	15000	77440	11.4	159	0.165	21.1	16.5	25300	15.6	0.062	32.3	28.3	63.7
	2	668	0.102	35	14.3	30890	17	0.056	18.6	53	52	2016	Liza EBS n25	Aluminum	43432	13900	66600	77440	Arsenic
	Barium	Cadmium	Chromium	May 2017	11.6	175	0.120	36.1	6.1	44	0.073	14.5	97.1	272	0.255	53.4	2	668	0.102
	35	121	8.2	1.2	81	34	46.7	0.15	20.9	150	8.2	1.2	81	70	9.6	370	270	218	0.71
	51.6	410	70	9.6	370	EEPGL Environmental Impact Assessment Liza Phase 1 Development Project	Parameter	Mean	Minimum	Maximum	Mean Background ¹	Copper	Iron	Mercury	Selenium	Lead	Nickel	20.2	30364
	0.029	0.22	15.5	27.0	6.9	12100	0.016	0.05	9.9	10.8	30.5	98100	0.042	0.75	27.5	51.5	14.3	30890	0.056
	0.083	17	18.6	Chapter 6 Existing Environment	Effects Range Low ²	34	Effects Range Median ³	270	0.15	46.7	20.9	0.71	218	51.6	410	69.7	Zinc	NA	Not applicable background level not available
	Note	One half of the detection limit was used for nondetect results in all statistical calculations	1	Mean concentration in upper continental crust Wedepohl 1995.	2	NOAA Effects Range Low	Ecotox 1996	3	NOAA Effects Range Median	Ecotox 1996	101.0	32.5	52	150	May 2017	122	EEPGL Environmental Impact Assessment Liza Phase 1 Development Project	Chapter 6	6

Existing Environment Table 63 Summary Results for Sediment Hydrocarbons Parameter 2014 Liza EBS n10 Mean Minimum Maximum Background¹ Total Saturated Hydrocarbon SHC g g1 10.64 Total Unresolved SHC g g1 Total Resolved SHC g g1 CPI Carbon Preference Index Pristane g g1 Phytane g g1 PristanePhytane Ratio nC16/nC15/nC17 Total PAH g g1 PetrogenicPyrogenic 2016 Liza EBS n25 THC g g1 Unresolved Complex MixtureCM g g1 nC1220 g g1 nalkanes nC2136 g g1 nC1236 g g1 CPI nC1220 nC2136 nC1236 Pristane g g1 Phytane g g1 PristanePhytane Ratio Total PAH Sum of 26 Rings g g1 Sum of 23 Rings NPD g g1 Sum of 46 Rings g g1 6.97 3.68 1.97 0.007 0.005 1.34 0.40 8 3 2 1.47 0.004 0.003 0.67 0.24 14 12 8.9 3.27 0.012 0.010 1.8 0.51 0.03861 0.02458 0.05336 3.36 2.8 1.8 0.06 0.21 0.27 1.29 2.62 2.22 0.002 0.003 1.28 0.048 0.016 0.032 2.14 1.5 0.9 0.02 0.1 0.12 1.1 2.09 1.83 0.001 0.001 0.13 0.016 0.006 0.010 4.65 4.8 2.8 0.13 0.38 0.5 2.41 2.99 2.7 0.013 0.012 2.27 0.239 0.082 0.157 NA NA NA NA NA NA NA NA NA NA NA 0.25 NA NA NA NA NA NA NA NA NA NA NA NA NA 0.54 0.82 0.35 NA NPD46 Ring PAH Polycyclic aromatic hydrocarbons; NPD Naphthalene phenanthrene anthracene and dibenzothiophene 2ring and 3ring PAHs; SHC Saturated and aliphatic hydrocarbons; THC Total hydrocarbons; UCM Unresolved complex mixture; CPI Carbon preference index the ratio of odd number carbon chain nalkanes to even numbered chain nalkanes; PrPh Ratio of pristane to phytane PetrogenicPyrogenic Ratio of the sum of combustionrelated PAHs fluoranthene pyrene chrysene benzoanthracene benzobfluoranthene benzokfluoranthene benzoapyrene dibenzoahanthracene and benzoghiperylene divided by the sum of petrogenic PAHs naphthalene acenaphthene acenaphthalene fluorene phenanthrene dibenzothiophenes chrysenes and fluoranthenespyrenes.

26 Ring PAH Total 2 to 6 ring polycyclic aromatic hydrocarbons nC1220 Alkanes ranging from carbon numbers 12 to 20 nC2136 Alkanes ranging from carbon numbers 21 to 36 nC1236 Alkanes ranging from carbon numbers 12 to 36 NA Not applicable background level not available 1 Typical THC levels i.e. background in sediments remote from anthropogenic activities North Sea Task Force 1993. May 2017 123 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment 6.1.3.5 2014 EBS Results TDI Brooks International Inc. 2014

During the 2014 EBS sediment samples were analyzed for the following parameters Total organic carbon TOC Metals Hydrocarbons Total Organic Carbon Concentrations of TOC were less than 1 percent at all survey stations. Higher concentrations of TOC were found in the southwest portion of the survey area which is closer to shore. Metals Twelve metals were measured to assess general patterns of distribution across the Study Area which was defined as the Liza Area of Interest for the purpose of the study and what is now considered the PDA. Of the 12 metals analyzed 10 metals i.e. arsenic barium cadmium chromium copper lead mercury nickel vanadium and zinc were used as indicators of anthropogenic sources; 2 metals i.e. aluminum and iron were used to provide geological source information. All of the ten anthropogenic indicator metals had concentrations similar to those reported for the upper continental crust Wedepohl 1995 with the exception of arsenic which was slightly elevated average of 4.51 g g⁻¹ compared to an upper continental crust mean background concentration of 2 g g⁻¹. However all average concentrations were at or below the NOAA Effect Range Low ERL values. Hydrocarbons Hydrocarbons are divided into two classes of compounds aliphatic compounds and aromatic compounds. The hydrocarbon analysis consisted of the analysis of saturated and other aliphatic hydrocarbons SHC including selected isoprenoids and polycyclic aromatic hydrocarbons PAHs. Aliphatic Compounds Aliphatic compounds can be saturated alkanes with carbon atoms joined by single bonds or unsaturated alkenes with carbons joined by double bonds. The study measured concentrations of saturated hydrocarbons that encompass light and heavy fractions of petroleum i.e. alkanes nC₉nC₄₀ and selected isoprenoids branched chain unsaturated hydrocarbons including pristane and phytane. Concentrations of total SHC ranged from 8 g g⁻¹ to 14 g g⁻¹. The unresolved portion of the SHC analysis i.e. SHCs that cannot be identified through the use of standard analytical methods ranged from 3 g g⁻¹ to 12 g g⁻¹ with an average of 7.0 g g⁻¹ which makes up approximately 66 percent of the average SHC concentration. Several SHC-based parameters and ratios were used to distinguish between biogenic and petroleum-derived sources. These parameters and ratios are listed below along with a general discussion of their relevance in determining the source of the hydrocarbons. May 2017 124 EEPGL

Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Carbon Preference Index CPI The total oddchain hydrocarbons divided by the total evenchain hydrocarbons. A value of 2 to 4 indicates input from plants. As petroleum is added the value decreases approaching 1. PristanePhytane Ratio The source of phytane is mainly petroleum whereas pristane is derived from both biological matter and petroleum. In environmental samples with no petroleum contribution this ratio is greater than 1 and it decreases as petroleum is added. Hexadecane nC16Pentadecane [nC15] Heptadecane [nC17] ratio At background levels hydrocarbons nC15 and nC17 can be used as indicators of plankton hydrocarbon inputs. As plankton productivity increases this ratio decreases. If the ratio were to increase over time or within the data set the rationale would be that it is related to anthropogenic sources. Hexadecane nC16 is rarely found in biolipids Thompson and Eglinton 1978; paraffins of nC15 nC17 or nC19 have been found to be predominant in benthic algae Clark and Blumer 1967 Youngblood et al. 1971. The results of the sediment samples exhibited a predominance of oddcarbonnumber over evencarbonnumber nalkanes with an average CPI value of approximately 2 indicating primarily biogenic sources of hydrocarbons. This could be expected given the volume of land runoff from the Essequibo and Demerara rivers. The average pristanephytane ratio of 1.34 reflects a predominance of pristane over phytane in the sediments indicating a predominantly biogenic source of hydrocarbons. The low ratio less than 1 of nC16 over the sum of nC15 nC17 for all samples indicates relatively higher concentrations of planktonrelated hydrocarbons as compared to hydrocarbons from anthropogenic sources. PAHs PAHs are composed of aromatic rings. PAHs analyzed included 20 parent i.e. unalkylated compounds and 23 alkylated homologues consisting of two to sixring PAH compounds. Concentrations of total PAHs all 43 analytes ranged from 0.02458 g g⁻¹ to 0.05336 g g⁻¹. The sample distribution of individual PAHs provided information for a range of hydrocarbon sources. The PetrogenicPyrogenic distribution ratio listed below is useful to distinguish between petroleumderived hydrocarbons and those derived from combustion of fossil fuels. The ratio increases as inputs from petroleum increase. PetrogenicPyrogenic Ratio The ratio of the sum

of petrogenic PAHs divided by the sum of pyrogenic i.e. combustion-related PAHs where o petrogenic PAHs include naphthalene acenaphthene acenaphthalene fluorene phenanthrenes and dibenzothiophenes as well as the daughter compounds of the chrysenes and fluoranthenes pyrenes and o pyrogenic PAHs include the parent compounds of fluoranthene pyrene and chrysene benzokfluoranthene as well benzoapyrene dibenzoahanthracene and benzoghiperylene. benzobfluoranthene benzoanthracene as May 2017 125 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment In general sample distributions of PAHs were dominated by the low molecular weight PAHs naphthalenes and anthracenephenanthrenes. The petrogenic/pyrogenic ratios of greater than 1 indicate hydrocarbons are from biogenic or natural material potentially including petroleum-derived rather than combustion-related compounds. High concentrations of perylene relative to other PAHs were also observed. Perylene is a biogenic compound linked to plant pigments from terrestrial runoff and is not indicative of either petrogenic or pyrogenic sources Fugro 2016. Both total PAHs and total SHC exhibited strong positive correlations with TOC further supporting biogenic origins of the trace hydrocarbons. Overall the 2014 sediment hydrocarbon results indicate that biogenic or natural materials are the primary source of the low-level hydrocarbons measured in the survey area. Biogenic hydrocarbon sources most likely consist of terrestrial plant and humic material transported to the survey area via river inputs.

6.1.3.6 2016 EBS Results

Fugro 2016 During the 2016 EBS sediment samples were analyzed for the following parameters TOC Metals Hydrocarbons TOC Similar to the 2014 results concentrations of TOC ranged from below the reporting limit to 1.1 percent. TOC concentrations were found to be higher at sampling locations with a greater proportion of fine sediments indicating a negative correlation between grain size and organic logical given that smaller grain sizes have a greater surface area and thus more ability to adsorb organic matter.

Metals

Twelve metals were measured to determine general patterns of distribution across the survey area i.e. Stabroek Block. Of the 12 metals analyzed 10 metals i.e. arsenic barium cadmium chromium copper lead mercury nickel vanadium and zinc were used as indicators of anthropogenic

sources and 2 metals i.e. aluminum and iron were used to provide geological source information. The maximum concentrations of the individual metals measured during the 2016 survey were consistently higher than those from the 2014 survey; this is possibly a result of the different as used by the 2014 and 2016 laboratories for extraction or of greater variability in the data set due to the significantly larger sample area covered by the 2016 investigation compared to the 2014 investigation. Average concentrations of anthropogenic indicator metals arsenic and nickel exceeded the NOAA ERL values. While this may reflect the composition of source material there may be some contribution from terrestrial runoff contaminated from mining or other industries as carried to the Guyana basin via riverine inputs from Brazil and the Guiana Shield.

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The hydrocarbon analyses include measurements of total hydrocarbons THC and PAHs. THC concentrations ranged from 1.5 g g⁻¹ to 4.8 g g⁻¹. THC showed positive correlations with metals concentrations with the exception of copper and arsenic as well as with TOC concentrations. The unresolved complex mixture UCM i.e. fraction of THC that cannot be resolved identified concentrations ranged from 0.9 g g⁻¹ to 2.8 g g⁻¹ and the average was 1.8 g g⁻¹ which makes up 64 percent of the average THC concentration. Concentrations of alkanes nC₁₂₋₃₆ ranged from 0.12 g g⁻¹ to 0.50 g g⁻¹. Levels of short chain alkanes nC₁₂₋₂₀ were consistently lower than those of the long chain alkanes nC₂₁₋₃₆. Several THC based parameters and ratios were used to distinguish between biogenic and petroleum derived sources. The values of CPI for the total range of alkanes nC₁₂₋₃₆ ranged from 1.83 g g⁻¹ to 2.27 g g⁻¹. These results display a predominance of odd carbon number over even carbon number nalkanes with an average CPI value greater than 2 indicating primarily biogenic sources of hydrocarbons. The average pristane/phytane ratio was 1.28 meaning a predominance of pristane over phytane exists in the sediments indicating the primary source of the hydrocarbons is likely biological. PAHs a subset of total hydrocarbons were analyzed. Concentrations of total PAHs ranged from 0.016 g g⁻¹ to 0.239 g g⁻¹. The sample distribution of individual PAHs provided information for a range of hydrocarbon sources. A distribution ratio is listed

below as well as a general discussion of its relevance in determining the source of the hydrocarbons. Naphthalene Phenanthrene Anthracene and Dibenzothiophene NPD4 to 6 Ring Ratio

The ratio of the sum of naphthalene phenanthrene anthracene and dibenzothiophene petrogenic indicators divided by the sum of 4 to 6ring PAHs pyrogenic indicators. This ratio is useful to determine the relative contributions of pyrogenic and petrogenic hydrocarbons in differentiating sources. The ratio increases as inputs from petroleum increase. In general samples showed a predominance of 4 to 6 ring PAHs i.e. NPD4 to 6 ring ratios of less than 1 indicating predominantly pyrogenic sources of hydrocarbons as opposed to petrogenic sources. However high concentrations of perylene a biogenic compound linked to plant pigments from terrestrial runoff and not indicative of either petrogenic or pyrogenic sources relative to other PAHs were also observed. Overall the 2016 sediment hydrocarbon results indicate that the low levels of hydrocarbons measured in the Study Area could have derived from biogenic or natural materials as well as combustionrelated compounds. Biogenic hydrocarbon sources most likely consist of terrestrial plant and humic material transported to the survey area via river inputs while combustionrelated emissions could arise from multiple natural or anthropogenic sources.

May 2017 127 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment 6.1.4 Oceanographic ConditionsMarine Water Quality 6.1.4.1 Oceanographic Conditions

Guyanas marine environment is bounded and heavily influenced by the Orinoco and Amazon rivers in Venezuela and Brazil respectively. During the rainy season Guyanas coastal marine waters receive large volumes of freshwater discharges from these major rivers as well as from Guyanas own Essequibo Demerara and Berbice rivers FAO 2005. Guyanas surficial marine waters are crossed by the Guiana Current which is part of the northern limb of the North Atlantic Meridional Overturning Circulation MOC. The North Atlantic MOC circulates water between the subtropics and polar region. The Guiana Current derives from the North Brazil Current NBC flowing north along the northeastern coast of South America from northern Brazil toward the southeastern Caribbean Sea. As it reaches French Guiana part of the NBC separates from the coast to join the North Equatorial Counter Current NECC while

the rest continues flowing northwest to form the Guiana Current. Figure 62 illustrates the proximity of the Guiana Current NBC and North Equatorial Counter Current to the Stabroek Block. Several times a year the NBC turns back on itself to create closed circulation and form regions of strong eddies circular currents. These eddies can separate the NBC and NECC. These eddies can travel northwest along the South American coast. The current magnitude within these eddies can vary with depths significantly. These eddies may range from approximately 145 km to 400 km 90 to 250 mi in diameter. During springtime the Guiana Current can extend as far as 300 nautical miles offshore to cover Guyanas entire continental shelf. Its highest velocities tend to occur along the edge of the continental shelf i.e. in Guyana just shoreward of the Stabroek Block. Fluctuations in the ITCZ and the trade winds lead to significant variation in the strength of the Guiana Current and the extent of its influence offshore but maximum speeds generally occur in April to May while minimum speeds commonly occur in September Gyory et al. 2013. The Guiana Current primarily travels near the water surface while the deeper portion of the water column in the Stabroek Block is strongly influenced by the North Atlantic Deep Western Boundary Current which is the southward limb of the North Atlantic MOC which returns colder denser water from polar regions to the subtropics at intermediate and deep levels. In May 2014 EEPGL commissioned a Lowered Acoustic Doppler Current Profiler LADCP survey of four stations along a transect located in the central portion of the Stabroek Block to support design development. The profilers were placed at depths ranging from approximately 970 m to 1100 m. The survey indicated the presence of both the Guiana Current and the Deep Western Boundary Current. Figure 63 shows vector stick plots from the four stations along the LADCP transect. Figure 64 shows the locations of these LADCPs relative to the planned FPSO location and the southern boundary of the Stabroek Block. The three deepest stations 1 2 and 3 showed similar vertical current structure i.e. a northwestward surface flow influenced by the Guiana Current and a southeastward deep flow due to the Deep Western Boundary May 2017 128 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Current. The shallowest station Station 4 showed a similar layered structure but the

speed of the northwestward surface current however was significantly greater at this station than at the others TDI Brooks International Inc. 2014. May 2017 129 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 62 Marine Currents in the Vicinity of the Project Development Area Chapter 6 Existing Environment February 2017 130 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 63 Vector Stick Plot for Stations on the Stabroek LADCP Transect Each stick also called a vector describes the direction speed and depth of a discrete measurement. The length of the vector is directly proportional to its speed a scale is provided at the bottom of the plot. The depth of each measurement is provided on the yaxis. The direction of the vector points in the compass direction of the current flow north corresponding to up on the plot. The horizontal distance between stations on the xaxis is to scale. Source TDI Brooks 2014 May 2017 131 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 64 LADCP Locations Chapter 6 Existing Environment May 2017 132 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.1.4.2 Marine Water Quality Chapter 6 Existing Environment The hydrographic and isohaline conditions in Guyanas coastal marine waters are greatly impacted by the outflow of the coastal rivers in the region as described in Section 6.1.4.1. The large amount of freshwater discharge impacts ocean salinity and temperature. Oceanic water is relatively heavy cold and saline compared to the lighter warm and fresher water of the Amazon and Orinoco plumes which converge offshore of Guyana. These convergences form oceanic fronts offshore of Guyana. Freshwater lenses generated by the Amazon and Orinoco rivers are transported across Guyanas continental shelf to points north and west. These lenses persist for months and have been detected as far away as Barbados and Trinidad Sherman and Hempel 2009. Of the several coastal rivers that impact the marine environment offshore Guyana the Amazon River with its average discharge of 180000 m³sec Nittrouer and De Master 1987 is the most prominent factor in marine water quality in the region. Analysis of the Amazonian plume has shown there is little seasonal variation in the plumes nutrient e.g. silicates of 144 mol.kg⁻¹ phosphates of 0.7 mol.kg⁻¹ and nitrates of 16 mol.kg⁻¹

De Master and Pope 1996. It has been estimated that 40 to 50 percent of the annual Amazon runoff transits along the coast of the Guyanas. The entire region offshore of Guyana is considered part of the North Brazil Shelf Large Marine Ecosystem LME. The ocean temperature in the North Brazil Shelf LME has alternately warmed and cooled over the last few decades. A period of cooling lasted from the mid1970s through the mid1990s but since the mid1990s the LME has consistently warmed Sherman and Hempel 2009. Although the ocean temperature has alternately warmed and cooled in recent decades the net change in LME water temperature since 1957 equates to an average increase of 0.22 C over 50 years Sherman and Hempel 2009. Water quality samples were collected from the Stabroek Block offshore Guyana as part of two environmental survey efforts in 2014 and 2016. The 2014 samples were collected in April and May of 2014 prior to exploration drilling activities Maxon Consulting Inc. and TDI Brooks International Inc. 2014. The 2016 survey provided an additional detailed integrated site investigation covering 247 mi 64000 ha of the offshore PDA FUGRO EMU 2016. This study enables ERM to have a multiyear database of water quality in the Stabroek Block as well as the ability to analyze a greater number of locations to further characterize the block. Sampling locations were chosen based on current and future exploration and potential development activities. In the 2016 study water quality samples were collected at top middle and bottom depths and analyses of the collected samples covered a range of physicochemical parameters. In addition conductivity temperature and depth CTD profiles including dissolved oxygen pH and turbidity measurements were acquired and assessed through in situ monitoring of water column profiles at 15 locations. May 2017 133 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Results from the 2016 vertical profiles show a stratified water column in terms of temperature salinity and dissolved oxygen. The depths of the thermocline halocline and oxygen boundary layer were observed to increase with the total depth of water. Dissolved oxygen concentrations reach near saturation levels near the surface but decrease with depth. The mean sea surface temperature was 27.8 C while bottom temperatures ranged between 2.7 C deepest station and 11.2 C shallowest station. Salinity ranged between 37.05

parts per thousand ppt to 36.60 ppt near the surface. In depths below the halocline the salinity ranged between 33.63 ppt and 35.50 ppt. Mean pH values ranged between 8.18 and 8.47 increasing slightly with depth. Low turbidity was measured throughout the water column with values less than or equal to 2.9 formazine turbidity units FTU. The presence of organic carbon in the water column was analyzed by measuring TOC in discrete water samples. TOC decreased slightly with depth. TOC ranged between 0.9 mg/l and 3.9 mg/l at the surface and between 0.9 mg/l and 2.4 mg/l in the bottom depths. Total suspended solids TSS concentrations were generally higher near the surface than at depth. In the 2016 survey values ranged from 2.4 mg/l to 18.3 mg/l near the surface and from below the detection limit to 7.7 mg/l at the bottom depths. In the 2014 survey measured hydrocarbon concentrations were mostly below detection limits total SHC less than 13 g/l to less than 13.5 g/l. In the 2016 survey whose protocols allowed for lower detection limits THC were detected at concentrations ranging from 8.3 g/l to 35.9 g/l in the bottom depths and 10.0 g/l to 33.1 g/l near the surface. Individual n-alkanes were also measured from 12 carbons n-dodecane to 36 carbons n-hexatriacontane. The sum of all measured alkanes in the 2016 survey ranged from 0.55 g/l to 4.22 g/l at the surface and from 0.37 g/l to 16.3 g/l in the bottom depths. In the 2014 survey PAHs were reported to be below detection limits with the exception of naphthalene as well as the C1 and C2 alkylated homologues of naphthalene fluorene and phenanthrene all of which are ubiquitous trace-level laboratory contaminants. In the 2016 survey the sum of the PAHs with two to six benzene rings ranged from 0.051 g/l to 0.109 g/l at the surface and 0.059 g/l to 0.133 g/l at the bottom depths. The sum of the 16 PAHs from U.S. Environmental Protection Agency's USEPA's priority pollutant list ranged from 0.006 g/l to 0.021 g/l. Pristane to phytane ratios indicative of the possible origin of hydrocarbons present were close to 1.0 suggesting an oxidizing depositional environment with the compounds likely derived from chlorophyll (Moustafa and Morsi 2012). Ratios below 1.0 would suggest the presence of petroleum-based hydrocarbons. In both the 2014 and 2016 surveys measured metal concentrations in the collected water samples were below USEPA Saltwater Quality Standards (USEPA 2015). Table 64 provides the minimum mean and maximum values for

metals measured in 2014 and 2016 along with USEPAs criterion maximum concentrations CMCs and criterion continuous concentrations CCCs for comparison. The CMCs and CCCs are the USEPAs recommended highest concentrations in saltwater that are not expected to pose a significant risk for acute and chronic May 2017 134 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment impacts respectively to the majority of species in a given environment USEPA 2016. All samples had concentrations within the natural range of the ocean water Morel et al. 2006 well below the CMCs and CCCs. Table 64 EBS Water Column Heavy Metals Concentrations Heavy Metals Concentrations gl Arsenic Barium Cadmium Chromium Copper Min Mean Max USEPA CMC USEPA CCC 1.02 1.43 1.77 40 8.8 6.4 7.5 9.2 40 8.8 0.03 0.043 0.064 4.8 3.1 0.523 0.656 0.778 210 8.1 0.211 0.385 1.68 3.68 90 81 Mercury Zinc Lead 0.041 0.144 0.0002 0.000104 0.625 0.000254 1.8 1.8 0.94 0.94 4 2.44 6.42 26.4 69 36 Source Maxon Consulting Inc. and TDI Brooks International Inc. 2014; Fugro 2016 Note One half of the detection limit was used for nondetect results in all statistical calculations.

6.2 Biological Resources

6.2.1 Protected Areas and Special Status Species

Formerly the EPA was Guyanas focal point for the Convention of Biological Diversity and the agency coordinated the National Protected Areas System EPA Undated which included five protected areas. In 2011 Guyana enacted Protected Areas legislation that established a Protected Areas Commission to oversee and manage protected areas. This legislation established a list of prohibited activities including unlawfully entering or remaining within a protected area; disturbing or destroying the vegetation common or endangered; removing or exterminating wildlife species common or endangered; damaging archeological finds or sites; and mining. If any prohibited activities occur fines range from 50000 to 500000 Guyanese dollars [GYD] Protected Areas Act 2011. Guyanas National Biodiversity Strategy and Action Plan 2015 states the overall importance of biodiversitys role within the country Guyanas biodiversity provides an important basis for climate regulation poverty reduction provisioning of fresh water and hydropower economic growth and development in areas such as agriculture forestry and fisheries payment for forest climate services community based economies particularly in hinterland

communities and biodiversity-related education, scientific research and recreation. Loss of biodiversity and any disruption in the provision of ecosystem services would impact negatively on the economy and more particularly on the quality of life in the hinterland and indigenous communities. GNBSAAP 2015 May 2017 135 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment

The 2011 legislation also established Shell Beach and the Kanuku Mountains as Guyana's newest nationally Protected Areas. This increased the total number of Protected Areas in Guyana to seven and increased the total land area protected to approximately 1.8 million hectares or about nine percent of Guyana's land area as summarized in Table 65. Figure 65 illustrates the locations of Guyana's Protected Areas. There are currently no designated marine Protected Areas in Guyana.

Protected Area	Km ²
Kaieteur National Park	630
Iwokrama Forest	3710
Kanashen Community Owned Conservation Area	6250
Kanuku Mountains	6110
Shell Beach Nature Reserve	2000
Moraballi Forest Reserve	110
Mabura Hill Forest Reserve	20

Source: IUCN and UNEP WCMC 2016

Of the seven Protected Areas, Shell Beach Protected Area (SBPA) is the only one located on Guyana's coast and so it is most pertinent to the impacts analysis of the Project. The SBPA includes Guyana's coastline but does not extend into the Atlantic Ocean; however, the ecology of the coastal zone and Shell Beach are inextricably connected to the coastal marine ecosystem. Figure 66 provides a detailed map of SBPA, the beaches it incorporates and the surrounding area. It is located in northwestern Guyana and extends for almost 140 km (87 mi) between the Waini, Baramani and Moruka rivers and the Atlantic Ocean. The PDA is located approximately 300 km (187 mi) northeast of the southernmost closest point of Shell Beach. Shell Beach, which derived its name from the fact that its entire stretch of coastline is comprised mainly of pulverized shells from crustaceans (RBAPS/BPA 2004), is a dynamic area. Its landscape constantly changes due to the competing impacts of erosion and accretion along the shoreline. The area is 70 percent forested; the rest is made up of mostly swamp (30 percent) and sandy beaches (1 percent) (Kandaswamy 2014). Shell Beach supports numerous plant species including coconut, papaya and palm trees (GMTCS 2011; Bovell 2011). The vegetative

community has changed little in recent history apart from limited clearing to accommodate a few dispersed encampments and farmsteads. The rivers bordering the Protected Area discharge nutrients through the Protected Areas mudflats and mangroves. These high nutrient levels contribute to the productivity of the marine ecosystem. Fish prawns and crabs from the nearshore marine area use the mangrove covered coastlines as nursery habitat. May 2017 136 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 65 Protected Areas of Guyana May 2017 137 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 66 Shell Beach Protected Area May 2017 138 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Shell Beach is best known as a sea turtle nesting site. The composition of the substrate at Shell Beach its geographical location and the low anthropogenic activity makes it an ideal nesting site for sea turtles. Most nesting beaches in Guyana are used by only one or two species of sea turtles but four species of sea turtles Leatherback Hawksbill Olive Ridley and Green Turtle nest at Shell Beach Pritchard 2001. In addition to sea turtles there are also at least four other species of turtles present within the Protected Area including yellowfoot tortoise *Geochelone denticulate* scorpion mud turtle *Kinosternon scorpioides* giant river turtle *Podocnemis expansa* and mata mata *Chelus fimbriata*. The SPBA also supports rich bird herpetofauna reptiles and amphibians and mammal communities. The 2004 Rapid Biodiversity Assessment documented 170 species of birds 20 species of mammals and 31 species of herpetofauna. The 170 species of birds represent one of the richest populations in Guyana and include well known species such as scarlet ibis *Eudocimus ruber* roseate spoonbill *Platalea ajaja* and Caribbean Flamingo *Phoenicopterus ruber* orangewinged Amazon parrots *Amazona amazonica* and several species of macaws. Sixteen herpetofauna species other than turtles are known to inhabit the Shell Beach area. These include the Ameiva lizard *Ameiva ameiva* whiptail lizard *Cnemidophorus lemniscatus* water labaria *Helicops angulatus* cane toad *Bufo Marinus paradoxical* frog *Pseudis paradoxa* and numerous tree frogs *Hyla* spp. RBAPSBPA 2004. Twenty species of

mammals including howler monkeys *Alouatta* spp. jaguars *Panthera* spp. and manatees *Trichechus* sp. are known to inhabit the Shell Beach area and surrounding coastal region Prince et al. 2004; Kalamandeen et al. 2005. Appendix G Flora and Fauna Diversity of Shell Beach provides an extensive list of species within the area. Resources within Protected Areas are a key factor in supporting local communities see Chapter 7 for additional information. Areas within and near Shell Beach have been inhabited for 10000 years by Amerindian groups from the Warao Carib and Arawak tribes Charles et al. 2004. Most of the current indigenous residents of the Shell Beach area are concentrated in a community known as Almond Beach near the northern end of the Protected Area. Other communities included within the boundary of the Protected Area as delineated in 2011 include Fathers Beach and Assakata. The remainder of the Protected Area is sparsely populated if at all. Indigenous communities have historically used the Shell Beach area for subsistence fishing crabbing trapping farming logging and palm harvesting. The important crab species that are utilized by the locals include blue hermit *Callinectes bocourti* hermit *Portunas spinimanus bunderi* *Cardiosoma guanhumi* and buckcrab *Ues cordatus* RBAPSBPA 2004. They have also historically engaged in sea turtle trapping and harvesting of sea turtle eggs. While these activities have declined in recent years as emphasis on conservation and sustainability has increased illegal catching of turtles may still occur Charles et al. 2004. Increasing human activity in proximity to Shell Beach has led to increasing exploitation of natural resources and has the potential to lead to additional ecological harm. In 1997 a fire caused by human activity extensively damaged an area of mangroves Pritchard 2001. May 2017 139 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Throughout the past few decades there have also been various industrial proposals for Shell Beach. These include proposals to extract shell material from the beaches as feedstock for fertilizer production and to develop a luxury tourist outpost Charles et al. 2004. Amerindian communities in the area have also expressed interest in developing ecotourism in the area Charles et al. 2004. 6.2.1.1 Special Status Species The International Union for Conservation of Nature IUCN maintains a Red List which provides taxonomic

conservation status and distribution information on plants and animals that have been globally evaluated to determine their relative risk of extinction IUCN 2014. The IUCN categorizes species according to their risk at six status levels ranging from Extinct to Least Concern as defined in Table 67. Table 67 Definitions of IUCN Red List Threatened Categories IUCN Red List Status Extinct EX Critically Endangered CR Endangered EN Vulnerable VU Near Threatened NT Least Concern LC Data Deficient Source IUCN 2001 Definition A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat at appropriate times diurnal seasonal annual and throughout its historical range have failed to record an individual. A taxon is Critically Endangered when the best available evidence severe population decline very small population very small geographic area occupied or a probability of extinction in the next 10 years of 50 indicates that it is facing an extremely high risk of extinction in the wild. A taxon is Endangered when the best available evidence large population decline small population small geographic area occupied or a probability of extinction in the next 20 years of 20 indicates that it is facing a very high risk of extinction in the wild. A taxon is Vulnerable when the best available evidence substantial population decline small population fairly small geographic area occupied or a probability of extinction in the next 100 years is 10 indicates that it is considered to be facing a high risk of extinction in the wild. A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered Endangered or Vulnerable now but is close to qualifying for or is likely to qualify for a threatened category in the near future. A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered Endangered Vulnerable or Near Threatened. Taxa that are widespread and abundant are included in this category. A taxon is Data Deficient when there is inadequate information to make a direct or indirect assessment of its risk of extinction based on its distribution and/or population status. May 2017 140 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Species categorized as CR EN and VU are collectively considered to be internationally threatened while NT species are close to

qualifying as threatened and LC species are considered internationally widespread and abundant. There are 296 species known to occur in the coastal and marine habitats in Guyana on the IUCN Red List. Sixtytwo of these marine and coastal species have been ranked NT or higher. These species are listed in Appendix H. According to the IUCNs classification scheme these species currently face a credible threat of extinction. Most of the threatened CR EN or VU or NT species that could be impacted by the Project are fish. They include highly migratory species such as species of tunas and sharks benthopelagic species including certain groupers and demersal species including species of skates and rays. As noted in Section 6.3.3.2 many of these fish species are also targeted by the Guyanese commercial fishing industry. The remaining threatened or NT marine and coastal species in Appendix H include sea turtles marine mammals and crustaceans.

6.2.2 Coastal Habitats

There are four ecoregions in Guyana Figure 67 coastal plain interior savannas hilly sand and clay and forested highlands GNBSAAP 2015. The Project will have no impact on the interior savannas hilly sand and clay and forested highlands so this section focuses on habitats of the coastal plain note that the only potential impacts on the coastal plain are those associated with unplanned events [i.e. oil spill]. Guyanas coastal plain occupies approximately 7 percent of the countrys total area and extends along the entire approximately 400 km 250 mi of the Atlantic coast varying in width from approximately 16 km to 64 km 10 mi to 40 mi Kalamandeen and Da Silva 2002 and in elevation from sea level to approximately 3 m 10 ft GNBSAAP 2015. The coastal plain is a narrow belt of sediments with riverine and marine clays and silts stretching along Guyanas coastline. The coastal zone is a highly productive and sensitive environment that is subjected to marine and terrestrial influences. Guyanas coastal ecoregion is a network of plains and low hills including mangroves salt to brackish lagoons brackish herbaceous swamps swamp woods and swamp forests. The coastal zone contains some of the worlds most productive ecosystems with rich biological diversity Kalamandeen and Da Silva 2002. The swamps are an important source of freshwater to mangroves and other flora and fauna WWF 2016. Along the Guyana shoreline the portion of the coastal plain with the most potential to be impacted by an unplanned event associated with the Project the

principal habitats are mangroves beaches and mudbanks which are described below. May 2017 141

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 67 Guyanas
Ecoregions Chapter 6 Existing Environment May 2017 142 EEPGL Environmental Impact
Assessment Liza Phase 1 Development Project 6.2.2.1 Mangroves Chapter 6 Existing Environment

Mangroves are regarded as one of the most important ecosystems for the security of the biodiversity
of the entire Guyana coast as they protect coastlines from wave action and shoreline erosion see
Section 6.1.3. Figure 68 shows the general distribution of mangrove resources along coastal
Guyana; Figure 69 provides photographs of mangroves in Guyana. It is difficult to ascertain the
exact location and extent of mangrove forests in the country because the mangroves are subject to
erosion and other factors that can lead to rapid and dramatic changes in distribution. A 2008
Smithsonian report stated that mangroves occupied over 81000 hectares of Guyanas coast in six of
Guyanas 10 geopolitical regions Smithsonian 2008. The Guyana Mangrove Restoration Project
estimates 75 percent of the countrys mangroves are concentrated in Regions 1 and 2 GMRP Fact
Sheet 2010 which are located along the northwestern coast and include SBPA. Coastal mangroves
have been identified by numerous national and international stakeholders as vital to Guyanas
biodiversity physical security and economy WWF 2016; GMRP 2010; Ilieva undated. In 2014 ERM
conducted a coastal zone sensitivity analysis as part of the Oil Spill Response OSR planning for the
Liza1 drilling program. The analysis included detailed mapping of mangroves along Guyanas coast
from Georgetown west to the Venezuelan border. Figure 68 is a composite of 10 individual map tiles
showing the identified distribution of mangroves redshading across this portion of Guyanas coastline
as of 2013. There are currently three species of mangrove in Guyana red mangrove *Rhizophora*
mangle black mangrove *Avicennia germinans* and white mangrove *Laguncularia racemosa*.
Mangroves in Guyana have a unique distribution pattern that is different from the norm in most other
countries. RGME 2014 noted that in Guyana black mangroves typically colonize the coastal
shorelines and red mangroves establish themselves further inland along the rivers. There is some
overlap in the typical distribution of these species elsewhere but in general the pattern in other

countries is for red mangroves to establish along the shoreline black mangroves to establish farther inland and white mangroves to establish the farthest inland. Mangrove ecosystems are known to be among the most productive ecosystems in the world Mann 1982 serving major habitats while providing shelter and feeding sites for many faunal species Mestre Krul and Moraes 2007. Many invertebrate inhabitants of mangrove ecosystems in Guyana live either on or in close proximity to mangrove roots and substrates and include snails barnacles tunicates mollusks polychaete worms oligochaete worms shrimp crabs sponges jellyfish amphipods and isopods. These small organisms provide forage for birds mammals reptiles amphibians and fish. Herons egrets and ibises are the most conspicuous group of bird species found in mangroves due to the abundant food sources in a relatively safe habitat Da Silva 2014. May 2017 143 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 68 Guyanas Mangrove Distribution Georgetown west to Venezuelan Border Figure 69 Mangrove Photographs Coastal Mangroves Red Mangrove Forest Source ERM 2016; Rapid Biodiversity Assessment of Shell Beach 2004 May 2017 144 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.2.2.2 Beaches Chapter 6 Existing Environment Guyana has relatively few beaches but the beaches that do occur are critically important nesting habitats for sea turtles and providing habitat used by a variety of avian herpetofauna and mammalian species see Figure 66 for the locations of beaches in the SBPA. 6.2.2.3 Mudbanks See Section 6.1.3 for the description of the physical attributes and location of Guyanas mudbanks which generally refer to the submerged mud features below the low tide line as distinct from the intertidal mud flats. There has been no targeted biological surveys of Guyana mud banks conducted to date but coastal mud habitats typically support burrowing invertebrates such as marine worms mollusks crustaceans amphipods and copepods. This invertebrate community provides important forage for bottomfeeding fishes such as grunts catfishes and snappers particularly during their early life stages. 6.2.3 Coastal Wildlife and Shorebirds Guyana occupies the westcentral portion of the Guianan mangrove ecoregion which extends from southeastern Venezuela southeast to French Guiana between the Orinoco River

Deltas and the Oyapok River Delta in French Guiana. The ecoregion is a biogeographical rather than geopolitical region and was designated as a distinct ecoregion by the World Wildlife Fund as part of their Terrestrial Ecosystems of the World project Olsen et al. 2001. Despite supporting over 90% of the countrys human population Guyanas coastal region supports a diverse fauna. This section briefly describes bird mammal reptile and amphibian species that are representative of Guyanas coastal region.

6.2.3.1 Coastal Wildlife Numerous mammal reptile and amphibian species occur in Guyanas mangroves agricultural areas and coastal forests. There are over 50 species of mammals present including opossums; bats; primates such as capuchin monkeys *Cebus apella* squirrel monkeys *Saimira sciureus* howler monkey *Alouatta seniculus* and Guianan saki *Pithecia pithecia*; giant anteater *Myrmecophaga triactyla*; several species of cats including pumas *Panthera onca* puma *Puma concolor* and ocelot *Leopardus pardalis*; ungulates and rodents including the capybara *Hydrochaeris hydrochaeris* paca *Agouti paca* red rumped agouti *Dasyprocta leporina*; red and grey brocket deer *Mazama* sp.; and the giant river otter *Pteronura brasiliensis* which is a freshwater species and the neotropical otter *Lontra longicaudis* which is found in both freshwater and estuarine habitats WWF undated. Other reptiles that frequent this ecoregion are the green iguana *Iguana iguana* spectacled caiman *Caiman crocodilus* and anaconda *Eunectes murinus*. Amphibians are generally less common along the coast than in the interior especially due to saline influence in the mangroves but two species that are found along the coast are the paradoxal frog *Pseudis paradoxa* and the pipa frog *Pipa pipa*.

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6.2.3.2 Shorebirds Chapter 6 Existing Environment Guyana has a high species richness and diversity of flora and fauna. The coastal bird community is rich in Guyana with over 200 species of coastal birds recorded including a variety of parrots and macaws numerous waterbirds and shorebirds and raptors including the rare Harpy Eagle *Harpia harpyja* GNBSAAP 2015. A coastal bird survey conducted along the coast in the Georgetown region by Bayney and Da Silva 2005 documented 32 coastal bird species 20 of which are migrants. The most abundant species documented in the survey were shorebirds including Least Sandpiper *Calidris minutilla* Spotted

Sandpiper *Actitis macularia* Ruddy Turnstone *Arenaria interpres* and Semipalmated Plover *Charadrius semipalmatus*. Waterbird species including Snowy Egret *Egretta thula* and Cattle Egret *Bulbulcus ibis* were also abundant. In 2007 Braun et al. developed a comprehensive checklist of the 814 bird species within 11 habitats documented in Guyana Braun et al. 2007. The coastal habitats surveyed include mangrove forests and mudflats and the checklist includes 47 species within 18 families for the mangroves and 38 species within 8 families for the mudflat habitats Braun et al. 2007 Appendix I. A more recent bird survey within coastal mangrove habitats in southeast Guyana identified 37 species within 14 families Da Silva 2014. In this 2014 survey the most abundant species recorded were the Rufous Crabhawk *Buteogallus aequinoctialis* Great Egret *Ardea alba* Greater Kiskadee *Pitangus sulphuratus* Scarlet Ibis *Eudocimus ruber* and the Pied Water Tyrant *Fluvicola pica* Appendix I. As discussed in Section 6.2.2 Shell Beach is the only coastal Protected Area in Guyana. Two biodiversity surveys have been undertaken within and around Shell Beach over roughly the past decade Mendonca et al. 2006; GEPA et al.; 2004. Each of these surveys documented over 200 bird species in the Shell Beach area including many forest interior species that occur in the inland habitats of Shell Beach. Many of the over 200 species documented are migrants traveling from United States and Canada to spend the winter season in Guyana primarily following the Atlantic and Central Flyways to South America. The most abundant coastal species recorded at and around Shell Beach during the two surveys included Laughing Gull *Larus atricilla* Scarlet Ibis *Eudocimus ruber* Yellowbilled Tern *Sterna supercilialis* Least Tern *Sterna antillarum* Spotted Sandpiper *Actitis macularia* Lesser Yellowlegs *Tringa flavipes* and Blackbellied Whistlingduck *Dendrocyna autumnalis* Mendonca et al. 2006; GEPA et al. 2004. BirdLife International 2016a has designated several Important Bird Areas IBAs in the neighboring countries of Suriname Trinidad and Tobago and Venezuela. These IBAs provide foraging breeding and nesting habitats similar to those found along Guyanas coastline. However no IBAs have been designated in Guyana.

6.2.4 Seabirds

Seabirds are birds that spend their time in nearshore and/or offshore marine environments away from land except when they are nesting. Types or groups of

seabirds more prevalent in this region include albatrosses petrels shearwaters stormpetrels skuas jaegers tropicbirds and terns. Twentytwo species of seabirds breed in the Caribbean and dozens more occur as migrants through the region. Seabird data that is specific to Guyana is almost nonexistent and May 2017 146 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment no comprehensive survey of seabirds has ever been conducted in Guyana BirdLife International 2016. Birdlife International lists 21 species of seabirds for Guyana BirdLife International 2016. Other current data sources such as eBird and seabird observations recorded in the Stabroek Block during the EEPGL seismic surveys conducted in 2015 and 2016 increase the total number of documented seabird species in Guyana to 30 eBird 2016; RPS 2016. This number is consistent with that of other countries in the region. For example 32 and 29 species of seabirds are documented in Trinidad and Tobago and Venezuela respectively BirdLife International 2016. Table 68 lists the seabird species documented in Guyana based on the BirdLife data eBird records and EEPGL observations. Any of these species could occur in the PDA at some time during the year specific timing of occurrence is dependent on the species and environmental conditions. All of the 30 species of seabirds known to occur in Guyana are currently listed on the IUCN Red List as LC which means that the population status of the species does not meet the IUCN criteria for a threatened or NT designation IUCN 2016. Of the species observed in the Stabroek Block during the EEPGL seismic surveys the most commonly observed species in descending order of number of sightings i.e.; frequency of occurrence were the Masked Booby *Sula dactylatra* Magnificent Frigatebird *Fregata magnificens* and Brown Booby *Sula leucogaster* RPS 2016. Seabirds feed on fish and other marine organisms that concentrate on or near the surface of the water either by surface feeding from flight or swimming or by diving. As such the presence and availability of seabird prey in a given area which is strongly influenced by the oceans currents are a major determinant in the occurrence of seabirds. Further water clarity can impact a seabirds foraging success and some studies have suggested that seabirds in the Caribbean prefer areas with clear water where they can more easily see their prey Schreiber 2001. Seabirds in the PDA area are

likely to be transients moving opportunistically with schools of fish and other prey. The marine environment within the PDA is heavily influenced by the Guiana Current which is a strong surface current that directs surface flows northwestward. No slower moving or circular currents or areas of upwelling that could concentrate marine biota are known to occur in the PDA. Further no islands or nearsurface submarine ridges that would be an attractant to foraging seabirds occur in the PDA. While a variety of fish occur in the PDA including schooling fish such as tuna and mahimahi no evidence suggests that large concentrations of fish consistently occur in the PDA to the extent that they would promote regular use by foraging seabirds. The turbid conditions in the Stabroek Block further reduce the likelihood that the area has significant importance for foraging seabirds. Since 2010 BirdLife International has focused its efforts on identifying Marine IBAs with specific significance to seabirds. The types of sites that qualify as Marine IBAs include seabird breeding colonies foraging areas around breeding colonies nonbreeding usually coastal concentrations migratory bottlenecks and feeding areas for pelagic species Birdlife International 2016b. No Marine IBAs have been identified in Guyana but three Marine IBAs of May 2017 147 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment global or regional importance to seabirds have been designated in neighboring countries St. Giles Islands and Little Tobago both located off the northeastern tip of Tobago and Isla de Aves in Venezuela Lentino and Esclasans 2009; Birdlife International 2016b; Devenish et al. 2009. Figure 610 depicts the location of these IBAs relative to the Stabroek Block. Table 68 Seabird Species Known to Occur in Guyana

Common Name	a	b	c
Magnificent Frigatebird	a	b	c
Brown Booby	a	b	c
Masked Booby	a	b	
Redfooted Booby	b		
Whitetailed Tropicbird	a	b	
Leachs Stormpetrel	a	c	
Audubons Shearwater	a	b	c
Wilsos Stormpetrel	b	c	
Corys Shearwater	a	b	
Barolo Shearwater	b		
Great Shearwater	a	c	
Arctic Jaeger	c		
Pomarine Jaeger	a	b	c
Parasitic Jaeger	b		
South Polar Skua	b		
Great Skua	c		
Least Tern	b	c	
Royal Tern	b	c	
Black Tern	b	c	
Common Tern	a	b	c
Bridled Tern	b	c	
Sooty Tern	c		
Sandwich Tern	b	c	
Roseate Tern	b		
Brown Noddy	b	c	
Gull Billedtern	b	c	
Northern Gannet	b		
Laughing Gull	b	c	
Brown Pelican	b	c	
Neotropic Cormorant	b	c	

a Species observed in in the Stabroek Block during the EEPGL

seismic surveys conducted in 2015 and 2016 RPS 2016 b eBird record eBird Caribbean 2016 c BirdLife International record BirdLife International 2016 Scientific Name *Fregata magnificens* *Sula leucogaster* *Sula dactylatra* *Sula sula* *Phaethon lepturus* *Oceanodroma leucorhoa* *Puffinus lherminieri* *Oceanites oceanicus* *Calonectris diomedea* *Puffinus baroli* *Ardenna gravis* *Stercorarius parasiticus* *Stercorarius pomarinus* *Stercorarius parasiticus* *Stercorarius maccormicki* *Catharacta skua* *Sternula antillarum* *Sterna maxima* *Chlidonias niger* *Sterna hirundo* *Onychoprion anaethetus* *Onychoprion fuscatus* *Thalasseus sandvicensis* *Sterna dougalli* *Anous stolidus* *Gelochelidon nilotica* *Morus bassanus* *Larus atricilla* *Pelecanus ocellatus* *Phalacrocorax brasilianus* May 2017 148

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment St. Giles Islands IBA includes one main island and several surrounding rock outcrops that support globally important numbers of breeding Redbilled Tropicbird *Phaethon aethereus* and regionally important numbers of breeding Audubons Shearwater *Puffinus lherminieri* Magnificent Frigatebird *Fregata magnificens* Masked Booby *Sula dactylatra* and Redfooted Booby *S. sula*. Other seabirds such as Brown Booby *S. leucogaster* and Brown Noddy *Anous stolidus* also breed there White 2008; Devenish et al. 2009. Little Tobago IBA supports globally important breeding populations of Redbilled Tropicbird and Laughing Gull *Larus atricilla* and regionally important breeding populations of Audubons Shearwater Brown Booby Redfooted Booby and Bridled Tern White 2008; Devenish et al. 2009. Field surveys conducted as part of the coastal mapping of Trinidad and Tobago documented large colonies of seabirds at both St. Giles Island and Little Tobago as well as along the northeastern cliffs of Tobago from Corvo Point to Pedro Point ERM 2016. The Isla de Aves IBA in Venezuela supports the largest breeding colony of Brown Noddy known from the Caribbean 5509 pairs as well as the principal breeding colony of Sooty Tern *Sterna fuscata* in Venezuela 12182 pairs Lentino and Esclasans 2009. May 2017 149

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 610 Location of IBAs with Importance to Seabirds Relative to Stabroek Block May 2017 150 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.2.5

Marine Mammals Chapter 6 Existing Environment Although there have been no comprehensive studies in the PDA a basic understanding of the existing composition and distribution of the marine mammal community in the vicinity of the PDA is provided by regional compilations Ward 2001; Ward and Moscrop 1999 marine mammal observation MMO data collected during EEPGL exploration activities from 2014 to 2016 RPS PSO database studies on cetaceans in offshore waters of neighboring countries such as Suriname and Venezuela de Boer 2015; IWCSC 2006 and incidental reports associated with strandings and bycatch Project GLOBAL 2007. Information from these reports and other studies provides the foundation for this discussion of existing conditions which is focused on cetaceans. One sirenian the West Indian manatee and two pinniped groups seals and sea lions have been documented in the region but are either now considered to be locally extinct or extremely rare and would not be expected to be encountered in coastal waters adjacent to the PDA Ward 2001. However the manatee may be encountered in nearshore and riverine settings. 6.2.5.1

Regional Setting The equatorial waters of Guyana are located within subregion VI of the Wider Caribbean Region WCR. This subregion includes the countries of Guyana Suriname and French Guiana Ward and Moscrop 1999. Many cetacean species are known to occur either seasonally or yearround in the waters of the WCR but there are minimal data concerning the life history and behavior of the majority of these species. The cetacean community is also underrecorded in waters off of French Guiana and Guyana de Boer 2015; Mannocci et al. 2013. In contrast more detailed records exist for Venezuela in the southern Caribbean region. The scarcity of cetacean records for subregion VI can be attributed to a lack of survey effort rather than an absence of marine mammals de Boer 2015. 6.2.5.2 Marine Mammal Data from the Project Development Area The 2007 Global

Bycatch Assessment of Longlived Species Project GloBAL Country Profile of Guyana provides a list of marine mammals whose distributions overlap with Guyanas Exclusive Economic Zone EEZ. The cetacean species documented in this report are listed in Table 69. Table 69 Marine Mammals with Ranges that include Waters Offshore Guyana Common Name Scientific Name Sei whale *Balaenoptera borealis* IUCN Status Notes EN Brydes whale *Balaenoptera brydei* Data Deficient The

sei whale is a baleen whale and is the third largest after the blue whale and the fin whale. It inhabits most oceans and adjoining seas and prefers deep offshore waters. Bryde's whales are moderately sized and closely resemble their relative the sei whale.

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Common Name	Scientific Name	IUCN Status	Notes
Blue whale	<i>Balaenoptera musculus</i>	EN	Chapter 6 Existing Environment
Fin whale	<i>Balaenoptera physalus</i>	EN	
Short beaked common dolphin			
Long beaked common dolphin			
Minke whale			
North Atlantic right whale			
Pygmy killer whale	<i>Delphinus delphis</i>	LC	
	<i>Delphinus capensis</i>	Data Deficient	
	<i>Balaenoptera acutorostrata</i>	EN	
	<i>Eubalaena glacialis</i>	LC	
	<i>Feresa attenuate</i>	Data Deficient	
Shortfinned pilot whale	<i>Globicephala macrorhynchus</i>	Data Deficient	
Risso's dolphin	<i>Grampus griseus</i>	LC	
Pygmy sperm whale	<i>Kogia breviceps</i>	Data Deficient	
Dwarf sperm whale	<i>Kogia simus</i>	Data Deficient	

Blue whales are the largest mammals on earth. Their diet consists almost entirely of krill. Blue whales were hunted nearly to extinction. Fin whales are the second largest mammal after blue whales; they are found worldwide and their food consists of small fish, squid, copepods and krill. These dolphins occur throughout warm temperate and tropical oceans. Shortbeaked common dolphins can occur in aggregations of hundreds or even thousands of dolphins. They sometimes associate with other dolphin species such as pilot whales. The range of this dolphin is more restricted than that of the short beaked common dolphin. It has a varied diet. One of the main threats to this dolphin is fisheries. Minke whales are the second smallest baleen whale. This is a baleen whale that was once a preferred target for whalers. They feed mostly on copepods and krill. This is a poorly known and rarely seen dolphin that avoids human contact. They are often caught in drift gill nets. Shortfinned pilot whales are very sociable and are rarely seen alone. They are found in groups of 10 to 30 though some pods are as large as 50. The species primarily feeds on squid but will also feed on certain species of fish and octopus. They feed nearly 300 m deep or more and spend great lengths of time at depth. A pod may spread out up to 800 m (2640 ft) to cover more area to find food. These are found worldwide in temperate and tropical waters just off the continental shelf on steep banks. Risso's dolphins feed almost exclusively on neritic and oceanic squid mostly

nocturnally. The pygmy sperm whale is not much larger than many dolphins. Pygmy sperm whales are normally either solitary or found in pairs. They feed mainly on cephalopods. The dwarf sperm whale is the smallest species commonly known as a whale. Dwarf sperm whales feed mainly on squid and crab. Its preferred habitat appears to be just off the continental shelf.

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Common Name	Scientific Name	IUCN Status	Notes
Frasers dolphin	<i>Lagenodelphis hosei</i>	LC	Chapter 6 Existing
Environment Humpback whale	<i>Megaptera novaeangliae</i>	LC	Blainvilles beaked whale
Mesoplodon densirostris		Data Deficient	Gervais beaked whale
Mesoplodon europaeus		Data Deficient	Trues beaked whale
Melonheaded whale	<i>Mesoplodon mirus</i>	Data Deficient	LC
Peponocephala electra		Data Deficient	LC
Sperm whale	<i>Physeter macrocephalus</i>	VU	False killer whale
<i>Pseudorca crassidens</i>		Data Deficient	

This dolphin is normally sighted in deep tropical waters. Frasers dolphins swim quickly in large tightly packed groups of about 100 to 1000 in number. Found in oceans and seas around the world humpback whales typically migrate up to 25000 km each year. Humpbacks feed only in summer in polar waters and migrate to tropical or subtropical waters to breed and give birth in the winter. Once hunted to the brink of extinction its population fell by an estimated 90 before a 1966 moratorium. Since this time stocks have partially recovered. This species of beaked whale is found in tropical and warm waters in all oceans and has been known to range into very high latitudes. The whales are seen in groups of three to seven individuals. Dives have been measured as long as 22 minutes. These whales occur in small groups. They most likely feed on squid. Although this species frequently strands until 1998 no one had made a confirmed sighting of the species at sea. These have been seen in small groups and are believed to be squid eaters. Little else is known. Closely related to the pygmy killer whale and pilot whale collectively this dolphin species is known by the common name blackfish. It is also related to the false killer whale. The melonheaded whale is widespread throughout the worlds tropical waters although not often seen by humans because it prefers deep water. The largest of the toothed whales that can be found anywhere in the open ocean females and young males live together in groups while mature males live solitary lives outside

of the mating season. Females give birth every four to twenty years and care for the calves for more than a decade. A mature sperm whale has few natural predators. They feed on squid and fish and usually dive between 300 to 800 m 984 to 2625 ft to forage. This species lives in temperate and tropical waters throughout the world. As its name implies the false killer whale shares characteristics such as appearance with the more widely known killer whale. Like the killer whale the false killer whale attacks and kills other cetaceans. May 2017 153 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Common Name Scientific Name Pantropical spotted dolphin *Stenella attenuata* LC IUCN Status Notes Clymene dolphin *Stenella clymene* Data Deficient Striped dolphin *Stenella coeruleoalba* LC Spinner dolphin *Stenella longirostris* Data Deficient Roughtoothed dolphin *Steno bredanensis* LC Found in all the worlds temperate and tropical oceans this species was threatened due to the killing of millions of individuals in tuna purse seines. In the 1980s the rise of dolphinfriendly tuna capture methods benefitted the species and it is now one of the most abundant dolphin species in the world. Clymene dolphins spend most of their lives in waters over 100 m 330 ft in depth but occasionally move into shallower coastal regions. They feed on squid and small schooling fish hunting either at night or in mesopelagic waters where there is only limited light. The striped dolphin inhabits temperate or tropical offshore waters. It moves in large groups usually up to thousands of individuals in number. The adult striped dolphin eats fish squid octopus krill and other crustaceans. The spinner dolphin is a small dolphin found in offshore tropical waters around the world. The species primarily inhabits coastal waters islands or banks. These dolphins can be found in deep warm and tropical waters around the world and are typically social animals. An average group has between 10 and 20 members. They have also been reported to school together with other species of dolphin and with pilot whales false killer whales and humpback whales. Source Global 2007; De Boer 2015; IUCN 3.1; Minasian et al. 1984 A recent peerreviewed study was conducted in Suriname and adjacent waters in 2012 De Boer 2015. The data from this study were collected at similar depths and distances offshore as the PDA. De Boer 2015 documented the presence of 10 identifiable species in

dedicated effort-related surveys. These are shown in bold in Table 5A of de Boer 2015. In addition during transit to the survey area Trinidad to Suriname De Boer also documented incidental sightings of common bottlenose dolphins *Tursiops truncatus* off of Trinidad other dolphins *Stenella* sp. off of Guyana and Guiana dolphin *Sotalia guianensis* at the entrance of the Suriname River. These species may be encountered closer to shore where Project-related marine support vessel transits will be occurring. The survey data from De Boer 2015 show that the cetacean community in the Suriname area is primarily composed of odontocetes toothed whales including sperm whales beaked whales killer whales and dolphins. These are more common offshore of Suriname than the baleen whales including Brydes and sei whales. The occurrence of baleen whales is likely seasonal with Brydes and sei whales recorded only during June and July. Additional opportunistic records May 2017 154 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment cited in De Boer 2015 show that large baleen whales have been observed in early October. Both shelf waters and offshore waters are important for the dolphin community. De Boer 2015 notes that the most abundant species documented offshore Suriname were the sperm whale and melonheaded whale. Spinner and pantropical spotted dolphins were also frequently encountered in large groups. The relative abundance index for all cetaceans was relatively low as expected for the offshore survey location approximately 1190 m to 3350 m [3900 ft to 11000 ft] water depths. Based on these data when viewed together with other systematic surveys in tropical regions in the eastern Atlantic and western Africa estimated densities were found to be much higher in areas that spanned both deep and shallow waters versus the deep water only area surveyed offshore Suriname. De Boer 2010. For example tropical shallow shelf waters off of the Maldives in the Indian Ocean generally hold a much more diverse and abundant cetacean community Clark et al. 2012. Other older reports provide additional information for context. For example the International Whaling Commission IWC Scientific Committees SCs Draft Report on Small Cetaceans of the Wider Caribbean IWCSC 2006 cites information from French Guiana and Venezuela and provides secondary information on Guyanas marine mammals. Bottlenose dolphins are incidentally captured in

both gillnet and trawl fisheries in these countries. Tucuxi or grey dolphin *Sotalia fluviatilis* are known to suffer incidental capture in gillnets and seines throughout their range which includes the Guianas French Guiana Suriname and Guyana. Marine mammal observations during recent seismic surveys conducted between December 2015 and March 2016 RPS 2016 noted that dolphins were detected either visually or acoustically on 20 occasions and included four species pantropical and bottlenose dolphins shortfinned pilot whales and melon headed whales. Two sperm whale detections and two Brydes whale detections were also recorded along with one unidentified baleen whale. Visual monitoring was conducted over a period of about 85 days for a total of 1007.5 hours. Data from this winter study were combined with other observations in the Stabroek and Canje Blocks to develop the list of confirmed species sighted depicted in Table 610. Table 610 Marine Mammal Species Visually Observed during EEPGL Activities Since 2014

Common Name	Scientific Name	Source
Brydes whale	<i>Balaenoptera brydei</i>	RPS 2016
Frasers dolphin	<i>Lagenodelphis hosei</i>	RPS 2016
Melon headed whale	<i>Peponocephala electra</i>	RPS 2016
Pantropical spotted dolphin	<i>Stenella attenuata</i>	RPS 2016
Rissos dolphin	<i>Grampus griseus</i>	RPS 2016
Shortfinned pilot whale	<i>Globicephala macrorhynchus</i>	RPS 2016
Sperm whale	<i>Physeter microcephalus</i>	RPS 2016
Spinner dolphin	<i>Stenella longirostris</i>	RPS 2016

May 2017 155 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Table 611 summarizes the data for acoustic and visual observations of marine mammals in the vicinity of the PDA monthbymonth over the period June 1 2014 to September 1 2016. The locations of whales sighted or identified from acoustic observations during this period are depicted on Figure 611. Table 611 Data Compiled from PSO Observations June 2014 to September 2016

Number of Observations	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sperm Whale	3	56	7	0	2	1	1	7	2	0	4	14
Dolphin	0	0	0	0	0	0	0	0	0	0	0	0
Baleen Whale	0	0	0	0	0	0	0	0	0	0	0	0
Beaked Whale	0	0	0	0	0	0	0	0	0	0	0	0

Source RPS PSOMAP database search from June 1 2014 to Sept 1 2016. Includes visual and acoustic detections. Data indicates number of detections rather than abundance. These observations off of Guyana correspond with those documented by De Boer 2015 off of Suriname. Based on these recent sightings and data compilations toothed whales including dolphins are

detected most frequently in the PDA but baleen whales may also be encountered. A survey of nearshore waters conducted by Charles et al. 2004 of 125 Guyanese captains of trawl drift seine and red snapper fishing vessels found that these vessels usually encountered boto *Inia geoffrensis* spotted dolphin *Stenella* spp. longmouth or common dolphin *Delphinus delphi* *tucuxi* *Sotalia fluviatilis* spinner dolphin *Stenella longirostris* and bottlenose dolphin *Tursiops truncatus*. Individuals of these species may be encountered by marine support vessel operations and tankers in these waters. Nearshore Project activities in or near the Demerara River could encounter West Indian manatees. A subspecies of the West Indian manatee is sometimes referred to as the Antillean manatee *Trichechus manatus manatus*. Antillean manatees are sparsely distributed throughout the Caribbean and the Northwestern Atlantic Ocean from Mexico east to the Greater Antilles and south to Brazil. They are found in French Guiana Suriname Guyana Trinidad though there has been a lack of recent sightings there and Venezuela. Historically Antillean manatees were hunted by local natives and sold to European explorers for food. Today they are threatened by loss of habitat poaching entanglement with fishing gear and increased boating activity.

May 2017 156 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 611 Locations of Marine Mammal Sightings Relative to the Stabroek Block

May 2017 157 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.2.6 Marine Turtles Chapter 6 Existing Environment According to the Regional Sea Turtle Conservation Program and Action Plan for the Guianas 2003 sea turtles are an important natural resource shared by the countries of the Guiana Shield region which encompasses the nations of Venezuela Guyana Suriname French Guiana and Brazil. Data from this action plan along with more recent compilations from Project Global 2007 The Center for Rural Empowerment and the Environment [CREE] 2014 and observations collected during exploration activities from 2014 to 2016 represent the main sources of data for turtles in the Project Area. In addition information on the interaction between sea turtles and trawl fisheries on the Guianas shelf since the 1970s was reviewed Pritchard 1973 1991.

6.2.6.1 Regional Setting and Species Descriptions Five sea turtle species are found in the region all

of which occur in Guyanese waters. Four of these species green turtle *Chelonia mydas* leatherback turtle *Dermochelys coriacea* hawksbill turtle *Eretmochelys imbricata* and Olive Ridley turtle *Lepidochelys olivacea* nest on Guyanas beaches. Loggerhead turtles *Caretta caretta* also occur offshore Guyana but rarely come ashore. In addition to sandy beaches for egg laying as a group sea turtles require healthy coral reef seagrass and hardbottom habitats for food and refuge although the relative importance of these habitats varies by species. Based on each species known habitat requirements some green sea turtles likely remain in Guyana waters as juveniles to feed in the sargassum mats while the other species largely move to clearer waters and coral reefs to the north after hatching Piniak and Eckert 2011. Green turtles are generally found in tropical and subtropical waters along coastlines and continental islands between the latitudes of 30 North and 30 South. They are distributed worldwide nesting in more than 80 countries and inhabiting the coastal waters of more than 140 countries National Marine Fisheries Service U.S. Fish and Wildlife Service 2007. Green turtles are listed as endangered by the IUCN and are protected from exploitation in most countries. Adult green turtles are benthic herbivores Bjorndal et al. 1997; they play an important role in seagrass ecosystems by pruning them increasing the nutrient cycle and preventing the creation of sediment Bjorndal and Jackson 2003; Jackson et al. 2001. Their migrations have two phases they travel rapidly to the open ocean in a straight line and then move more slowly toward the migration coasts Trong et al. 2005b. Leatherback turtles are the largest of all sea turtle species and do not have a hard shell like other sea turtles; instead their shell is made of leathery tissue. Leatherbacks are found in pelagic tropical and temperate marine waters where they spend most of the time feeding on jellyfish salps and siphonophores DOE 2014; however they are also known to forage along coastlines. Leatherbacks make extensive seasonal migrations between different feeding areas and nest at the same location every year NWF 2014b. Leatherback turtles nest from March to midJuly along the Caribbean coast Trong et al. 2004. Young leatherback turtles can remain in tropical latitudes until the length of their shell reaches approximately 40 inches Eckert 1999. The largest nesting colony in the Caribbean region is located in Yalimapo French Guiana Eckert May

Existing Environment and Grobois 2001. A moderate number of nests can also be found in Guyana Venezuela Trinidad and Colombia. This species is listed by the IUCN as Vulnerable. The hawksbill turtle is a small to medium sized sea turtle that has an elongated head that tapers to a point with a beaklike mouth giving its name NOAA 2014e. These turtles are circumtropical and can be found in waters from latitudes of 30 North to 30 South in the Atlantic Pacific and Indian oceans and use a wide range of broadly separated localities and habitats during their lifetimes Mortimer and Donnelly 2008. However individuals located within the Atlantic Ocean primarily feed on sponges and are found within lagoons ledges and caves associated with coral reef environments NOAA 2014e. These types of habitats are generally found northwest of the PDA in the Caribbean Sea. This species is listed as Critically Endangered by the IUCN. The loggerhead turtle is an oceanic turtle distributed throughout the world. The loggerhead turtle is found in the Atlantic Pacific and Indian oceans as well as the Mediterranean Sea. It spends most of its life in saltwater and estuarine habitats with females briefly coming ashore to lay eggs. The loggerhead sea turtle has a low reproductive rate; females lay an average of four egg clutches and then become quiescent producing no eggs for two to three years. The loggerhead turtle is omnivorous feeding mainly on bottom dwelling invertebrates. Its large and powerful jaws serve as an effective tool for dismantling its prey. Young loggerheads are exploited by numerous predators; the eggs are especially vulnerable to terrestrial organisms. This species is classified by the IUCN as Endangered with high risk of extinction. The olive ridley turtle is a small circumtropical sea turtle that is classified as vulnerable by the IUCN. While olive ridley turtle populations have declined in prior decades their populations have remained stable in more recent years. Olive ridley turtles are best known for their behavior of synchronized nesting in mass numbers termed arribadas. Females return to the same beach at which they first hatched to lay their eggs. The olive ridley is predominantly carnivorous especially in immature stages of the life cycle. Animal prey consists of protochordates or invertebrates which can be caught in shallow marine waters or estuarine habitats. Common prey

items include jellyfish tunicates sea urchins bryozoans bivalves snails shrimp crabs rock lobsters and sipunculid worms. Large nesting aggregations of green and leatherback turtles are located in the Guianas Suriname and French Guiana while smaller nesting areas are located from northwestern Guyana Shell Beach to Venezuela and some Caribbean islands which includes the Leeward Lesser and Greater Antilles; the Gulf of Mexico Central America; and Atlantic Ocean the Bahamas; and the southern coast of the United States Piniak 2011. The hawksbill turtles range is primarily in the Caribbean Sea with small nesting areas in the Guianas and in eastern Brazil. The olive ridley turtle primarily nests along the French Guiana coast with small nesting areas along the northeastern coast of Venezuela to Suriname and in eastern Brazil Piniak 2011. The primary nesting site for all these species in Guyana is Shell Beach located on the northwestern coast of Guyana. The exact locations of secondary nesting sites change due to coastal erosion which creates and destroys nesting areas continuously but they are generally distributed along the northwest coast between the Pomeroon River and the Waini River May 2017 159 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment estuaries. Leatherback turtles are the most common species on Guyanas nesting beaches while nesting green and hawksbill turtles are less common. According to CREE the primary nesting season for the leatherback green hawksbill and olive ridley turtles in Guyana Shell Beach occurs at night from March to August CREE 2014. The primary threats to sea turtles are poaching of eggs and adults intentional and acental fishing and habitat disturbance and degradation due to marine pollution coastal zone development shore erosion lighting and debris. Population monitoring and conservation activities are limited primarily due to the logistical challenges associated with the remoteness of primary nesting sites. Although leatherback and olive ridley turtles occur at higher densities and thus show a corresponding higher frequency in shrimp trawls juvenile greens and loggerheads are also taken as bycatch see Project Global 2007. Tambiah 1994 estimated that trawl nets in the Guianas caught 1300 turtles annually with mortality rates of 60 percent. Tambiah 1994 also reported that gillnet fisheries in Guyana and Suriname are an even bigger threat than trawl

fisheries inentially capturing 21600 sea turtles per year. However the report documents the highest inences of olive ridley bycatch occurring during the period prior to the nesting arribadas in Suriname January to March coining with the peak period for shrimp fisheries February to May. 6.2.6.2 Marine Turtle Data for the Project Development Area MMO observations conducting during seismic surveys between July 2015 and August 2016 detected six sea turtles one green turtle two loggerhead turtles and three unidentified turtles. The locations of the sightings are indicated on Figure 611. Based on these recent sightings and data compilations it is possible that any of the five abovereferenced sea turtle species could be encountered in the PDA. The Sea Turtle Conservation Society actively maps sea turtle movements by placing satellite transmitter tags on individual turtles after they finish nesting see www.conserveturtles.org. Starting on May 21 2012 the Society mapped movements of three leatherback turtles from their nesting place at Shell Beach Figure 6.12. Each remained offshore of Shell Beach and in Guyanas equatorial waters for several weeks. By the second to third week of June two had moved farther offshore in transit to waters off the coast of Nova Scotia while one remained in Guyanese waters until the third week of July and eventually transited to Honduran waters. One passed through the Stabroek Block before moving northward. These movements are consistent with Piniak and Eckerts 2011 assertion that most species of marine turtles likely move out of Guyanese waters as juveniles. May 2017 160 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 612 Location of Sea Turtle Sightings and Satellite Tracks Relative to the Stabroek Block May 2017 161 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.2.7 Marine Fish Chapter 6 Existing Environment Scientific data on marine fish in the PDA are sparse. Much of what is known about marine fishes offshore Guyana is known from study of commercial landings. The inshore fish community is dominated by drums croakers and marine catfishes and includes other species such as snooks and tarpon. Further offshore near the interface of the turbid North Brazil Current with oceanic water the fish community is more complex consisting of pelagic highly migratory species such as tunas jacks and mackerels in the upper water column and snappers and groupers in the

demersal zone lowest section of the water column near the seafloor MOA 2013. Sharks are found inshore and offshore. Guyanas marine fish community exemplifies the ecological connectivity among the mangroves estuaries and offshore zones because many fish species are dependent on different habitats at specific life stages or occur in more than one habitat type. Several species that occur in the inshore and offshore zones as adults are dependent on coastal mangroves as juveniles particularly drums croakers and snappers. Catfishes occur in the mangroves estuaries and oceanic waters as adults. Some other species including snooks and tarpon may occur occasionally in the ocean but are specifically adapted to completing their entire life cycles in mangrovelined estuaries

MOA 2013. 6.2.7.1 Historical Data on Demersal Coastal Species The most complete data on marine fish in Guyanas territorial waters come from a twoyear trawl survey conducted in 1958 and 1959. The survey consisted of 35 cruises lasting 4 to 11 days each and included data from 1070 stations comprising 2246 fishing hours McConnell 1962. Although the study report does not contain a map of the individual stations the map of the study area indicates that they extended seaward to the edge of the continental shelf. Although the study did capture some pelagic species it was designed as a trawl survey and was therefore more oriented toward demersal species. The study documented the presence of 213 species of fish comprised primarily of drums croakers catfishes jacks grunts and snappers. McConnell noted a spatial pattern in the distribution of fishes across the shelf and separated the shelf into four biogeographic zones Zone 1 described as the brown fish zone water depths from 0 to 10 fathoms 018 m. The fish community in this zone was dominated by drums catfishes rays and various toadfishes Batrachoididae. Zone 2 described as the golden fish zone water depths from 10 up to 30 fathoms 1855 m. The fish community in this zone was dominated by catfishes jacks and grunts. Zone 3 described as the silver fish zone. This zone was associated with less turbid oceanic waters and the location of this zone was more dependent on water quality than depth but the fish typical of this zone were particularly abundant in water 20 to 40 fathoms 3775 m. Zone 4 described as the red fish zone ranging from water depths of about 20 fathoms near Suriname and 30 to 40 fathoms 5575m closer to Georgetown seaward to the edge of the continental

shelf. Snappers and various demersal species comprised the bulk of the catch in this zone. May 2017 162 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Approximately 80 species of fish occurred in Zone 4 in the McConnell study. These species are listed in Appendix K. Although the PDA is located slightly north of the seaward limit of McConnells study area and in deeper water the catches from Zone 4 contain species that are also found at much deeper depths and are therefore considered indicative of the types of fish that are likely to occur in the PDA especially near the seafloor. The data from Zone 4 in the McConnell study include several species that are commonly associated with coral reefs including butterflyfishes angelfishes wrasses and parrotfishes McConnell 1962. McConnell notes that coral fragments appeared in the trawl but that the coral retrieved in the net was dead. It seems likely that the coral-associated fishes in the McConnell study were likely present on scattered fragments of dead coral or possibly small dead patches of coral rather than on living reefs. Based on comparisons with species lists from nearby countries McConnell determined that about 50 percent of Guyanas marine fish species were widely distributed coastal species about 10 percent were clearwater associated species more typical of the Caribbean Islands about 5 percent were more southerly species typical of the Brazilian coast and the balance were habitat generalists with no defined regional habitat associations. McConnell also noted that the North Atlantic Continental Shelf is continuous from the Gulf of Mexico to Brazil and that there were no major barriers to migration through this area so Guyanas marine fish community would be expected to have many species in common with other countries in the region. This likely explains the presence of so many widespread species in the dataset. The Guyana Fisheries Department a division of the Guyana Ministry of Agriculture does not monitor noncommercial marine fisheries but bycatch data from the nearshore shrimp trawl fishery provided by the Guyana Fisheries Department summarized in Table 612 are consistent with the McConnell study with respect to marketable species in McConnells brown fish zones. Recent bycatch data collected since 2012 from shrimp trawlers identify seven species of fish. Four of these species Bangamary Bashaw Croaker Sea Trout are in the family Scianidae which McConnell

identified as characteristic of Zone 1 McConnell et al. 1962; Bangamary Bashaw and Sea Trout represent 6575 percent of the total bycatch by weight each year from 2012 to 2015. May 2017 163

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Species	Bangamary	Butterfish	Bashaw	Croaker	Sea Trout	Grey Snapper	Snook	Total
2012	757	559	111	0	303	3	0	2013
921	665	189	0	292	2	0	1733	2069
2014	1380	6622	1799	0	4711	22	0	2692

Source ERM Personal Communication 16 6.2.7.2 Observations from EEPGLs Offshore Activities

2015 1151 485 168 0 303 0.1 42 2148 Projects specific information on fish species from the PDA is available from observations made during EEPGLs various activities in the southeastern half of the Stabroek Block since 2014 Figure 613. Fish observed in this area Figure 613 include 17 species as listed in Table 613. None of these species were documented in the McConnell study but the data from EEPGLs activities were acquired from surface observations and are comprised of species that are characteristic of the upper water column so would not be expected in McConnells trawl survey.

Table 613 Fish Species Observed in the Stabroek Block during EEPGL Activities Since 2014

Common Name	Mahimahi	Jack	Atlantic tripletail	Atlantic flying fish	Little tunny	Manta ray	Ocean sunfish	Planehead filefish	Sailfish	Skipjack tuna	Blackfin tuna	Yellowfin tuna	Clearwing flying fish	Blue marlin	Bar jack	Crevalle jack	Rainbow runner
Scientific Name	Coryphaena hippurus	Seriola sp.	Lobotes surinamensis	Chellopogon melanurus	Euthynnus alletteratus	Manta sp.	Mola mola	Stephanolepis hispidus	Istiophrous albicans	Katsuwonus pelamis	Thunnus atlanticus	Thunnus albacares	Cypselurus comatus	Makaira nigricans	Caranx ruber	Caranx hippos	Elagatis bipinnulata

May 2017 164 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 613 Approximate Locations of Biological Observations Made Since 2014 February 2017 165 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment In the summer of 2011 several islands in the eastern Caribbean e.g. Anguilla Antigua Barbuda Barbados British Virgin Islands Guadeloupe Martinique St. Lucia St. Maarten St. Martin experienced large amounts of sargassum washing

ashore. In 2012 and 2014 Barbados Guadeloupe Dominica Antigua Barbuda St. Croix and Puerto Rico reported moderate episodes of the phenomenon. The sargassum consisted of two species Common Gulfweed *Sargassum natans* and Broadtoothed Gulfweed *Sargassum fluitans* CRFM undated. A large amount of sargassum was also documented in the Stabroek Block in 2015. Quantities were sufficiently large in the block to clog intake hoses for vessel propulsion systems and foul acquisition equipment being used to collect seismic data in the block at the time. Subsequent analysis of satellite imagery revealed that although sargassum densities were unusually high offshore Guyana in 2015 sargassum concentrations fluctuate annually and have a seasonal peak between April and September Palandro 2016. The presence of such large amounts of sargassum is significant from a fish biodiversity perspective because sargassum has several important ecological roles related to marine fishes including concentrating forage fish that are preyed upon by large pelagic fishes including juvenile swordfish dolphinfish filefishes jacks flying fishes triggerfishes and various tunas; spawning habitat for flying fish *Exocoetidae*; and habitat for unique fishes and other organisms that spend most or all of their lives in floating mats of sargassum including the sargassum fish *Histrio histrio*.

6.2.7.3 Special Status Fish Species

Thirty marine and coastal fishes in Guyana have been ranked by the IUCN as threatened CR EN or VU with another 21 ranked as NT. According to the IUCNs classification scheme these species currently face a credible threat of extinction and are expected to face such risks soon. An additional 17 are considered Data Deficient and cannot be objectively assessed with the currently available data. Most of the threatened or NT species that could be impacted by the Project are fish. These species are listed in Appendix H. They include highly migratory species e.g. some tunas and sharks benthopelagic species e.g. some groupers and demersal species e.g. some skates and rays. As noted in Section 6.3.3.2 many of these fish species are also targeted by the Guyanese commercial fishing industry. All of the CR species are coastal species and would not be expected to occur in the vicinity of the PDA. Several of the EN species including Atlantic bluefin tuna whale shark squatheaded hammerhead shark and scalloped hammerhead shark are open water pelagic species and could occur in the PDA

intermittently but would not be expected to be residents in the area. The two remaining EN species golden tilefish and Nassau grouper are bottomdwelling species and do not move large distances as adults but they are most often associated with uneven bottoms containing rocky outcrops shipwrecks or other structural habitats. The continental slope in the vicinity of the PDA lacks any known structure that would be expected to attract or aggregate these species.

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The VU NT and Data Deficient categories all contain a mix of pelagic species e.g. sharks and tunas and demersal marine species such as grouper skate and ray species and in some cases species that are important targets of fishery activities e.g. gillbacker.

6.2.8 Marine Benthos

The benthic communities inhabiting the Guyana Basin are influenced by the dominant environmental conditions that characterize the area including sediment composition water turbidity and nutrient loads. This section describes the marine benthic habitat within the Project AOI.

6.2.8.1 Methodology

This section draws on information provided in the scientific literature maps Automated Underwater Vehicle AUV photographs as well as field data collected by box coring and sediment profile imaging during the 2014 and 2016 environmental surveys.

6.2.8.2 Regional Setting

Marine benthic biological resources offshore of Guyana are poorly studied but do not include the matrix of shallow coral reefs and seagrass meadows that are characteristic of coastal tropical Atlantic environments elsewhere. This is due to the highly turbid conditions offshore of Guyana which do not permit the growth of warm water corals since they rely on symbiotic photosynthetic algae for nourishment. Two coldwater coral species *Madrepora oculata* and *Solenosmilia variabilis* are known to occur offshore of Guyana. Both species occur in a wide range of depths *M. oculata* from 55 to 1950 m and *S. variabilis* from approximately 219 m to 2165 m. The locations and the extent of deepwater corals offshore of Guyana have not been published Freiwald et al. 2004. Many cold water corals construct reefs that support highly diverse invertebrate and fish fauna NOAA 2014. Both *M. oculata* and *S. variabilis* are technically considered reefbuilding corals but *M. oculata* is particularly fragile and does not often form deepwater reefs. It more frequently occurs as a

commensal species living within or on reefs that were originally constructed by more robust species such as *S. variabilis*. Several species of benthopelagic shrimp occur in Guyanese waters including shallow water species such as the Atlantic Seabob *Xiphopenaeus kroyeri* the Southern Brown Shrimp *Penaeus subtilis* and the Southern White Shrimp *Penaeus schmitti*. The Redspotted Shrimp *Penaeus brasiliensis* and the Southern Pink Shrimp *P. notialis* are found in deeper waters USEPA 2010. While these species are free swimming they are often found at or near the bottom. In addition to shrimp there are other species of crustaceans found in the deepwater areas of the Caribbean Sea. These include several species of isopods such as *Leptanthura guianae* and *Malacanthura truncata* Poore and Schotte 2009 and 2015 and amphipods including *Ampelisca mississippiana* and *Thaumastasoma* species. There are also numerous species of annelids May 2017 167 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment including the polychaetes *Tharyx marioni* *Ariea suecia* *Levinsenia uncinata* and *Paraonella monilaris* as well as bivalves such as *Vesicomya vesical* and *Heterodonta* sp. Wei et al. 2010.

6.2.8.3 Existing Conditions in the Project Development Area Results of the 2014 environmental survey revealed that the total abundance of benthic infauna in the PDA was low averaging 116 organisms per m². This organism density is below the range of typical abundances reported from other continental slopes Rowe et al. 1982; Flach et al. 1999. The most abundant major taxonomic groups were polychaete worms crustaceans and mollusks. The overall prevalence of these three groups is typical for marine sediments. Polychaetes were the numerically dominant group identified avg. density 47 per m² representing 41 percent of the total groups. Polychaetes typically comprise about half of all species and a third of macrofaunal species from deepwater marine habitats worldwide. Aside from polychaetes no other individual major taxa were abundant with each of the other taxa groups individually representing less than 14 percent of total abundance. The observed paucity of macrofauna is likely ascribed to limited organic food sources indicated by the low organic carbon in the sediment. No deepwater coral growth was detected in either the 2014 or 2016 environmental surveys or the AUV surveys of the seafloor in the vicinity of the Liza1 well

Maxon Consulting Inc. and TDI Brooks International Inc. 2014; FUGRO EMU Limited 2016. A total of 50 distinct families were identified during the 2014 environmental survey with approximately half represented by either one or two individuals. This is a relatively high level of diversity considering the low abundance of macrofauna. Dominant families were typical cosmopolitan inhabitants of shelf and slope sediments worldwide. These included spionid cirratulid paraonid polychaetes phoxocephalid amphipods and thyasirid and nuculanid bivalve mollusks. Similar to the 2014 data the 2016 environmental study showed an overall prevalence of annelids including polychaetes crustaceans and mollusks typical for marine sediments as well as low macrofaunal densities. The 2016 samples averaged 20 organisms per 0.1 m² which can be extrapolated to 200 organisms per 1 m² for the purposes of comparison to the 2014 data. While the 2014 survey did not categorize the macrofauna organisms beyond the family level the 2016 survey further classified the macrofauna to the order and species level and covered a larger sampling area. Results from the 2016 sampling showed macrofaunal communities within the survey area to be diverse. In 2016 a total of 165 taxa were identified in 7 phyla and 27 families with 36 identified to species level including 15 species of polychaetes 10 crustaceans 8 mollusks and 3 sipunculid worms. Annelida were the numerically dominant group phylum in terms of species composition 40 percent and abundance 42.7 percent. Crustaceans accounted for the second highest species composition 38.2 percent and abundance 39.1 percent followed by mollusks 12.7 percent and 8.7 percent respectively and other taxa collectively 9.1 percent and 9.5 percent respectively Figure 614. May 2017 168 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 614 Abundance of Major Taxonomic Groups Identified in 2016 EBS Source FUGRO EMU Limited 2016 Table 614 identifies the common macrofauna families identified in the 2014 and 2016 studies. As the 2014 survey did not categorize the macrofauna organisms beyond the family level the commonalities between the 2014 and 2016 surveys were identified based on equivalent families. Both surveys characterized the surveyed area to have a diverse macrofauna community with polychaete worms as the most abundant major taxonomic group. The 2014 survey

additionally recognized that overall macrofaunal abundance within the surveyed area is at the lower end of the macrofaunal densities reported for continental slope sediments around the world Rowe et al. 1982; Flach et al. 1999. The 2016 survey similarly reported that numbers identified in all taxonomic groups were low.

Table 614 List of Common Macrofauna Families between the 2014 and 2016 Environmental Survey Reports

Phylum	Annelida	Annelida	Annelida	Annelida	Annelida
Annelida	Annelida	Annelida	Annelida	Annelida	Annelida
Class	Polychaeta	Polychaeta	Polychaeta	Polychaeta	Polychaeta
Order	Sabellida	Spionida	Spionida	Terebellida	Terebellida
Not assigned	Not assigned	Not assigned	Not assigned	Not assigned	Not assigned
Family	Oweniidae	Spionidae	Magelonidae	Cirratulidae	Ampharetidae
Orbiniidae	Paraonidae	Capitellidae	Maldanidae	Opheliidae	Phyllodoae
Orbiniidae	May 2017	169	EEPGL	Environmental Impact Assessment	Liza
Phase 1 Development Project Chapter 6 Existing Environment	Phylum	Annelida	Annelida	Arthropoda	Arthropoda
Mollusca	Nematoda	Sipuncula	Sipuncula	Sipuncula	Class
Polychaeta	Malacostraca	Malacostraca	Scaphopoda	Unidentified	Sipunculidea
Sipunculidea	Order	Eunia	Eunia	Cumacea	Tanaidacea
Dentaliida	Unidentified	Golfingiiformes	Golfingiiformes	Golfingiiformes	Family
Lumbrineridae	Onuphidae	Unidentified	Apseudidae	Dentaliidae	Unidentified
Unidentified	Unidentified	Golfingiiidae	Phascolionidae	Notes	The term not assigned

references that the scientific community has not specifically classified the organism to a given categorization. The term unidentified refers to the surveyors inability to further identity the categorization of an organism. Figure 615 depicts some of the benthic fauna detected during the 2014 environmental survey. Figure 615 Benthos Photographed in the Vicinity of the Liza1 Well

Source Maxon Consulting Inc. and TDI Brooks International Inc. 2014 May 2017 170 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Both surveys reported that there was not a strong correlation between macrofaunal communities or number of species and any single parameter such as sediment characteristics or water depth. The results of the seabed photography sediment and faunal data review showed the

survey area primarily consists of one broad benthic habitat type sublittoral sediment EUNIS15 code A5. This marine benthic habitat can encompass a wide range of sediments from boulders and cobbles through pebbles and shingles coarse sands fine sands muds and mixed sediments Davies et al. 2004. Each sediment type hosts characteristic biological communities which together define biotopes. Within the sublittoral sediment habitat one biotope was identified circalittoral sandy mud A5.35 with aspects of deep sea mud. Benthic epifauna were scarcely observed in the photographs taken. Figure 616 provides representative photographs of the circalittoral sandy mud biotope taken from five of the 2016 sample stations. Epifauna were sparse in the photographs taken but evidence of habitation by tube building polychaetes possibly Sabellidae and Terebellidae burrowing shrimp and foraminifera can be observed in all of the images of the seafloor. Mud shrimp burrows were evident in most photographs and some photographs showed other taxa including tusk shells gastropods and hydroids. 15 The European Nature Information System EUNIS is a habitat classification system developed by the European Environment Agency EEA in collaboration with international experts. The EUNIS includes all types of natural and artificial habitats both aquatic and terrestrial. May 2017 171 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 616 Representative Photographs of the CircaLittoral Sandy Mud Biotope Photographed in the Vicinity of the Liza1 Well Source FUGRO EMU Limited 2016 Photo A Station NC21BCE002; Mud tube building polychaetes and amphipods mud shrimp burrows Scaphopoda tusk shells gastropods foraminiferans Photo B Station NC21BCE004; Sandy Mud tube building polychaetes and amphipods mud shrimp burrows foraminiferans. Unidentified hydroid Photo C Station NC21BCE005 Sandy Mud tube building polychaetes and amphipods foraminiferans Scaphopoda Photo D Station NC21BCE024 Sandy Mud tube building polychaetes and amphipods foraminiferans Photo E Station NC21BCE025; Muddy Sand Sabellids and other tube building polychaetes mud shrimp burrows foraminiferans May 2017 172 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 6.3 Socioeconomic Resources Chapter 6 Existing Environment This section describes the existing socioeconomic characteristics of the

Project AOI. It was developed based on secondary information contained in Projectrelated materials; socioeconomic reports and data obtained through government entities and other stakeholders; and other relevant data received from public sources. It is also based on information obtained directly from key informant interviews with members of national regional and local governments; civil societies and nongovernmental organizations NGOs; local community members; and other Project stakeholders. Specific stakeholder engagement information can be found in Section 4.5.

6.3.1 Administrative Divisions in Guyana Guyana is divided administratively into 10 regions pictured on Figure 617. These regions are further subdivided into Neighborhood Democratic Councils NDCs of which there are 65 in total. Within the NDCs are villages the smallest administrative unit. In addition there is one city that serves as the capital Georgetown and nine townships. Four of these townships were designated as new townships by the Ministry of Communities in 2015 as part of an administrative decentralization effort. Each of the nine townships has its own mayor and council and is intended to serve as an administrative hub for government services such as passports and drivers licenses as well as providing utilities and public services such as water and sanitation as well as other services such as banking.

May 2017 173 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 617 Guyanas Administrative Regions and Townships May 2017 174 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project

6.3.2 Population Distribution Chapter 6 Existing Environment Most of Guyanas population is located in the six coastal regions and according to the 2012 national census nearly half of the countrys population lives in Region 4 DemeraraMahaica which includes the capital city of Georgetown. Table 615 summarizes the distribution of population within the 10 regions in 2012 the last year for which complete census data are available. Table 615 Regional Population Distribution in Guyana

Region	Population 2002	Population 2012
1 BarimaWaini	24,275	49,253
2 Pomeroon Supenaam	10,306	31,032
3 Essequibo Islands West Demerara	5,242	12,369
4 DemeraraMahaica	17,597	10,095
5 Mahaica Berbice	19,387	41,112
6 East Berbice	7,480	8,408
7 Corentyne		
8 CuyuniMazaruni		
9 Potaro Siparuni		
10 Upper Takutu Upper Essequibo		

27643 46810 107785 311563 49820 109652 18375 11077 24238 39992 746955 Population change since 2002 13.9 5.0 4.6 Percent of Guyanas Total Population 3.7 6.3 14.4 0.4 5.0 11.4 4.4 9.7 25.0 2.7 0.6 41.7 6.7 14.7 2.5 1.5 3.2 5.3 100.0 Source Bureau of Statistics Guyana 2012; Bureau of Statistics Guyana 2002. Note Each regions change in population should be weighted based on that regions percent of the total population so the sum of population changes in each region do not add up to the total national population change.

6.3.2.1 Ethnic Composition Data from the 2012 census indicate that the majority of the countrys population are representatives of two ethnic groups those of East Indian descent 39.8 percent and those of African descent 29.3 percent. These are followed by populations of mixed ethnicity 19.9 percent and indigenous peoples who in Guyana are referred to as Amerindians 10.5 percent. Other ethnicities including Chinese White and Portuguese collectively make up less than one percent of the population. Figure 618 shows the ethnic composition of each region and indicates notable differences between interior and coastal regions and between regions that are highly rural versus more urban. The more populated and urban Regions 3 4 5 and 6 are dominated by populations of East Indian and African descent followed by populations of mixed ethnicity. Amerindian population numbers in these regions are low. However the majority of population residing in the more remote and rural Regions 1 8 and 9 is of Amerindian ethnicity.

May 2017 175 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 618 Regional Distribution of Ethnicity 2012

	African	Black	Amerindian	Chinese	East Indian	Mixed	Portuguese	White	Other	Total	Region 10	Region 9	Region 8	Region 7	Region 6	Region 5	Region 4	Region 3	Region 2
	10	10	20	30	40	50	60	70	80	90	100								

Source Bureau of Statistics Guyana 2012

6.3.2.2 Indigenous Peoples Amerindians in Guyana numbered 78492 as of the 2012 census and their population is on the rise with growth of 12.8 percent seen in the period 2002-2012. According to Minority Rights Group International 2008 there are nine main Amerindian groups in Guyana of which three are coastal the Carib Warao and Arawak tribes. Other groups tend to inhabit the countrys hinterland regions. Many of the Amerindians in Guyana particularly in the coastal area have undergone cultural integration

with the general population and share much of the same culture as the Afro and IndoGuyanese population. However as a whole the standard of living for the Amerindian population in Guyana is lower than for the general population particularly for those in remote areas where provision of infrastructure and services is a challenge. The distribution of Amerindian population among the regions is shown on Figure 619.

May 2017 176 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment Figure 619 Amerindian Population by Region 2012

Region	Population
Region 1	17846
Region 2	8834
Region 9	20808
Region 8	8009
Region 7	6833
Region 6	1801
Region 5	1270
Region 3	2820
Region 4	7066

Source Bureau of Statistics Guyana 2012

The coastal plain of Region 1 and part of Region 2 are not accessible by road and therefore Amerindian communities in these areas are remote and are generally underserved by public infrastructure and services. These populations make use of a range of coastal resources for subsistence and livelihoods. Communities that are directly adjacent to the coast are the titled community of Three Brothers along the Waini River directly inland from Shell Beach and the nontitled communities within the SBPA Almond Beach Fathers Beach and Unity Grant. Titled indigenous communities located 510 km inland from the coast in Regions 1 and 2 are Santa Rosa Waramuri Manawurin Assakata and Wakapau. In the SBPA fishing and crabbing activity is particularly active at the westernmost end of Shell Beach at the mouth of the Waini River. At the eastern end of Shell Beach in the community of Fathers Beach there are coconut plantations used for manufacturing oil and just northwest of this is a forested area where hunting trapping fishing crabbing crabwood seed harvesting and lumbering occurs Protected Areas Commission 2015. In Regions 3 and 4 titled indigenous communities are located inland and not within the coastal plain.

6.3.3 Education

The education system in Guyana is similar to that of other Caribbean countries with school being compulsory from ages of 5 to 16 through preprimary primary and secondary schools. The federal Ministry of Education controls education budgets policies and standards and administers these by region. In 2012 the government spent 3.2 percent of GDP on the education sector CIA World Factbook 2016. Between the years of 2008 and 2012 the youth 15-24 years literacy rate was 93.7 percent and 92.4 percent for females

and males respectively. Preprimary and primary school gross enrollment averaged from 83.7 percent to 88.7 percent depending May 2017 177 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Existing Environment upon grade and gender with male youth averaging a few percentage points lower than female youth. Secondary school net enrollment was 80.6 percent and 71.2 percent for female and male youth respectively UNICEF 2016. At the time of writing the 2012 census compendium on social indicators had yet to be released. Therefore the only reliable data on educational attainment at the regional level are from the 2002 census compendium which shows that Region 1 had the highest percentages of male youth 10.9 percent and female youth 15.3 percent with either no schooling or Kindergarten level only with Regions 8 and 9 only a few percentage points higher. In Regions 2 and 3 the percentage of all youth with either no schooling or Kindergarten level only ranged between 2 percent and 4 percent. Region 4 and Region 10 had the highest level of enrollment across all levels Guyana Bureau of Statistics 2002. The levels of primary education for the indigenous population are typically lower than nonindigenous groups of the population. In the Amerindian communities the attendance rate at primary schools has been reported to be 50 percent lower than average. This is partly attributable to a shortage of teachers and standardized teaching methods and curriculum which limits appreciation for indigenous culture and values. While access to education in Amerindian communities continues to be limited the stated government policy is to provide indigenous children with the same educational opportunities available to the rest of the population Minority Rights International 2008.

6.3.4 Land Use Guyana is divided into the following three main geographic zones The lowlying coastal plain occupying about 5 percent of the countrys land area which ranges from approximately 5 km to 6.5 km 3 to 4 mi wide along the coast; The white sand belt a largely vegetated zone dominated by white sandy soils lying inland from the coastal zone ranging from approximately 150 km to 250 km 93 mi to 155 mi wide and containing most of the countrys mineral deposits; and The interior highlands that extend from the white sand belt to the countrys southern borders and makes up the largest land area in the country. As described above Guyana is a sparsely populated country

with the majority of the population concentrated in the coastal plain region. In 2012 the cultivated area in Guyana was estimated at 1107000 acres. Cultivated land is also concentrated in the coastal plain where the majority of the population resides FAO 2015. Figure 620 shows land cover in the coastal and white sand belt areas. In the coastal plain areas cultivated areas are evident in Regions 2 3 and 4 southeast of SBPA and occur to a lesser extent in Region 1 including SBPA. The landscape in these areas is dominated by sugar rice and coconut plantations interspersed with smaller scale establishments of nontraditional crops and livestock. May 2017 178 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Figure 620 Land Cover in Coastal Guyana Chapter 6 Existing Environment Source ERM 2014 and CCI 2012 May 2017 179 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment The SBPA is a notable feature in the coastal area. It was designated a Protected Area with the passage of the Protected Areas Act of 2011 and is the only Protected Area on Guyanas coast. More information on the SBPA is provided in Section 6.2.2.

6.3.4.1 Land Ownership The pattern of land ownership in Guyana today is approximately 85 governmentowned approximately 14 percent Amerindianowned and one to two percent privately owned. There are two land markets one consisting of freehold properties and one consisting of the lease of stateowned land. Amerindian lands are owned collectively and are not subject to transfer or sale. Approximately half of the farms in the coastal area are freehold properties and these tend to be small properties of 515 acres each Government of Guyana 1997. Leases of governmentowned lands are issued by the Guyana Lands and Surveys Commission GLSC. According to a study of the land registration system in Guyana conducted by the InterAmerican Development Bank IDB the countrys dual property registration system title registration and deed registration has regulations that overlap and conflict and is considered complex and bureaucratic. The systems are also considered ineffective in managing and enforcing rights. As a result a large number of land owners do not register their properties or do not keep their ownership rights up to date IDB 2010.

6.3.5 Economy Guyanas nominal GDP in 2015 was 653.8 billion GYD or approximately 3.2 billion U.S. dollars USD.

The per capita GDP in 2015 was 761000 GYD or approximately 3700 USD BSG 2016 and it was reclassified by the World Bank from a lower middle income to an upper middle income country in 2016 World Bank 2016. Guyanas main sectors by contribution to GDP are summarized in Table 616. Table 616 Economic Sectors and Contribution to GDP 2015 Sector Agriculture Fishing and Forestry Wholesale and Retail Trade Transportation and Storage Mining and Quarrying Construction Manufacturing Public Administration Information and Communication Financial and Insurance Activities Education Other Services Health and Social Services Real Estate Source PSC 2015 Note Percentages add to more than 100 due to rounding. May 2017 180 Percent of GDP 19.2 12.3 11.2 10.9 9.8 7.4 7.2 7.0 5.0 4.5 3.9 2.0 1.2 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Guyana relies heavily on trade with exports totaling 238.3 billion GYD 1.15 billion USD in 2015 up from 183.3 billion GYD 884.9 million USD in 2010 Guyana Bureau of Statistics 2015. The main export products for the country are sugar rice bauxite gold forest products and fish FAO 2015. Sectors that are uniquely tied to the coastal environment in Guyana as well as the mining sector are described in further detail below. 6.3.5.1 Agriculture According to the Private Sector Commission Guyana has a relatively strong agricultural sector and is the only net exporter of food in the Caribbean. In 2015 agriculture fishing and forestry accounted for 19.2 percent of the countrys GDP or 73.9 billion GYD approximately 356.7 million USD. Rice Rice farming is the predominant agricultural activity in the coastal areas of Regions 2 and 3 accounting for an estimated 85 percent of the overall economy in Region 2 and 55 to 60 percent of the economy in Region 3 ERM Personal Communication 1. Rice fields dominate the landscape in many coastal areas in these regions Figure 621. Figure 621 Rice Field in Region 2 PomeroonSupenaam The rice sector yield grew by 8.3 percent in 2015 see Figure 622. However the first half of 2016 has seen a decline in yields attributed to El Niorelated dry weather as well as an early arrival of the rainy season Ministry of Finance 2016. May 2017 181 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 622 Annual Rice Production 20112015

sennoT800000700000600000500000400000300000200000100000020112012201320142015Source Private Sector Commission 2015 According to the president of the Guyana Rice Producers Association industrial rice production requires the ability to precisely control water levels in the rice fields. The rice growers in coastal Guyana achieve this by operating two separate systems of canals one dedicated to irrigation and another dedicated to drainage. The irrigation canals convey fresh water from water conservancies via gravity to the rice fields. The rice fields are contained within a dike system that has separate gates for irrigation and drainage systems. The fields drain to a separate network of canals that were constructed to provide general drainage to the surrounding coastal landscape ERM Personal Communication 1. These canals drain to the Atlantic Ocean via manuallyoperated mechanical sluice gates locally called kokers; see Figure 623. The drainage canals are generally constructed at or very near sea level to achieve the gradient necessary for drainage of the surrounding landscape and can therefore be tidally influenced but the kokers control inflow from the sea. This system ensures that the rice fields remain upgradient of tidally influenced water in the drainage canals and prevents salt water from intruding into the fields ERM Personal Communication 1. May 2017 182 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 623 Sluice Gate Koker in Charity Region 2 at High Tide Note Seawater seeping into drainage canal from ocean through closed gate. Sugar Figure 624 shows an aerial view of sugar plantations in Region 2. Sugar production increased in 2014 and 2015 after being in decline in previous years Figure 625. According to Guyana Sugar Corporation GuySuCo the national sugar company sugar production employs 18000 people in Guyana and accounts for 40 percent of the countrys agricultural production. GuySuCos Demerara sugar is exported to markets in the European Union the U.S. and CARICOM countries. May 2017 183 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 624 Aerial View of Sugar Plantations in Region 2 Figure 625 Annual Sugar Production 20112015 sennoT25000020000015000010000050000020112012201320142015Source Private Sector

Commission 2015 May 2017 184 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Coconut The coconut industry in Guyana has grown in recent years Figure 626 and shows potential for continued growth due to high international demand for products such as coconut oil and coconut water. It ranks third after rice and sugar in terms of acreage cultivated and is grown primarily in the coastal regions including along the Pomeroon River and the Essequibo Coast in Region 2. According to recent news media articles the amount of land in the Pomeroon area being converted to coconut cultivation is increasing Guyana Chronicle 2016; Stabroek News 2016. Figure 626 Annual Coconut Production 2011-2015

sennotcirteM100000900008000070000600005000040000300002000010000020112012201320142015

Source Ministry of Agriculture 2016a Other Cash Crops Nontraditional crops crops other than sugar cane and rice grown in Guyana include tubers such as cassava sweet potato and eddo; vegetables such as eggplant pumpkin and okra; spices such as hot peppers sweet peppers and ginger; and fruits including banana papaya mango and pineapple. Data from the Ministry of Agriculture 2016a show that production for most tuber and vegetable crops has increased in recent years while yields for fruits have been more variable with some fruit crops showing declines from 2014 to 2015. Valueadded Agricultural Products According to various interviewed stakeholders establishment of manufacturing operations to develop valueadded products such as pepper sauce beverages and canned fruit are priorities at both community and strategic policy levels ERM Personal Communications 5 10 14 and 15. A number of agricultural coops in Regions 2 and 3 have achieved varying levels of success in producing and marketing such products. Nationallevel agencies such as the Ministry of May 2017 185 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Agriculture and the Private Sector Commission emphasize the importance of developing markets for such products to provide better stability and security to farmers. However there are a number of challenges associated with this including high energy costs difficulty locating or establishing markets for

products and obtaining financing for startup costs. 6.3.5.2 Fisheries and Aquaculture Marine Fisheries There are four main types of marine fisheries in Guyana MOA 2013 that can be defined by the species targeted gear types used and the depth of water where the fishery takes place. Table 617 summarizes the characteristics of these fisheries. Table 617 Primary Characteristics of Marine Fisheries in Guyana Type of Fishery Industrial Species Seabob shrimps and prawns Gear Trawls Depth Primarily between 1316 m but can occur from 075 m Semiindustrial Artisanal Red snapper and vermillion snapper Mixed fish and shrimp Shark Various Fish traps and lines Edge of continental shelf Gillnets seines and others Trawls gillnets and hook and line 018 m Throughout the continental shelf waters Note Whitebelly identified in Figure 627 is a species of shrimp and is included in the artisanal shrimp fishery. According to data from the Private Sector Commission PSC and the Ministry of Agriculture fishery yields declined between 2014 and 2015. The PSC attributes this to El Niorelated weather phenomena while the Ministry of Finance characterizes this as part of a longerterm decline caused by unsustainable overfishing including illegal fishing by foreign vessels Ministry of Finance 2015. Fishing interests and the Fisheries Department personnel also acknowledged the prevalence of illegal fishing by both foreign and domestic vessels but did not specifically implicate illegal fishing in the recent declines ERM Personal Communications 2 14 15 and 16. Fishing catches for 2007 to 2015 are shown on Figure 627. The data indicate a declining trend for fish and seabob shrimp catches in recent years although the recent decline follows an increasing trend for 2010 through 2014. The prawn industry has been voluntarily scaled back in response to limited catches resulting from overfishing in previous years with approximately 15 Guyaneseregistered boats in operation in 2016. Prawn fishing boats operate from the coast out to about 40 fathoms ERM Personal Communication 2. May 2017 186 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 627 Commercial Fisheries Catch Volumes 20072015 TotalPrawnsWhitebellyFinfish ArtisanalFinfish IndustrialRed SnapperSeabobsennoTcirteMniseicepS300002500020000150001000050000600005000040000300

0020000100000sennoTcirteMnilatoT2007 2008 2009 2010 2011 2012 2013 2014 2015Source

Ministry of Agriculture 2016a The industrial seabob shrimp sector continues to be an important commercial fishery for Guyana and industry leaders are currently in the process of applying for Marine Sustainability Council MSC certification an internationally recognized voluntary process used to assess and certify the sustainability of wild capture marine and freshwater species. The seabob fleet currently operates under a voluntary management plan the only fisheryspecific management plan for fisheries operating in Guyanas territorial waters that calls for a sevenweeklong closed season each year. Seabob sector representatives expect the management plan to be adopted by the government and made compulsory in the near future ERM Personal Communication 2.

Aquaculture According to data from the Ministry of Agriculture the main species produced in aquaculture establishments are the fish bashaw hassar mullet querriman tambaqui tilapia and black shrimp. Data show that tilapia once dominated aquacultural yields but have declined in production while yields of tambaqui and black shrimp have increased considerably in recent years. The total yield of aquaculture product has been variable in the period from 20092015 for which data are available Figure 628. May 2017 187 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 628 Fish Yields from Aquaculture 20092015 Source Ministry of Agriculture 2016a According to the president of the National Aquaculture Association aquaculture is still a small industry in Guyana. Establishments are typically set up in abandoned rice fields. By using the same water supply and drainage configuration used for rice production the aquaculture operations avoid dependency on brackish water and can raise freshwater species despite their coastal locations. Freshwater species currently being raised in rehabilitated rice fields include hassa arapaima tilapia and tobaki pacu ERM Personal Communication 18.

6.3.5.3 Mining and Quarrying The mining sector is an important sector for Guyana and contributed to over half of exports in 2015 Guyana Bureau of Statistics 2015. Most notably raw gold bauxite and diamonds equated to 43.5 percent 9.1 percent and 1.5 percent respectively of export totals in 2015. The Guyana Geology and Mines Commission estimated that in

2010 mining and quarrying accounted for 9 percent of GDP and employed over 11000 persons directly and almost 14000 indirectly GGMC 2010. Due in large part to the mining sector Guyanas economy in recent years has reflected the path of global commodity prices. Real GDP growth decelerated to 3.8 percent in 2014 and to 3.0 percent in 2015 as global commodity prices collapsed for Guyanas major mining exports World Bank 2016. May 2017 188 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment

6.3.5.4 Manufacturing Manufacturing contributed 7.4 percent of GDP in 2015 and grew by 5.3 percent from 2014 to 2015. The most important products in terms of volume include laundry soap detergent paints putty whitewash oxygen and acetylene as well as edible goods including rice sugar and rum PSC 2015. Many of the countrys manufacturing facilities are located in coastal areas UNDP 2005.

6.3.5.5 Tourism According to the World Travel and Tourism Council tourism contributed 3.3 percent to the countrys GDP in 2015. Although most tourism infrastructure e.g. hotels is located in the most populated townships such as Georgetown Linden and Berbice many of Guyanas tourist attractions are located in the countrys hinterland. These attractions offer nature culture and adventurebased experiences such as trips to waterfalls and Amerindian villages which range from sameday to multiple night excursions. Guyana is not a popular destination for cruise ships and receives only a few small ships each year. The country does not have the berthing capacity for large cruise ships ERM Personal Communication 3. Deposition of sediment from the mouth of the Amazon River along Guyanas coast means that there are few beach offerings for tourists. The highly turbid water along the coast also likely contributes to the relatively small numbers of tourists that visit Guyana relative to other locations with clearer water in the region. Some tourism occurs at the SBPA during the sea turtle nesting season but because infrastructure and systems have not yet been established to facilitate travel or provide convenient accommodations this number is limited. In general however Guyana is thought to have considerable ecotourism potential and development of tourism infrastructure at the countrys Protected Areas is considered a key part of the Protected Areas Commissions current strategic plan PAC 2016. Data from the Department of Tourism indicate

that the number of international visitors to Guyana has doubled since the early 2000s see Figure 629 with the largest number of visitors originating from the United States followed by the Caribbean Canada and Central and South America. Because the majority of visitors consist of Guyanese expatriates returning to visit family visitor numbers peak during the summer vacation July and August and key holidays e.g. Christmas in December. According to representatives of the Department of Tourism increases in tourism in recent years are also attributable to increased hosting of regional sporting tournaments particularly cricket events in the Georgetown area. This has brought many international visitors particularly those from the Caribbean. During major events such as the Cricket World Cup traffic congestion beyond the norm was observed in the Georgetown area

ERM Personal Communication 3. May 2017 189 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 629 Annual International Visitors to Guyana 20002015

9002010211022102310241025102Source Department of Tourism 2016 Most of the major tourist attractions in Guyana such as museums the zoo parks public gardens and the Stabroek Market are located in Georgetown. Georgetown and surrounding areas are known for their many historic buildings which date from the late eighteenth century through the midnineteenth century when Guyana was first a Dutch colony and then an English colony National Trust of Guyana 2009. Guided tours of Georgetown's historic buildings and sites are available as are guided tours of attractions such as the Essequibo River the El Dorado Rum Factory and the Georgetown City Centre.

6.3.6 Employment and Livelihoods

Results of the most recent national census indicate that 87.5 percent of the labor force was employed and 12.5 percent was unemployed at this time 2012. Data from the previous census in 2002 indicate that the unemployment rate did not change in this 10year period BSG 2012; BSG 2002. In 2012 the unemployment rate in Region 1 was the highest in the country at 19.3 percent of the labor force. Region 2 had the lowest rate of unemployment in the country at this time at 10.6 percent. Regions 3 and 4 had rates of 11.8 percent and 11.3 percent respectively.

Statistics from the 2012 census indicate that 23.0 percent of the employed population 15 years of age and over in Region 1 27.9 percent in Region 2 and 18.8 percent in Region 3 had occupations in the Agriculture Forestry and Fishing industry group in 2012 BSG 2016. This was the industry group employing the largest number of workers in Regions 2 and 3 while in Region 1 this group was second to Mining and Quarrying. After the Agriculture Forestry and Fishing category Mining and Quarrying employed the second largest group of people in Region 2 14.9 percent while in Region 3 Construction employed the second largest number of workers 12.1 percent. It should be noted that the Agriculture Forestry and Fishing industry group and the May 2017 190 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment primary sector¹⁶ in general is dominated by male workers with female workers making up less than ten percent of the workers employed in this industry group in these regions. Census data show that tertiary service sector jobs such as wholesale and retail trade public administration and accommodation and food services are dominant in Region 4 including Georgetown making up 67.0 percent of jobs there . Female representation in this sector is high with women making up 48.2 percent of workers in the sector BSG 2016. Secondary and primary sector jobs make up 21.0 percent and 12.0 percent of employment in Region 4. The issues facing indigenous groups of Guyana are typically related to lack of empowerment and inclusion into the mainstream economy. The standard of living for the indigenous minority of Guyana continues to be lower than that of the majority of the countrys citizens. A larger proportion of the Amerindian population is classified as socioeconomically disadvantaged Minority Rights Group International 2008 with the lack of formal employment opportunities as a significant contributing factor. Income generation opportunities in the indigenous coastal communities of Regions 1 and 2 are scarce and include heart of palm harvesting and the wildlife trade including sale of aquarium fish IDB 2007. In the past the Region 2 village of Mainstay operated an organic pineapple farm and processing facility; however the plant was shut down several years ago ERM Personal Communication 4. Some residents of Region 1 and 2 indigenous communities also work in mining and logging camps in the hinterland IDB 2007. 6.3.6.1

Fishing Fishing along the Guyanese coast varies in scale and type. At the easternmost end of Region 2 fishing occurs at a relatively small scale and catch is typically sold locally at roadside stands or out of vehicles See Figure 630. Boats venture only a few kilometers out from the coastline and fisherfolk typically only go out for the day. Species caught include catfish bangamary and bashaw ERM Personal Communication 19. Farther west in Region 2 at Lima larger scale fishing is practiced about 8 km 5 mi offshore. Small artisanal boats are still used because the coastal mudflats in this area do not allow for the use of larger boats. Fisherfolk go out for 1012 days at a time and fish for snapper snook trout wrasse patwa catfish bangamary and butterfish. Some fish are sold locally while others are sold wholesale for resale in Georgetown ERM Personal Communications 16 20 and 21 see Figure 631. There are no landing areas for commercial fishing vessels in Region 1; small scale fishing activity occurs along the Region 1 coast and is primarily for subsistence. Fishing yields vary by season with interviewed fisherfolk reporting the highest yields in June through August. From September to January catches are at their lowest due to high winds. 16 According to the BSG the primary sector industries e.g. agriculture fishing forestry and mining make direct use of natural resources and include the production of raw materials and basic foods. The secondary sector is engaged in manufacturing using raw products from the primary sector and includes processing construction textile production brewing and bottling etc. The tertiary sector provides services to the general population and businesses including retail and wholesale trade transportation and distribution entertainment tourism healthcare etc. May 2017 191 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 630 Salted Fish Drying Outside a Fisherpersons Home in Region 2 Source ERM 2016 Figure 631 Fresh Fish Being Sold at Stabroek Market in Georgetown Source ERM 2016 May 2017 192 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Challenges for the Fishing Industry When asked about changes in fishing yields over the years responses from artisanal Region 2 fisherfolk varied with most reporting no noticeable change in catch volume. However a fisherman with a relatively

largescale operation of three boats operating out of Charity stated that catches are declining and attributed this to an overallocation of fishing licenses by the government ERM Personal Communication 17. As indicated in Section 6.3.3 annual yields in the fishery sector have declined in the last four years for fish and three of the last four years for seabob although seabob yields recovered slightly between 2014 and 2015. Although there are no data available to quantify the impact of Illegal Unreported and Unregulated IUU¹⁷ fishing in Guyana its role in threatening sustainability of the countrys fishery is considered to be significant Ministry of Finance 2015; Ministry of Agriculture 2016b. Another challenge faced by fisherfolk is piracy. Most of the fisherfolk interviewed by ERM in Region 2 have been victimized by pirates at some time. This typically consists of the theft of boats and/or engines and fisherfolk are sometimes assaulted in these confrontations. Most respondents perceived that piracy had gone down in the last 5 or 10 years. Some implicated the recent establishment of a Coast Guard Station at the mouth of the Pomeroon River as having influenced the decrease in piracy. Of those who have encountered pirates they were typically unsure of their assailants nationality but speculated that they could be Venezuelan Guyanese Surinamese or a mixed group from different countries. The dynamic accretion and erosion of the Guyanese coastline as a result of natural forces can also pose challenges for fisherfolk. During the August/September 2016 field visit ERM personnel observed considerable mudflat and beach accretion at most coastal access points along the Region 2 coast which prevents fisherfolk from landing their boats in some areas Figure 632. 17 IUU fishing takes place where vessels operate in violation of the laws of a fishery. This can apply to fisheries that are under the jurisdiction of a coastal state or to high seas fisheries regulated by regional organizations. May 2017

193 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 632 Fishing Boat Landed on a Coastal Mudflat in Region 2 September 2016 Source ERM 2016 6.3.6.2 Farming and Agricultural Processing As discussed above agriculture is a major livelihood activity in Region 2. Rice farming dominates agricultural production in Region 2 but other crops such as red beans plantains bananas eggplants

and other vegetables are grown on a smaller scale in Region 2 as well. Most households also raise livestock such as cattle hogs poultry and small ruminants. The Amerindian community of Mainstay located approximately 6 km 3.5 mi from the coast in Region 2 is known for its organic pineapples which for a number of years were processed into canned chunks for export to European markets ERM Personal Communication 4. As discussed above coconut cultivation is becoming increasingly popular in the Pomeroon area as demand for coconut water and other valueadded coconut products continues to grow. A number of farms produce coconut water for export to Trinidad and Tobago while others produce coconut oil. A group established in 2001 the Pomeroon Womens AgroProcessors Association also produces a number of valueadded products including virgin coconut oil pepper sauce cooking sauce wine and carambola cake mix ERM Personal Communication 5. In the Amerindian communities of Region 1 agricultural activities occur on a small scale and include cultivation of tubers corn cucumber eggplant ginger peppers plantains bananas watermelon beans okra pumpkin and coconut. At least one community engages in cassava processing including cassava bread starch and cassareep Protected Areas Commission 2014. May 2017 194 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Challenges for Farmers and Agricultural Processors Climate change is perceived as a challenge for some agricultural producers. For example changes in sunshine and rain patterns are thought to have contributed to decreased pineapple yields in recent years ERM Personal Communication 4. Sea level rise potentially associated with climate change is also considered a threat for coastal farmers given that the coastal plains where the majority of the countrys agricultural activity occurs lies below sea level ECLAC 2011. Outside of flood events saltwater sometimes enters into the irrigation canals through sluice gates at high tide or up the Pomeroon River during the dry season. This can adversely impact some crops such as most vegetables but may be beneficial to others such as fruit trees ERM Personal Communication 5. As noted above however the irrigation canal system for rice fields and fish farms are separated from the drainage system and draw from the water conservancies. 6.3.6.3 Speedboat Operation Guyanas

unique geography means that boating is an important mode of transport for travel between the coastal regions. Other than air travel the most rapid and direct means of accessing Region 2 from the east coast of the Essequibo River is by speedboat though a ferry service is also available. Speedboat operators servicing the route between Parika in Region 3 and Supenaam in Region 2 belong to the SupenaamParika Speedboat Owners Association which currently numbers 91 boats See Figure 633. According to a member of the association the majority of customers for this route are business owners such as shopkeepers who travel to Georgetown for supplies ERM Personal Communication 6. Speedboats are also used for transportation to communities upriver in the Essequibo and Pomeroon Rivers and to areas of Regions 1 and 2 that are not accessible by road i.e. areas west of Charity. More information on speedboat use in the coastal areas is provided in Section 6.3.8 Figure 633 Speedboats Docked in Parika Region 3 Source ERM 2016 May 2017 195

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Challenges for Speedboat Operators Although natural forces e.g. wind waves sea currents and sediments transported from the mouth of the Amazon River create a dynamic and everchanging coastline speedboats are typically able to maneuver through mud and sandbanks where ferries would be unable to traverse ERM Personal Communication 6. As a result there are no notable seasonal factors that impact business or safety for speedboat operators. However some stakeholders noted that along the Pomeroon River where there are many coconut plantations and processing plants the practice of discarding coconut shells in the river poses a danger to speedboat operators and passengers ERM Personal Communication 5 and ERM Personal Communication 6.

6.3.7 Community Health and Wellbeing According to the Ministry of Health health outcomes in Guyana continue to improve steadily with life expectancy at birth increasing from 63 years in 1998 to 67 years in 2010 Ministry of Health 2013.

6.3.7.1 Health Status Causes of Death The leading causes of mortality in 2010 were chronic diseases including cardiovascular and cerebrovascular diseases cancers diabetes and hypertension Ministry of Health 2013b. According to the World Health Organization Guyana had the highest rate of suicide of any

country in the world in 2015 at 44.2 deaths per 100000 people versus the global average of 16 WHO 2014. According to Guyanas Chief Medical Officer rates are particularly high in Regions 2 3 and 6 with the most common method being ingestion of poisons such as pesticides. No single reason is pinpointed for this phenomenon but the shortage of mental health workers and the stigma associated with mental illness leading to untreated depression are thought to be contributing factors as well as the ease of access to pesticides and other toxic agricultural substances ERM Personal Communication 7. Burden of Disease As with many other developing countries Guyana is undergoing an epidemiological transition by which noncommunicable diseases are beginning to replace communicable diseases as the leading causes of illness and mortality. This shift is largely due to trends toward more sedentary occupations and lifestyles as well as unhealthy diets and habits such as tobacco and alcohol use. Obesity is on the rise in the country along with other forms of malnutrition. Although Guyana is considered selfsufficient for food accessibility and utilization of the right types of food to maintain health are of concern leading the Ministry of Agriculture to develop the Guyana Food and Nutrition Security Strategy 20112020 Plan. This plan aims among other things to integrate agricultural practices with improved food security and nutrition Ministry of Health 2013a. May 2017 196 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Communicable diseases also continue to impact productivity quality of life and wellbeing in Guyana particularly in the hinterland regions. This is due to a number of interrelated factors including poverty nutritional deficiency and inadequate access to health services. Malaria is found in much of Guyana and is most prevalent in Regions 1 7 8 and 9. Malaria control efforts such as distribution of insectietreated bed nets and indoor residual spraying¹⁸ have been ongoing in these regions for decades. After an initial reduction in malaria prevalence in the early 2000s the number of cases increased from 2007 to 2012. Data indicate a correlation with mining activities in the hinterland areas and the countrys Central Vector Control Service now sends mobile teams to work directly with populations residing in mining camps Ministry of Public Health 2014. Figure 634 shows the number of reported new malaria cases for each region

in 2010 the most recent year for which data are available. Figure 634 Malaria Incidence by Region 2010

sesacwenforebmuN9000800070006000500040003000200010000Region1Region2Region3Regions
4 5Region6Region7Region8Region9Region10Source Ministry of Public Health 2013b Dengue fever

chikungunya lymphatic filariasis and Zika are also locally transmitted in Guyana. Unlike malaria transmission of these diseases tends to be common in populated and urbanized areas. Tuberculosis

TB continues to be a priority health concern in Guyana. It was nearly eradicated in the 1980s but saw a resurgence in the 1990s due to its association with the HIV/AIDS epidemic. In 2010 the

national average for TB incidence was nine cases per 10000 people. Regional distribution of cases in 2010 is shown on Figure 635. 18 Indoor Residual Spraying involves coating the walls and other

surfaces of a house with an insecticide that has residual activity i.e. continues to work over several months killing mosquitos on contact with the sprayed surfaces. Source Centers for Disease Control

and Prevention 2012. May 2017 197 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 635 TB Incidence Rate

by Region 2010 Inoitaupop00001repsesaC1614121086420Source Ministry of Public Health 2013b In 2015 the number of people living with HIV in Guyana was estimated at 7800 and the prevalence

rate in the population aged 15 to 49 was 1.5 percent. According to the Joint United Nations Program on HIV/AIDS UNAIDS progress has been made in addressing the HIV epidemic in the country with a

reduction in the number of HIV cases reported since 2009 as well as a reduction in the number of AIDS cases Figure 636 and AIDS-related deaths. Figure 636 Annual Number of HIV and AIDS

Cases 20012014 Source UNAIDS 2015 The Neglected Tropical Diseases NTDs lymphatic filariasis and soil-transmitted helminthiasis continue to be problematic in Guyana leading to deformity

malnutrition and social stigma in May 2017 198 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment impacted

populations. Efforts to combat these diseases in the country include mass drug administration campaigns and improvements in sanitation in endemic areas. Maternal and Child Health Guyana

has made improvements in maternal and child health in recent years but has not achieved its Millennium Development Goal MDG targets of reducing child mortality rates by two thirds and maternal mortality ratio by three quarters between 1990 and 2015. Furthermore marked disparities exist in rural and hinterland areas with the rate of under age 5 mortality at 48 per 1000 live births in rural areas and 11 per 1000 live births in urban areas UNICEF 2014.

6.3.7.2 Health Care System

Government health spending compares favorably with other Latin American and Caribbean countries and has averaged about 3 percent of GDP in recent years equivalent to 11.5 billion GYD annually 57.5 million USD Ministry of Public Health 2013b. The healthcare system in the country is highly decentralized with Regional Democratic Councils and Regional Health Authorities managing financing and providing health services. The system experiences a number of challenges related to human resources capacity and infrastructure capacity.

Health Facilities

Health facilities in the coastal regions are summarized in Table 618 below. In addition to these facilities there is one National Ophthalmology Center and one National Psychiatric Hospital in the country both located in Region 6.

Table 618 Health Facilities in the Coastal Regions

Region	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
Regional Hospital	1	1	1	1	1	1
District Hospital	4	2	2	1	1	3
Diagnostic Center	1	1	1	1	1	1
Health Center	4	11	17	39	14	21
Health Post	44	17	22	7	1	2

Source Ministry of Public Health 2016

According to Guyanas Chief Medical Officer some of the biggest health system shortfalls are unreliable emergency care services. This includes the lack of a functioning air ambulance system which is needed to adequately respond to mining injuries in the countrys interior and to the large number of vehicle crash injuries. There are also shortages of blood at times and capacity in hospitals is inadequate. The public hospital in Georgetown once had 900 beds but due to fires and dilapidation over the years this has been reduced to 450

ERM Personal Communication 7.

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Health Human Resources

Retention of health care professionals in Guyana is a challenge as in many other developing countries that see emigration of skilled workers to developed countries. The most recent available statistics from the

Ministry of Public Health indicate that there were 6.8 physicians and 13.3 nurses per 10000 people in the country in 2010 Ministry of Public Health 2013a. Guyana currently has a Health Human Resource Action Plan for Guyana 20112016 that is aimed at addressing this issue.

6.3.7.3 Quality of Life Water and Sanitation According to the most recent Guyana Multiple Indicator Cluster Survey MICS19 94 percent of Guyanas population had sustainable access to improved drinking water sources20 as of 2014 and 95.4 percent used an improved sanitation facility21 UNICEF 2014. Figure 637 shows the percentage of the population with access to improved sources of drinking water by region. Figure 637 Percent of Population with Access to Improved Water Sources by Region 2014

Region	1Region	2Region	3Region	4Region	5Region	6Source
UNICEF 2014	19					

The MICS program was developed by UNICEF and serves as an international household survey program to collect internationally comparable data on a wide range of indicators on the situation of children and women. 20 Improved water sources refer to any of the following types of supply piped water into dwelling compound yard to neighbor or to public tapstandpipe; tube wellborehole; protected well; protected spring; and rainwater collection. Bottled water is considered as an improved water source only if the household is using an improved water source for handwashing and cooking. 21 An improved sanitation facility is defined as a facility that flushes or pourflushes to a piped sewer system a septic tank a pit latrine a ventilated improved pit latrine or a pit latrine with slab. May 2017 200 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Electricity Results of the MICS indicate that an estimated 91.2 percent of the coastal population and 56.2 percent of the interior population have access to electricity. Figure 638 shows the percent of the population with electricity in each of the coastal regions. Figure 638 Percent of Population with Electricity by Region 2014

Region	1Region	2Region	3Region	4Region	5Region	6Source
UNICEF 2014						

Telecommunications In terms of telecommunications mobile telephone coverage is quite comparable among coastal regions and an average of 88.6 percent of

households in the country has at least one member with a mobile phone. There is more disparity in other forms of telecommunications with Region 1 in particular showing lower levels of access to computers television and radio relative to other regions Figure 639. May 2017 201 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 639 Household Access to Telecommunications 2014 Mobile PhoneComputerTelevisionRadioRegion 6Region 5Region 4Region 3Region 2Region 1020406080100Source UNICEF 2014 6.3.7.4 Natural Hazards Guyana is not threatened by many natural hazards but due to its lowlying coastal plain it faces severe risk of flooding. Both changes in rainfall patterns and predicted sea level rise associated with climate change pose threats to the Guyanese population and its livelihoods. As such the country invests continuously in the construction and maintenance of sea and river defense infrastructure as well as a system of reclaimed lands drainage and irrigation canals and conservancy dams to protect agriculture in the vulnerable coastal areas. In 2005 torrential rains caused many rivers and water conservancies in the coastal plain to overflow causing flooding in Regions 1 2 3 5 and 6. The floods resulted in the direct or indirect deaths of 19 people either from drowning acute dehydration or succumbing to an outbreak of leptospirosis that occurred in the aftermath of the flooding PAHO 2005. Direct economic losses of agricultural crops livestock fisheries forestry and roads in the coastal area were estimated to total over 10 billion GYD 50 million USD UNDP 2005. 6.3.8 Marine Use and Transportation 6.3.8.1 Introduction and Methodology This section describes Guyanas existing marine and coastal transportation infrastructure with particular focus on the Project AOI. Data and information in this section were primarily obtained the Projects Final Multiwell Environmental Management Plan February 2016 and Strategic Environmental Assessment March 2014. Other sources of information include key informant interviews reports studies and other publicly available information. from Projects specific documents including May 2017 202 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment 6.3.8.2 Regional Setting The EP Act requires EIAs to assess impacts on material assets. Nearly all the Project related

activities will occur at designated shorebases on the coast coastal marine waters or offshore. Therefore for the purposes of this EIA material assets were determined to include the marine infrastructure within the AOI which consists of waterways coastal shipping channels ports and offshore shipping lanes. Guyana has approximately 1000 km 620 mi of navigable rivers to most population and economic centers. Subsea which provide water access telecommunications cables are also present in or near the PDA.

6.3.8.3 Existing Conditions in the Project Development Area

The Minister of Public Infrastructures MARAD is responsible for ensuring the safe and efficient operation of shipping activities in Guyana territorial waters. MARAD operates in accordance with the IMO and is a party to a number of IMO Conventions including conventions on Safety of Life at Sea SOLAS; Standards of Training Certification and Watchkeeping STCW; and Prevention of Pollution from Ships. Jamaican and Trinidadian shipping lanes may cross the Stabroek Block Figure 640. As described in Section 6.3.2 fisheries are of significant importance to Guyanas economy particularly in coastal areas. Marine fisheries and subsistence fishing occur throughout Guyana coastal waters from the shore to the edge of the continental shelf approximately 150 km 93 mi from shore although most fishing activity occurs well inshore from the shelf edge. Figure 641 depicts the primary fishing zones offshore Guyana by fishery type and the primary fishing ports or landing sites in Regions 2 and 3. There are no formal landing sites in Region 1. The Port of Georgetown contains more than 40 separate wharves including six primary cargo wharves ranging from approximately 130 m to 247 m 427 ft to 810 ft in length as well as four tanker berths NGIA 2014. Other privately owned docks and portside facilities near Georgetown and the mouth of the Demerara River have staging areas or storage yards although these facilities are congested and space is limited. Vessel call data for the Port of Georgetown are not available. A shipping channel is maintained on the lower Demerara River for the use of private commercial and military vessels. Pilotage is required to access the channel and is provided by the Stabroek Harbour Master. As of 2014 the Superintendent of Surveys of the Harbour Master Department indicated that ship draft in the channel was approximately 4.5 m 15 ft at low water but that dredging work was ongoing to reach a target depth of approximately 5.5 m

18 ft. The Transport and Harbours Department is responsible for the management of the national ferry service. The department has four ferry vessels three of which operate in the Essequibo River and one in the Berbice River. The ferries on the Essequibo River serve several ports also known as Stellings on either side of the Essequibo River and on Leguan and Wakenaam Islands as shown on Figure 642. May 2017 203 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment In addition to the national ferry service many smaller vessels provide transportation between Regions 2 and 3 across the Essequibo River. These smaller vessels are collectively and informally known as speedboats because they typically travel faster than the ferries Figure 633. These speedboats vary in size power and capacity but can typically carry from 5 to 15 passengers. They operate at the same ports as the national ferry service and may also call at smaller informal landings as client demand and conditions warrant.

Telecommunications A publically mapped Guyana Telephone Telegraph GTT subsea telecommunications cable which is part of the Suriname Guyana Submarine Cable System SGSCS runs through the Stabroek Block but is outside the PDA.. Since the SGSCS is outside the area of direct impact and the Project would not have any indirect impacts on it the SGSCS is not discussed further in this EIA. May 2017 204 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 640 Offshore Shipping Lanes NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. May 2017 205 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 641 Fishing Zones and Ports NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. May 2017 206 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 642 Maritime Transportation Facilities May 2017 207 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment 6.3.9 Social Infrastructure and Services 6.3.9.1 Housing Figure 643 shows the breakdown of housing types in the coastal regions as of the 2002 census

housing data from the 2012 census are not yet available and indicates that detached houses are the most common type of housing in all regions. Figure 643 Proportion of Housing Types by Region

	Undivided	private	house	Flat	apartment	condo	Duplex	Barracks	Unknown	Part of a private house	Townhouse	Combined business and dwelling	Other	Region 6	Region 5	Region 4	Region 3	Region 2	Region 1												
1020406080100	Source	Bureau of Statistics	2002	Figure 644	shows the breakdown of home ownership types by region and shows that the majority of homes in the coastal area are owned by their occupants. However Regions 3 and 4 have a higher proportion of rented and squatted homes. Informal housing settlements increased in the 1980s and 1990s due to housing supply constraints causing many people to squat on vacant parcels IDB 2016. The Ministry of Communities has worked in recent years to regularize informal settlements particularly in the Georgetown area by providing services such as paved streets drainage septic tanks and water supply. If settlement sites are not suitable for permanent neighborhoods they are moved to other locations ERM Personal Communication 8; IDB 2008 2016. There are currently 216 squatting areas in the country of which 154 have been brought under the regularization program. May 2017 208	EE PGL	Environmental Impact Assessment	Liza	Phase 1	Development Project	Chapter 6	Description of the Existing Environment	Figure 644	Proportion of Home Ownership Types by	Coastal	Region	Owned	Rented	Private	Leased	Dont know	Squatted	Rented	Government	Rentfree	Other	Region 6	Region 5	Region 4	Region 3	Region 2
1020406080100	Source	Bureau of Statistics	2002	Data from the 2014 MICS indicate that the majority of homes in Guyana have a finished floor 81.2 percent roof 97.0 percent and walls 93.2 percent. However housing stock in some regions is aging and in need of upgrade IDB 2016. According to the 2002 census more than 30 percent of the housing stock in Regions 3 4 5 and 6 was built before 1970.	6.3.9.2	Ground Transportation Infrastructure	Guyana has an approximately 3990 km 2480 mi road network that is used by the approximately 80000 vehicles in the country. There are six main national paved roads that each have two lanes except for fourlane segments along the East Bank and East Coast Demerara. The road network is dependent on a system of																								

bridges and culverts that provide crossings over a dense system of canals drains and sluices throughout the coastal lowlands. Georgetown has a compact gridbased street network. Road conditions vary widely and can be poor in some locations. Most streets are no more than two lanes wide with approximately 7 m to 8m 23 ft to 26 ft of paved width Google Earth 2016. The port area is linked to central Georgetown via East Bank Demerara Road. Most intersections are not signal controlled; where signals do exist they are frequently out of service. Traffic congestion is a chronic problem in and around Georgetown. Many different types of vehicles including cars large commercial vehicles minibuses horse drawn carts bicycles mopeds scooters and motorcycles all share the same travel lanes. Traffic congestion occurs frequently including just before and just after school hours. East Bank Demerara Road is particularly susceptible to congestion due to backups at the Demerara Harbour Bridge the only road crossing of the Demerara River Figure 645. Daily retraction of the bridge for a period of about one hour causes severe traffic congestion at both ends of the bridge. The limited number of bridge openings causes delays and inconvenience to May 2017

209 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment ocean going vessels. The Government of Guyana has investigated replacing the existing bridge with a new bridge with an elevated central span that would reduce or eliminate the need for drawbridge openings further downstream Kaieteur News 2015. Figure 645 Demerara Harbour Bridge Driving behavior also contributes to poor and dangerous land transportation conditions. Speeding aggressive driving and driving under the influence of alcohol contribute to traffic accidents in Georgetown. Driving at night poses additional concerns due to poor street lighting and road conditions as well as livestock and pedestrians congregating near the roadside OSAC 2016. At the time of writing the Ministry of Public Infrastructure was working with the IDB to develop a Sustainable Urban Transport Plan for Georgetown. This will focus more on management of current traffic than addition of significant new infrastructure; for example separation of slowermoving traffic from vehicular traffic in designated lanes ERM Personal Communication 9.

6.3.9.3 Water and Sanitation According to the Food and Agriculture Organization FAO 95 percent of

water usage in Guyana in 2010 was for irrigation and livestock with four 4 percent used by municipalities and one 1 percent by industry FAO 2015. Potable Water Most potable water is obtained from the deeper aquifers that underlie Georgetown and the coastal plain. Water is distributed by Guyana Water Inc. GWI a commercial public enterprise May 2017 210 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment that has five service areas along the coast and a separate program to serve communities in the hinterland. There are three major water treatment plants in the country located in Georgetown New Amsterdam and Guyamine FAO 2015. In rural areas not served by GWI domestic water is obtained from a mix of ground surface and rainwater sources. Rainwater is often used for potable household use while river water is typically used for cleaning and other nonpotable uses. Businesses that use large quantities of water such as beverage bottling and food processing plants generally have their own wells to meet their needs FAO 2015. Agricultural Water Areas with fully developed drainage and irrigation systems are called Declared Drainage and Irrigation Areas DDIA's and are found in Regions 2 3 4 5 and 6. In these regions irrigation is by gravity from surface water resources trapped by shallow earthen dams known as conservancies. These are located in the upper stream catchment areas and store water at higher elevations than the surrounding fields. The Tapakuma conservancy is a large humanmade conservancy. It serves Region 2 and has been designed to provide irrigation to about 120 square kilometers 29650 acres. During times of water shortage this conservancy is supplemented by pumping from the Pomeroon River FAO 2015. The National Drainage and Irrigation Authority NDIA has responsibility for the maintenance and delivery of the irrigation water supply throughout the country. 6.3.9.4 Power Most of the electricity in the coastal plain of Guyana is generated transmitted and distributed by the stateowned utility Guyana Power Light Inc GPL. However due to poor reliability of the electrical supply many users also have their own diesel generators. Coastal areas that are not serviced by GPL are the Region 2 area west of Charity and Region 1. Most areas of the hinterland do not have electricity service and the government has implemented a number of hinterland energy development projects in recent years

which have included installation of solar systems and feasibility studies for hydropower and wind projects GPL 2016. The PSC has noted that the high cost of electricity in Guyana is a major challenge for business. This was also raised as an issue by representatives of agricultural processing associations ERM Personal Communications 1 5 and 10. According to the PSC development of hydroelectricity should be a major priority for the country. The plan for the 165 megawatt MW Amaila Falls hydroelectric plant was cancelled in 2015 due to delays and the potential for cost overruns ERM Personal Communication 10. Total electricity generation output in Guyana in thousands of MWhours for the period 2009 through 2015 is presented on Figure 646.

May 2017 211 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 646 Electricity Generation in Guyana 20092015 s000HWM80060040020002009201020112012201320142015Source Ministry of Finance 2015

Although Guyana has significant potential for hydroelectric and biomassfueled electricity generation at this time 83 percent of its installed generation capacity is thermal relying on expensive imported liquid fuels and making average electricity prices among the highest in Latin America and the Caribbean. The remaining 17 percent of installed capacity is biomassbased using bagasse sugarcane fibers remaining after cane juice is extracted as fuel to selfgenerate power at GuySucos sugarcane factories. There are plans to enhance the generation capacity of the GuySuco factories such that excess power is available and can be exported to the National electrical grid and the government continues to explore options for a hydroelectric power project GEA 2015; ClimateScope 2015.

6.3.9.5 Telecommunications Infrastructure As described in Section 6.3.7 the majority of households in the coastal regions have access to mobile phone service. However the lack of 4G network access has been a major barrier to increased business investment in Guyana and an issue that the PSC has prioritized. In 2016 the first 4G network in the country was installed. Fiber optic cable is also a pressing need to improve reliability and accessibility PSC 2015 of mobile phone services.

6.3.9.6 Educational Facilities Table 619 shows the number of nursery primary secondary and postsecondary schools in each of the coastal regions. The majority of postsecondary institutions

technical schools colleges and universities are found in Georgetown. May 2017 212 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Table 619 Number of Educational Facilities in Guyanas Coastal Regions

	Nursery	Primary	Secondary	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
17	49	59	65	34	67	42	37	59	54
32	54	Source	Guyana Ministry of Education 2013	3	8	13	15	7	17
Technical Vocational	0	1	0	4	0	1	College	University	0
0	0	0	7	0	2	Table 619 includes the full list of schools in the coastal regions as reported by the Guyana Ministry of Education but Figure 647 only shows schools occurring near the coast. In general this distribution reflects population trends along the coast. Schools are found all along the coast of Regions 3 4 and 6 which are also the most populated regions. In Region 2 schools are found along the coast until the coastal road ends and are much fewer in the Region 2 areas west of Charity and in Region 1.			

May 2017 213 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 647 Locations of Schools that Occur in Nearcoastal Portions of Regions 16

NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. May 2017 214 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment 6.3.9.7 Security Facilities The Guyana Defense Force GDF is the military service of Guyana and has land sea Coast Guard and air Air Corps units responsible for defending the territorial integrity of Guyana. In terms of internal security the Guyana Police Force GPF operates as a semiautonomous agency under the Ministry of Home Affairs. The GPF has seven geographic policing divisions each with their own headquarters stations and outposts as summarized in Table 620. Table 620 Policing Divisions in Guyana Division Geographic Area A B C D EF G City of Georgetown and the East Bank of the Demerara River including the Cheddi Jagan International Airport Timehri 25 miles from Georgetown. County of Berbice but excluding Kwakani. County of Demerara East of the Demerara River but excluding A Division. County of Demerara West of the Demerara River and a portion of the East Bank of the Essequibo. Upper Demerara including the area surrounding the bauxite holdings of Linden Ituni and Kwakani and the Interior. Essequibo

Coast including the islands of the Essequibo and Pomeroon Rivers. Headquarters Location Brickdam Georgetown Number of Stations 9 Number of Outposts 7 Coburg Street New Amsterdam Cove John East Coast Demerara Leonora West Coast Demerara Rabbit Walk Eve Leary Georgetown Anna Regina Essequibo Coast 12 8 6 30 6 5 4 1 6 0 Figure 648 shows the locations of 35 approximately 50 percent of the total reported police stations in Guyana enumerated in the table above locational data were not available for the interior outpost locations. May 2017 215 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 648 Locations of Security Facilities in Immediate Vicinity of Guyanas Coast NOTE Map does not represent a depiction of the maritime boundary lines of Guyana. May 2017 216 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment 6.3.10 Cultural Heritage 6.3.10.1 Underwater Cultural Heritage Prior to EEPGLs interest in the Stabroek Block no previous cultural surveys had been undertaken within the vicinity of the PDA. EEPGL retained Fugro Marine Geoservices Inc. Fugro to conduct a geophysical and remote sensing survey of the seafloor within the PDA to identify the occurrence of any potential cultural resources that may impact or be impacted by the design and placement of planned subsea equipment for the Project. Remote sensing surveys employ various instruments that use high and/or low frequency sound waves to collect information from the seafloor. This survey used several of these including Multibeam echo sounders MBES which collect bathymetric data via a wide band of high frequency sound waves and can detect abnormal shapes which could potentially include objects of cultural interest against the surrounding landscape both AUV and hull mounted used; Side scan sonars SSS which employ high frequency sound waves to collect textural data from the seafloor and provide high resolution images of objects on the seafloor surface AUV mounted; and Subbottom profilers SBP which collect data on subsurface sediments and objects located beneath the seafloor via low frequency sound waves and are capable of locating buried shipwrecks beneath the seafloor surface both AUV and hull mounted used. Submerged archaeological sites are not expected in waters deeper than approximately 125 m 410 ft

which was the approximate sea level during the Last Glacial Maximum 20000 years before present. Since all Project components with the potential to disturb the seafloor would be deeper than approximately 125 m 410 ft the only potential cultural resources in the Project area are manmade objects that have sunk most notably shipwrecks. Fugros Offshore survey operations employed AUV mounted highresolution multibeam echo sounder MBES sidescan sonar SSS chirp subbottom profiler SBP and digital camera as well as hull mounted MBES and SBP units. The remote sensing instruments utilized and the settings employed for each instrument are provided in Table 621. The survey was divided into three areas the Liza Field Development Main AUV Survey Area; the Upper Slope and Outer Shelf Reconnaissance USOS Survey Area; and the Skipjack Survey Area. May 2017 217 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Table 621 Type Instrument MBES SSS SBP Remote Sensing Instruments and Survey Settings of Model Survey Settings Kongsberg EM2040 bathymetric system Kongsberg EM302 bathymetric system EdgeTech model 2200 fullspectrum system Frequency of 200kHz swath coverage of 150 degrees Frequency of 30kHz Dual Frequencies of 105kHz and 410kHz Hull or AUV Mounted AUV Mounted Hull Mounted AUV Mounted EdgeTech model DW106 full spectrum system Frequency Range of 1kHz to 10kHz AUV Mounted Underwater Digital Camera EdgeTech 3300 full spectrum system Prosilica Allied Vision GE4000 Frequency Range of 1kHz to 10kHz 35 millimeter digital imagery 8 m 26 ft above seafloor Hull Mounted AUV Mounted Survey Areas in which Equipment was Used Main AUV Survey AreaWhere Possible in USOS Survey Area Skipjack Area USOS Survey Area Main AUV Survey AreaWhere Possible in USOS Survey AreaSkipjack Area Main AUV Survey AreaWhere Possible in USOS Survey Area Skipjack Area USOS Survey Area As Needed for Ground Truthing in all Survey Areas ERM assessed Fugros remote sensing survey methodology including the remote sensing equipment and instrument settings employed and the results produced according to internationally recognized standards. ERM found that the methods used by Fugro and the results yielded by their survey are sufficient to provide existing cultural heritage data for the area of anticipated impact as the

methodology and quality of data produced met the guidelines and requirements for near and offshore remote sensing cultural surveys as defined by the U.S. Bureau of Ocean Energy Management BOEM and the English Heritage whose guidelines together help frame internationally recognized practices for remote sensing surveys designed to locate and assess cultural heritage. The survey was divided into three areas the Liza Field Development Main AUV Survey Area; the Upper Slope and Outer Shelf Reconnaissance USOS Survey Area; and the Skipjack Survey Area. The main AUV Survey identified 73 Side Scan Sonar Targets UD01 UD073 which were assessed for their potential as marine hazards and/or cultural resources. The targets ranged from approximately 0.5 m to 10.5 m wide and from approximately 2 m to 27 m long. Only three targets UD03 UD06 and UD070 possessed recordable height measuring approximately 0.75 m 1 m and 0.5 m tall respectively. However none of these three targets possess shapes or other characteristics that might suggest they are culturally sensitive objects e.g. shipwrecks May 2017 218 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment and upon closer inspection all three targets are thought to be either pieces of debris or geological formations. Based on an analysis of the geophysical and remote sensing data Fugro concluded that One of the targets SC17 was initially considered to be a possible vessel and thus was subjected to follow up surveys using high frequency SSS and digital photography. During this second inspection however target SC17 could not be relocated though the seafloor at its previously recorded location showed signs of the object having moved downslope drag scars. This indicates that the object is not culturally sensitive because even if it were a cultural resource it no longer maintains its original context greatly diminishing its potential research value Figure 650; Another of the targets SC110 was initially thought to be a potential vessel but upon second inspection was identified as likely being a fishing net Figure 651; and The remaining 71 targets in the main AUV Survey area were judged to be modern debris e.g. debris associated with previous well development projects cable laying efforts or geological features e.g. rock clusters or formations of no significant cultural value. As examples of modern debris three of the targets UD08 UD011 and

UD021 Figure 649 were interpreted as discarded chain or cable coils. In summary upon review of the SSS imagery and data collected ERM concluded that these 73 SSS targets are likely modern debris fishing nets chain or cable coils or geological features of no significant cultural value. Figure 649 SSS Targets UD08 UD011 and UD021 Found within the Main AUV Survey Area May 2017 219

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Figure 650 SSS Target SC17 in the Main AUV Survey Area Figure 651 SSS Target SC110 in the Main AUV Survey Area Remote sensing efforts in the USOS Survey Area revealed no discernable objects either geological or manmade in origin and thus it was concluded that there are no cultural concerns for the USOS Survey Area. Ten SSS targets were identified in the SkipJack Survey Area each of which appeared linear in shape with lengths ranging from approximately 4 m to 78 m 13 ft to 256 ft widths ranging from approximately 1 m to 5.5 m 3 ft to 18 ft and no measureable heights Figure 652. None of these targets were concluded to represent culturally significant objects and are likely to be either geological formations or modern debris. In addition a series of subtle reflections in the SSS data located in the southeast portion of the Skipjack Survey Area are understood to represent the SurinameGuyana Submarine Cable System SGSCS TrinidadGuyana cable. May 2017 220

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment These reflections run approximately 950 m 3116 ft to the southeast and parallel to the reported asbuilt position of the SGSCS TrinidadGuyana cable. The presence of this cable accounts for the presence of discarded cable or chain remains located within the main AUV survey area. Figure 652 SSS Mosaic Showing SSS Targets Including the Potential SGSCS TrinidadGuyana Cable in the Skipjack Survey Area

6.3.10.2 Coastal Cultural Heritage Maps obtained from the Guyana National Trust also show the presence of several shell mounds seashell deposits quarries and ceramicpottery sites i.e. scatters along the Atlantic coast of Guyana including archaeological sites found near Moruka Uitvlugt Stewartville and Leonora. These sites are of significant cultural value to both the people of Guyana as well as researchers from other parts of the world as they offer insight into the material culture of

native peoples inhabiting the land before during and after contact with Europeans. However only two of the ceramic pottery sites on the maps are shown to be located near the shoreline. May 2017 221

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Description of the Existing Environment 6.3.11 Ecosystem Services Ecosystem services are typically defined as the benefits that people obtain from the natural environment including natural resources that underpin basic human health and survival needs support economic activities and provide cultural fulfilment. Ecosystem services are divided into provisioning regulating cultural and supporting services. Each of these is defined below Millennium Ecosystem Assessment [MA] 2005.

Provisioning services Goods or products obtained from ecosystems such as food freshwater timber fiber and other goods. Regulating services Benefits obtained from an ecosystems control of natural processes such as climate water flow disease regulation pollination and protection from natural hazards. Cultural services Nonmaterial benefits obtained from ecosystems such as recreation spiritual values and aesthetic enjoyment. Supporting services Natural processes such as erosion control soil formation nutrient cycling and primary productivity that maintain other services. Review of information indicates that the marine and coastal environments in Guyana provide all four categories of ecosystem services some of which are critical for the wellbeing and livelihoods of coastal communities. These are described by category below.

6.3.11.1 Provisioning Services As described above marine fishing for various species of fish and shellfish is a vital source of protein and income to coastal communities. In addition to cultivated agriculture communities in the coastal area particularly Amerindian communities in Region 1 harvest a range of naturally occurring resources for household use and sale. This includes coconuts manicole heart of palm mangrove bark timber tuli palm used for roof thatch and crabwood seeds that are processed to make crabwood oil. Fishing crabbing and shrimping also occur on a small scale in the mangroves. There is also potential for apiculture in the mangroves. There are currently five apiaries with a total of 100 beehives in Region 1 and seven apiaries with a total of 120 beehives in Region 2. However it is not clear whether any of these are located in mangrove forests. In Regions 4 5 and 6 apiculture does

occur in mangroves Ministry of Agriculture 2016. Despite their protected status sea turtles and their eggs are sometimes poached in the coastal area ERM Personal Communication 11.

6.3.11.2 Regulating Services

One of the most important regulating services provided by coastal ecosystems is shoreline and flood protection. Guyanas coastal plain is vulnerable to coastal flooding due to its low elevation and mangrove forests with their dense root systems are an important component of the countrys natural and manmade sea defense system. Mangroves also filter sediments protecting sensitive seagrass beds from being smothered. May 2017 222 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment

6.3.11.3 Cultural Services

Throughout Guyanas populated coastal regions the seashore is often utilized in religious Hindu funeral and cleansing ceremonies. The Hindu community in Guyana has a number of crematoriums along the coast and ashes are disposed in the ocean as part of funeral ceremonies. In addition prayer and bathing ceremonies are performed informally by members of the Hindu community year round but especially during the holy festival of Kartik Snan which occurs in October or November each year ERM Personal Communication 12. Some members of African ethnic organizations also make use of the seashore to commemorate African Holocaust day at the Kingston Seawall in Georgetown as well as other spiritual and religious events ERM Personal Communication 13. Although infrastructure in the area is not well developed and tourism activity is limited the SBPA has high aesthetic and educational value and potential for ecotourism due to its importance as a sea turtle nesting area.

6.3.11.4 Supporting Services

Mangrove forests along the coast play an active role in nutrient cycling and act as nurseries for ecologically and commercially important fish and shellfish species. Mangrove and other coastal ecosystems such as brackish lagoons brackish herbaceous swamps and swamp forests also provide habitat for a diversity of flora and fauna including those with tourism value and potential such as migratory shorebirds WWF 2016. May 2017 223 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 6 Description of the Existing Environment Page Intentionally Left Blank May 2017 224 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7

Assessment of Potential Impacts 7.0 ASSESSMENT OF POTENTIAL IMPACTS This chapter of the EIA discusses direct indirect and induced impacts that could occur as a result of the Project. Sections 7.1 through 7.3 discuss impacts that are expected to occur due to planned Project activities. Section 7.4 discusses impacts that are not expected to occur but could potentially occur due to unplanned events. As described in Chapter 4 this impact assessment was performed using the methodology of the ERM Impact Assessment Standard. This methodology takes into consideration both the magnitude of an impact and the sensitivityvulnerabilityimportance of the impacted resource receptor to determine the significance of the impact see Figure 71; the methodology is described in more detail in Chapter 4. In Chapter 7 the potential impacts to resources receptors are described. For each potential impact the impact magnitude and resource receptor sensitivityvulnerabilityimportance are characterized and assigned ratings as noted in Figure 71. Once these ratings are assigned the matrix is used to determine the impact significance. Figure 71 is annotated to show an example of a potential impact considering embedded controls that are part of the Project design but not yet considering any proposed mitigation measures that is assigned a magnitude of Small and for which the resource has been characterized as having a Medium sensitivity. The resulting impact significance which is termed the premitigation significance is therefore determined to be Minor as shown by the dashed circle. If a mitigation measure were to be proposed such that it reduced the impact magnitude to Negligible for example the impact significance would be reduced to Negligible as shown by the solid circle. As described in Chapter 4 positive impacts i.e. benefits are not assigned magnitude ratings and the impact significance is simply expressed as Positive. Figure 71 Evaluation of Impact Significance The impact assessment covers the Project stages described in Chapter 2 i.e. drilling and installation hookup and commissioning production operations and decommissioning. The nature of activities comprising the hookup and commissioning stage are such that all potential impacts associated with this stage are also associated with at least one other Project stage. Accordingly this impact assessment focuses on potential impacts associated with the other three stages drilling and

installation production operations and decommissioning and this effectively also addresses impacts associated with the hookup and commissioning stage. May 2017 225 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts It is also noted that not all resources/receptors have potential impacts associated with every one of these three Project stages. Accordingly there are instances where a particular Project stage is not discussed with respect to a resource/receptor.

7.1 Physical Resources

For the purposes of this EIA physical resources are intended to include nonbiological natural resources.

7.1.1 Air Quality and Climate

7.1.1.1 Introduction

This section addresses potential impacts on air quality due to emissions resulting from Project activities. Additionally while potential climate impacts are more of a global concern from cumulative worldwide greenhouse gas (GHG) emissions the section addresses potential impacts on climate from Project GHG emissions. The key potential impacts assessed include increases in ambient concentrations of pollutants as a result of stationary and mobile combustion sources associated with the Project and GHG emissions from these same sources.

7.1.1.2 Relevant Project Activities and Potential Impacts

Emissions generated by the Project generally emanate from two source categories: a specific point sources such as the power generating units and diesel engines on drill ships and on the FPSO flares used nonroutinely to combust produced gas when not consumed as fuel gas on the FPSO or injected back into the Liza reservoir vents and onboard incineration of wastes; and b general area sources such as support vessels installation vessels tug boats and helicopters. Such emissions contribute to increases in the ambient air concentrations of certain pollutants. Depending on the magnitude and extent of the increases relative to the location of potential receptors onshore in Guyana the increases may have the potential to contribute to health impacts. Because air quality for Project workers will be addressed through standard occupational exposure guidelines the air quality is in consideration to these potential onshore receptors. With respect to climate the combustion of hydrocarbons in support of Project activities will generate GHG emissions. While the GHG emissions from the Project have been estimated with an acceptable level of confidence the potential influence of those GHG emissions on global climate change is not

measurable with an acceptable level of confidence and therefore is not addressed in this EIA.

impact assessment was limited Table 71 summarizes potential Project impacts on air quality and climate.

May 2017 226 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 71 Project Activities and Potential Impacts

Air Quality and Climate	Stage	Project Activity	Resource
Drilling and Installation	Production	Operations	Operation of drill ships power generation and engines marine support and installation vessels and support aircraft.
Ambient air quality onshore population as receptors	Climate	Operation of FPSO power generation and engines marine support vessels and support aircraft; temporary nonroutine flaring of gas when not reinjected.	Ambient air quality onshore population as receptors

Climate Key Potential Impacts Increased concentrations of pollutants in ambient air potentially contributing to health impacts in onshore receptors. Increased emissions of GHGs potentially contributing to climate impacts more of a global concern. Increased concentrations of pollutants in ambient air potentially contributing to health impacts in onshore receptors. Increased emissions of GHGs potentially contributing to climate impacts more of a global concern. Please see discussion in Section 7.1.1.2

7.1.1.3 Characterization of Impacts Air Quality Magnitude of Impact Air Quality Project Emissions Emissions to air from the Project have been estimated based on a number of factors including activity levels fuel type equipment capacities and standard emission factors that are published by the USEPA in the publication AP42 Compilation of Air Pollutant Emission Factors AP42. As described in AP42 an emission factor is a representative value that relates the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight volume distance or duration of the activity emitting the pollutant e.g. milligrams of NO_x emitted per cubic meter of natural gas combusted. The use of these factors allows estimation of emissions from various sources of air pollution. In most cases these factors are averages of available data of an acceptable quality and are generally assumed to be representative of longterm averages for a particular type of source. Table 72 provides a summary of expected annual emissions from various

Project activities for three time periods 20182019 development drilling SURF installation and commissioning and operation of related support vessels; 20202021 drilling FPSO startup and associated temporary nonroutine flaring beginning of production operations tanker loading; and 20222040 production operations following cessation of drilling including temporary nonroutine flaring operation of support vessels and tanker loading. For each of the time periods following 2019 the annual emissions summarized in Table 72 represent the maximum anticipated for any one year during that time period. While there are some differences in emissions for different May 2017 227

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts years within the time periods they are relatively minor and the use of maximum emissions for the impact assessment provides a degree of conservatism in the results.

Table 72 Annual Air Emissions Summary Pollutant Source Category Nitrogen oxides NOx FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill ship Total FPSO Sulfur dioxide SO2 FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill Ship Total Particulate matter PM FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill Ship Total Carbon monoxide CO FPSO FPSO Flaring temporary nonroutine Tanker Loading Area Sources Drill ship Total Annual Emissions Tonnes unless otherwise specified 20182019 20202021 20222040

Pollutant	Source Category	20182019	20202021	20222040
Nitrogen oxides NOx	FPSO	0	0	0
	FPSO Flaring	2385	1255	3640
	temporary nonroutine	0	0	0
	Tanker Loading Area	85	45	130
Sulfur dioxide SO2	FPSO	0	0	0
	FPSO Flaring	170	90	260
	temporary nonroutine	0	0	0
	Tanker Loading Area	500	265	765
Particulate matter PM	FPSO	1635	375	135
	FPSO Flaring	1125	1670	4945
	temporary nonroutine	45	0	110
	Tanker Loading Area	40	60	250
Carbon monoxide CO	FPSO	45	15	10
	FPSO Flaring	80	120	210
	temporary nonroutine	425	2030	30
	Tanker Loading Area	235	350	1545
Other Pollutants	Hydrogen Sulfide H2S	175	140	1125
	Volatile Organic Compounds VOCs	0	2975	50
	Greenhouse Gases GHGs [kilotonnes CO2equivalents]	5	115	40
	Notes	1	205	35

1. The annual estimated totals generally reflect the current preliminary Project schedule see Section 2.14 which 1510 980 195 could change. 2. VOC emissions are shown in this table but were not included in the impact

assessment modeling as no ambient air quality criteria have been established for these substances.

3. PM emissions represent total PM; for the purpose of the impact assessment the total PM values were used for modeling of both PM₁₀ and PM_{2.5} emissions producing conservatively high modeling results. 4. The emission rates in this table reflect annual totals. In some cases the activities generating the emission are not continuous during the year or do not operate at full capacity throughout the year. For these sources the annual emissions estimates reflect this noncontinuous operation over the year. However for the purpose of modeling conducted to compare with shortterm up to 24hour guidelines activities were assumed to be operating at full capacity for the simulated period to reflect maximum shortterm emission rates. Ambient Air Quality Guidelines and Concentrations Ambient air quality guidelines are concentration levels in air that are established by governing authorities to protect human health in locations where exposure can occur. These generally include a margin of safety to ensure that vulnerable individuals are also protected. Guyana has not established specific ambient air quality standards AQSs; therefore the guidelines used for reference in this assessment were those established by the World Health Organization WHO. The WHO guidelines are summarized in Table 73. These guidelines were published in WHO Air Quality Guidelines for Particulate Matter Ozone Nitrogen Dioxide and Sulfur Dioxide Global Update 2005 WHO 2005 except for CO and H₂S which were published in WHO Air Quality Guidelines for Europe 2nd edition 2000 WHO 2000. Existing air quality is discussed in Section 6.1.1. A concentration value of 2.5 gm³ for PM_{2.5} from a Yale University 2015 study was identified for air quality onshore Guyana. No values were found in the literature for existing onshore air quality for the other substances modeled. However Yale University 2016 published a report that ranked Guyana 6th from the best out of 180 countries in air quality. Accordingly it was concluded that onshore Guyana is an undegraded airshed for the purpose of impact assessment process see below. May 2017 229

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7
Assessment of Potential Impacts Table 73 WHO Ambient Air Quality Guidelines Pollutant Averaging
Period Guideline Concentration gm³ NO₂ SO₂ PM₁₀ PM_{2.5} CO H₂S 1hour Annual 10minute

10000 7 Air Quality Dispersion Modeling Air dispersion modeling was carried out to assess air quality impacts for onshore human receptors. The key elements of the modeling are discussed below including receptors source inputs model selection and meteorological data. Receptors A grid of potential receptor points was established for onshore areas in the Project AOI. The intent of this grid was to identify maximum predicted pollutant concentrations generated by the Project across the onshore portion of the Project AOI. The methodology utilized was to predict maximum concentrations at all of the onshore grid points using the dispersion model and then to compare these maximum values to concentrations that may potentially result in significant impacts; if the maximum predicted concentrations are determined to be not significant it follows that air quality impacts on any specific receptors throughout the onshore Project AOI also would be not significant. For this reason specific locations of sensitive receptors were not identified at the onset of modeling.

Sources With regard to source characteristics point sources were modeled with fixed stack parameters including physical dimensions and exhaust characteristics. Flares were also modeled as stacks with additional calculations applied to adjust the release height and stack parameter to account for increased thermal buoyancy associated with the high temperature of the flare. All of the emissions sources on the FPSO were conservatively modeled at a single location representing the highest predicted ambient air concentration scenario. Area sources without fixed locations were modeled in a fashion to represent their transit across planned travel areas. For example support vessels and helicopters were assumed to operate and generate emissions within the PDA and also to transit between the shore at Georgetown and the PDA. There is a potential that additional support vessels for some stages of the Project may transit between Trinidad and Tobago and the PDA; however based on the low level of emissions contributed by support vesselhelicopter traffic relative to emissions from sources in the PDA and the expectation that most support vesselhelicopter traffic will originate from Guyana shorebase May 2017 230 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts facilities modeling of

support vessel area sources was limited to vessels transiting between Guyana and the PDA. Figure 72 displays the modeling domain used in this analysis showing the locations of the main Project point sources the FPSO and the drill centers and of the area sources including support vessels helicopters installation vessels and other sources without a fixed location as configured for the modeling. Terrain elevations used in the modeling are also depicted on this figure.

Model Selection

The CALPUFF model a nonsteadystate model used in the U.S. and around the globe for longrange transport and complex wind modeling was selected for use in the assessment. CALPUFF is a Lagrangian puff model that treats a plume as a series of puffs that it tracks as the wind carries the plume towards potential receptor locations. CALPUFF is also capable of modeling nearfield impacts. The selection of CALPUFF was based on the long distance between the principal Projectrelated sources and the receptors. As shown on Figure 72 the distance from the PDA to the closest shoreline is greater than 190 kilometers. At this distance emission plumes released from Project point sources would travel for 10 hours assuming an average wind speed of 5 meterssecond typical for the area. During this transport time winds can change direction and speed. Accordingly prediction of plume dispersion is most appropriately accomplished with a nonsteady state model.

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Chapter 7 Assessment of Potential Impacts Figure 72 Air Quality Modeling Domain

Meteorological Data

The Weather Research and Forecasting WRF model was used to develop hourly meteorology inputs for CALPUFF for one year calendar year 2014. WRF is a prognostic meteorological model that creates profiles of winds and temperature at grid points across a domain. The grid spacing chosen for this analysis was 12 km so that a twodimensional profile of hourly winds and temperature was developed every 12 km within the domain shown on Figure 72. The profiles were used by CALPUFF to simulate the transport and dispersion of emission plumes from Project sources allowing the model to calculate ambient constituent concentrations at potential receptor locations.

Predicted Ambient Air Concentrations

Using the methodology described above modeling was conducted with CALPUFF to estimate maximum ambient concentrations of Projectgenerated

constituents of interest at potential onshore receptor locations. Model results were developed for each modeled constituent for each averaging period with an associated WHO guideline concentration Table 73. Results are summarized in Table 74. May 2017 232 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 74 Modeling Results Summary at Potential Onshore Receptor Locations Pollutant Averaging Period Guideline Concentration gm3 Maximum Predicted Concentration gm3 202020182021 2019 20222040 Percent of WHO Guideline 20182019 20202021 20222040 NO2 SO2 PM10 PM2.5 CO H2S 1hour Annual 10minute 24hour 24hour Annual 24hour Annual 1hour 8hour 30minute 200 40 500 20 50 20 25 10 30000 10000 7 1.3 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.3 0.3 2.1 0.2 0.7 0.2 0.1 0.0 0.1 0.0 2.6 1.5 1.5 0.1 0.6 0.2 0.0 0.0 0.0 0.0 2.6 1.4 na na 0.00002 0.6 0.3 0.0 0.1 0.1 0.1 0.2 0.1 0.0 0.0 na 1.0 0.4 0.1 0.9 0.1 0.1 0.2 0.1 0.0 0.0 na 0.7 0.2 0.1 0.9 0.1 0.0 0.1 0.0 0.0 0.0 0.0002 The magnitude rating for air quality is determined on the basis of two factors The increase in pollutant concentrations in air as a result of the Project Project Contribution PC; and The total air pollutant concentrations arising as a result of the PC added to the existing conditions the Predicted Environmental Concentration PEC. The PC and PEC are considered in the context of the relevant WHO air quality guidelines. Once the PC and PEC have been estimated there are a number of approaches that may be used to determine the magnitude of impact. In jurisdictions such as Guyana that do not have specified approaches the most commonly used is based upon guidance from the International Finance Corporation IFC. This approach is set out below on Figure 73. As shown in Table 74 for all the modeled constituents the maximum onshore concentrations predicted to result from Project activities are negligible relative to WHO guidelines all less than or equal to 1 percent of the AQS. Accordingly a magnitude rating of Negligible was assigned for impacts on air quality. May 2017 233 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 73 Definitions for Magnitude Ratings for Potential Impacts on Air Quality Undegraded airshed environmental conditions where no existing concentrations exceed a specific air quality guideline coastal Guyana is considered an undegraded airshed based

on the existing concentrations presented above. Sensitivity of Resource Air Quality The standard approach taken assumes that the sensitivity for human health within the general population is Medium. This is on the basis that as air quality standards are set to protect the most vulnerable individuals in society there is inherently a margin of safety within air quality standards. There are a small number of specific cases where the sensitivity may be defined as High; these cases include where there are particularly vulnerable individuals e.g. a hospital where there are intensive care wards and high dependency wards where patients will be particularly sensitive to air pollution. As such the airshed at all potential onshore receptor locations would be either a Medium or a High sensitivity rating. Impact Significance and Mitigation Measures Air Quality Based on the magnitude of impact and receptor sensitivity ratings the significance of impacts on air quality for all receptors is Negligible. Based on this rating no mitigation is recommended.

May 2017 234 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.1.1.4 Characterization of Impacts Climate Table 75 summarizes the estimated annual GHG emissions for the Project throughout the projected Project lifecycle. Table 75 Estimated Annual Project GHG Emissions Estimated Annual GHG Emissions in kilotonnes CO₂ equivalents

Year	2018	2019	2020	2021	2022	2040
All Project Activities	Notes 1.					

1. The annual estimated totals generally reflect the current preliminary Project schedule see Section 2.14 which 1510 980 195 could change. As potential climate impacts are more of a global concern from cumulative worldwide GHG emissions as opposed to concern for a local airshed modeling of GHG emissions is typically not performed as part of an EIA for a proposed project. Additionally as there are no applicable regulatory criteria to which GHG emissions can be compared this impact was not assigned magnitude and sensitivity ratings. However EEPGL environmental performance monitoring and reporting management systems are in line with international good practice methods with respect to GHG management. EEPGL will quantify direct Project GHG emissions from the Project facilities and equipment utilized within the Project AOI. Quantification of GHG emissions will be conducted annually internationally recognized methodologies and good practice. in accordance with 7.1.1.5

Summary of Impact Significance Ratings Table 76 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on air quality and climate and the impact significance rating resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

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Chapter 7 Assessment of Potential Impacts Table 76 Stage All Project stages All Project stages Air Quality and Climate PreMitigation and Residual Impact Significance Ratings Magnitude Sensitivity

Premitigation Significance Rating	Negligible	Proposed Mitigation Measures	None	Residual Significance Rating
Negligible	Negligible	Medium or High	assumed NR	NR
NR	NR	NR	a NR	Resource

Receptor Impact Ambient air quality increased concentrations of pollutants in ambient air potentially contributing to health impacts in onshore human receptors Climate increased GHG concentrations potentially contributing to climate impacts NR not rated a EEPGL will quantify and report GHG emissions to the EPA consistent with international guidelines.

7.1.2 Sound As indicated in Section 6.1.2 the Project would not be expected to result in significant airborne sound impacts or groundborne vibration impacts due to the distance between Project sound sources and onshore communities and receptors the Stabroek Block is approximately 190 km offshore. The only airborne sound receptors will be workers onboard the FPSO drill ships and other Projectassociated vessels. With respect to worker protection EEPGL will utilize industry standard engineering and administrative controls for sound mitigation and will monitor sound levels and provide appropriate hearing protection PPE for workers as needed. Therefore the Projects potential impacts from airborne sound and groundborne vibration were not assessed. Potential impacts from Projectrelated underwater sound are discussed with respect to potential marine life receptors in Sections 7.2.5 and 7.2.7.

7.1.3 Marine Geology and Sediments 7.1.3.1 Introduction This section describes the assessment of potential impacts on marine geology and sediments. The potential impacts assessed include changes to seafloor morphology from accumulation of discharged drill cuttings on the seafloor and changes to sediment quality from the residual hydrocarbon contained on the

discharged drill cuttings. May 2017 236 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts During installation of the FPSO and SURF components there would be some localized disturbance of sediments in a limited area; however this impact would be negligible with respect to the seafloor morphology. Additional discussion regarding potential impacts on marine benthos from these activities is provided in Section 7.2.8 Marine Benthos. No impacts on marine geology and sediments would be expected as a result of activities associated with production operations or decommissioning.

7.1.3.2 Relevant Project Activities and Potential Impacts

The process of drilling the wells will produce drill cuttings that are discharged either directly to the seafloor in open hole sections drilled riserless and with seawater or from the drill ship into the ocean in hole sections drilled with a riser after treatment i.e. solids control and centrifugal cuttings dryer system. The planned development drilling program and its cuttings management approach is consistent with industry practices and protective of the environment. For each well approximately 2600 bbl of cuttings for the open hole sections will be discharged to the sea without treatment per standard industry practice as these sections are drilled using WBDF instead of NADF. For sections drilled with a riser approximately 3300 bbl of cuttings per well discharged from the drill ship into the ocean would first be treated to remove associated drilling fluids to acceptable discharge thresholds. EEPGL will utilize a cuttings dryer that incorporates a highspeed centrifuge to achieve high liquidssolids separation reducing waste volumes. Planned discharges of drill cuttings and fluids will locally impact the marine sediment layer as a result of accumulation of cuttings on the seafloor. Cuttings will accumulate on the seafloor around the well locations with the distribution of deposition determined by oceanographic conditions. Table 77 summarizes potential Project impacts on marine geology and sediments.

Stage	Project Activity	Potential Impacts
Drilling and Installation	Discharge of drill cuttings during drilling of wells and resulting deposition of cuttings on the seafloor	Localized disturbance of sediments in a limited area; negligible impact on seafloor morphology.
Production Operations	No planned Project activities associated with Production Operations	No impacts on marine geology and sediments.
Decommissioning	No planned Project activities associated with Decommissioning	No impacts on marine geology and sediments.

Key Potential

Impacts Changes to seafloor morphology from accumulated drill cuttings Impacts on sediment quality from residual hydrocarbon on discharged cuttings None anticipated May 2017 237 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.1.3.3 Characterization of Impacts Drill Cuttings Deposition Modeling Chapter 7 Assessment of Potential Impacts Modeling of the deposition of cuttings and fluids was performed using the Generalized Integrated Fate and Transport GEMSSGIFT model. This three-dimensional particle-based model uses Lagrangian algorithms in conjunction with currents specified mass load rates release times and locations particle size distributions settling velocities and shear stress values to calculate the fate and transport of discharged drill cuttings. Model outputs provide estimates of the thickness of deposits on the seafloor and the mass distribution of base hydrocarbon adhered to the cuttings across the seafloor. Four scenarios were modeled considering the drill centers with the shallowest and deepest water depths DC1I and DC2I respectively each under two current conditions the minimum and the maximum of the monthly-averaged and depth-averaged current speeds. These current speeds were derived from the SATOCEAN ocean circulation models. To provide a conservatively high estimate of the potential accumulation rate modeling was conducted assuming cuttings from the open hole sections containing WBDF will be discharged at the seafloor as noted above these cuttings may alternatively be discharged from the drill ship prior to treatment. Table 78 summarizes the results of the modeling for the four drill cuttings discharge scenarios. Releases deeper in the water column at DC2I traveled less distance and therefore resulted in a smaller depositional footprint since the currents near the seafloor were slower than currents near the seafloor at DC1I. Higher current velocities near the surface at DC1I also contributed to a larger overall footprint size. Table 78 Summary of Modeling Results for Drill Cuttings Discharge Scenarios

Scenario	Total Area m ² with Thickness 1 cm	Total Area m ² with Thickness 5 cm
1a DC1I shallowest water depth; Min Currents	1b DC1I; Max Currents	2a DC2I deepest water depth; Min Currents
2b DC2I; Max Currents	23928	14725
3801	4056	4575
5815	1442	1590

May 2017 238 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Magnitude of Impact

Sediment Morphology Modeling of cuttings discharge and deposition indicates the maximum depositional thickness of cuttings on the seafloor is predicted to be between 19 cm and 75 cm depending on currents and well location. The cuttings for the initial open hole sections settle relatively close to the well as they are discharged at the seafloor. In contrast the cuttings for the lower well sections are subjected to greater dispersion as they are distributed by the currents during their settling from near the sea surface. A literaturebased deposition threshold of 5 cm per month Ellis and Heim 1985; MarLIN 2011 was used to assess the extent of the area with the potential to impact benthic organisms via smothering an indirect impact resulting from impacts on marine sediment morphology further discussed in Section 7.2.8. This threshold represents the accumulation rate above which benthic organisms would be expected to be unable to overcome the rate of deposition and become smothered thereby limiting their mobility and access to oxygen. Modeling predicts the extent of cuttings deposition above this threshold is confined to within a relatively short distance from the well location with the largest modeled area predicted to be approximately 43 m in diameter. Deposition thicknesses decrease rapidly with increasing distance from the well. Although the 1 cm thickness does not represent an impact threshold Table 78 also shows the predicted areal coverage of deposition above this level for each scenario. While the above results are expressed in terms of total depositional thickness at completion of drilling of the well it is appropriate to compare these total thicknesses to the deposition threshold rate of 5 cm per month. This is based on the fact that the modeling was conducted assuming a constant well completion rate that simulates even the deepest of the modeled wells being completed in approximately 21 days. In reality it is likely there will be some pauses and delays during the drilling of a well meaning the actual drilling duration likely will be greater than 21 days. Under the assumption that a subsequent well at a given drill center would not be started any sooner than 30 days after the start of the previous well at that drill center the total depositional thicknesses therefore represent a conservatively high estimate of the average depositional rate across a full month. In terms of a magnitude rating the impact on sediment morphology was viewed in the context of the resources overall functionality with respect to providing

a habitat for benthic organisms. In this sense the magnitude rating is expressed based on the fraction of the overall resource being impacted at any one time by the Project. Assuming no more than two drill ships could be drilling at any one time the conservative approach is therefore to double the highest total area results from Table 78 to reflect the largest area predicted to be subjected to a cuttings deposition rate greater than 5 cm per month at any one time. This results in a predicted area of approximately 11600 m² 124860 ft² which represents approximately 0.00004 percent of the area of the Stabroek Block. Further as described above the currents are expected to redistribute the cuttings away from their initial deposition sites over time gradually reducing their thickness on the seafloor at these locations. Considering the extremely limited scale of impact relative to the overall sediment resource of the Stabroek Block the magnitude of impact on sediment morphology from drill cutting deposition was rated as Negligible.

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Sensitivity of Resource Sediment Morphology The sensitivity of the overall marine sediment resource to morphology impacts from drill cuttings deposition is considered Low as unlike the mud banks offshore Guyana that are of critical ecological importance as feeding zones for birds nursery areas for fish and habitat for a variety of invertebrates the deepwater sediments impacted by the drill cuttings discharge do not support high densities of marine species and are not unique. A separate consideration was made for the mud banks offshore Guyana; they are of critical ecological importance as feeding zones for birds nursery areas for fish and habitat for a variety of invertebrates. Thus they were assigned a sensitivity rating of High.

Impact Significance and Mitigation Measures Sediment Morphology Based on the magnitude of impact and receptor sensitivity ratings the significance of impacts on sediment morphology is Negligible. Based on this rating no mitigation is recommended. With respect to the mud banks as discussed in Section 6.1.3 these features exist within 40 km approximately 25 mi from the shore i.e. on the order of approximately 160 km 100 mi from the drilling locations. Based on the results of modeling the cuttings would not reach the mud banks; hence the impact magnitude rating specifically for the mud

banks is Negligible. Thus despite the High sensitivity rating for the mud banks the Negligible impact magnitude leads to a significance rating of Negligible for potential morphological impacts on the mud banks. Based on this rating no mitigation is recommended. Magnitude of Impact Sediment Quality

The embedded controls in the Project design to reduce the impact of drilling discharges on sediment quality include use of WBDF to the extent reasonably practicable for drilling of initial open hole well sections and use of IOGP Group III NABF in all other cases. WBDF contains no hydrocarbons and is less harmful to marine organisms; accordingly no treatment of WBDFbased cuttings is required. When NADF is used the discharge of treated cuttings will be controlled such that residual base fluid on discharged cuttings will average 6.9 percent wet weight. The NABF to be used in the NADF by EEPGL will be IOGP Group III with low to negligible aromatic reducing the potential that changes in sediment quality as a result of discharge of the treated cuttings will lead to toxicological impacts on benthic fauna. While the magnitude rating assigned for sediment quality was not based on a quantitative calculation as was the case for sediment morphology the calculation presented for sediment morphology illustrates the extremely low proportion of the Stabroek Block impacted by drill cuttings deposition. For this reason and considering the lowtoxicity nature of the NADF the magnitude of impact is considered Negligible.

May 2017 240 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Sensitivity of Resource Sediment Quality

As in the case of impacts on sediment morphology from drill cuttings deposition the sensitivity of the marine sediment resource to sediment quality impacts from drill cuttings deposition is considered Low as unlike the mud banks offshore Guyana that are of critical ecological importance as feeding zones for birds nursery areas for fish and habitat for a variety of invertebrates the deepwater sediments impacted by the drill cuttings discharge do not support high densities of marine species and are not unique.

Impact Significance and Mitigation Measures Sediment Quality

These magnitude and sensitivity ratings lead to a significance rating of Negligible for sediment quality impacts. Based on this rating no mitigation is recommended.

Summary of Impact Significance Ratings Table 79 summarizes the impact magnitude and resource

sensitivity ratings for potential Project impacts on marine geology and sediments and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

Table 79 Stage Marine Geology and Sediments PreMitigation and Residual Impact Significance Ratings

Resource	Impact Magnitude	Sensitivity	PreMitigation Significance Rating	Proposed Mitigation Measures	Residual Significance Rating
Drilling and Installation	Sediment morphology from accumulated drill cuttings	Sediment quality from residual NABF on deposited drill cuttings	Low	drill centers	Negligible
	Negligible	Negligible	None	Negligible	High
mud banks	Low	drill centers	Negligible	Negligible	None
	Negligible	Negligible	None	Negligible	High

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Resource	Impact Magnitude	Sensitivity	PreMitigation Significance Rating	Proposed Mitigation Measures	Residual Significance Rating
None	Production Operations	Decommissioning	None	anticipated	7.1.4 Marine Water Quality

7.1.4.1 Introduction

This section describes the assessment of potential impacts on marine water quality. The potential impacts assessed include changes to marine water quality physicochemical conditions as a result of the various effluent discharges associated with the Project. The following subsections describe the various discharges for which marine water quality impacts were assessed the application of computational models for impact magnitude quantification and a discussion of the impact assessment.

7.1.4.2 Relevant Project Activities and Potential Impacts

Planned discharges of drill cuttings and fluids may have a localized impact on marine water quality as a result of increased TSS concentrations in the water column. Cuttings and fluids released during jetting and drilling of the initial sections of the well will increase TSS concentrations around the well near the seafloor. Cuttings discharged from the drill ship will increase TSS concentrations in the photic zone the more shallow level of the water column. These increases in TSS may clog fish gills or in the photic zone cause light inhibition for photosynthetic organisms. During installation and commissioning of SURF equipment hydrotesting fluids containing bioes oxygen scavengers and corrosion inhibitors as well as hydrate inhibiting fluid such as

methanol or ethylene glycol will be discharged to the sea resulting in localized changes to water quality. The FPSO will have several discharges related to its operation and maintenance during production operations. The impacts from these discharges include localized changes to water quality from effluent discharges during production operations and localized changes to water temperature from discharge of cooling water effluent. Table 710 summarizes potential Project impacts on marine water quality. May 2017 242 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 710 Project Activities and Potential Impacts Marine Water Quality ResourceReceptor Stage Marine water quality marine fauna as receptors Drilling and Installation Production Operations Project Activity Discharge of drill cuttings resulting in increased TSS concentrations in water column Liquid effluent discharges from drill ships and marine installation and support vessels chemical substances Discharge of hydrotesting fluids Liquid effluent discharges from FPSO and marine support vessels chemical substances and elevated temperature streams Decommissioning Liquid effluent discharges from marine support vessels chemical substances Key Potential Impacts Increased TSS concentrations in water column potentially contributing to health impacts on marine fauna Increased chemical concentrations in water column potentially contributing to health impacts on marine fauna Increased chemical concentrations in water column potentially contributing to health impacts on marine fauna Increased temperature in water column potentially leading to avoidance of the area by marine fauna Increased chemical concentrations in water column potentially contributing to health impacts on marine fauna

7.1.4.3 Characterization of Impacts Increased TSS from Drill Cuttings Discharge Magnitude of Impact Increased TSS from Drill Cuttings Discharge Modeling of the deposition of cuttings and fluids was performed using the Generalized Integrated Fate and Transport GEMSSGIFT model. This threedimensional particlebased model uses Lagrangian algorithms in conjunction with currents specified mass load rates release times and locations particle sizes settling velocities and shear stress values to calculate the fate and transport of discharged drill cuttings. Model outputs provide estimates of the TSS concentrations resulting from the planned discharges. Four scenarios were

modeled considering the shallowest and deepest water depths of the four drill centers DC1I and DC2I respectively each under two current conditions the minimum and the maximum of the monthlyaveraged and depthaveraged current speeds. These current speeds were provided by the SATOCEAN ocean circulation model. As was assumed with drill cutting deposition modeling Section 7.1.3 modeling of increases in TSS concentrations was May 2017 243 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts conducted assuming cuttings from the open hole sections containing WBDF will be discharged at the seafloor as noted above these cuttings may alternatively be discharged from the drill ship prior to treatment per standard industry practice. This was confirmed to be a conservative assumption as modeling indicated the highest predicted TSS concentration increases are associated with seafloor discharge see results discussion below. Modeling of cuttings discharge and deposition predicts the maximum TSS concentrations at the seafloor occurring during drilling of the initial sections of the well would be between approximately 4323 micrograms per liter mgL and 9737 mgL depending on currents and well location. These concentrations correspond to only the initial sections of the well where WBDF and cuttings are discharged directly from the casing. In contrast modeling indicates the maximum TSS concentrations in the water column for subsequent sections of the well would be between approximately 1.6 mgL and 5.3 mgL depending on currents and well location. These concentrations are much lower because drill cuttings and fluids from the subsequent well sections are treated on the drill ship to remove a substantial amount of the drilling fluid prior to discharge at the surface. Additionally the discharges near the surface are also subjected to greater mixing from the higher current speeds at the shallower depths. A TSS threshold of 35 mgL recommended by MARPOL IMO 2006 was used to assess the extent of the area with the potential to impact photosynthesis via a reduction in light penetration an indirect impact resulting from increased TSS concentrations in the water column. Table 711 summarizes the results of the modeling for the four drill cuttings discharge scenarios. Table 711 Summary of TSS Modeling Results for Drill Cuttings Discharge Scenarios

Scenario	Maximum TSS mgL	Surface	Seafloor	Area km with TSS 35 mgL
Scenario 1	4323			
Scenario 2	9737			
Scenario 3	1.6			
Scenario 4	5.3			

Threshold SurfaceSeafloor 1a DC1I shallowest water depth Min Currents 1b DC1I Max Currents 2a DC2I deepest water depth Min Currents 2b DC2I Max Currents 2.1 4323 2.9 5517 1.6 5260 5.3 9737 0 0.094 0 0.168 0 0.091 0 0.088

Modeling predicts that TSS concentrations above the 35 mg/L threshold would occur during drilling of the initial well sections only and these instances are confined to within a relatively small area around the well locations near the seafloor where water depths are too great to allow photosynthesis. In the case of subsequent well sections none of the maximum predicted TSS concentrations in the photic zone exceed the 35 mg/L threshold. Even at the seafloor the modeling indicates TSS concentrations would be reduced to below the threshold through settling and dispersion within approximately 1 hour of cessation of the halfday of jetting and drilling for the initial well section. Based on the limited area impacted and the short time period during which concentrations above the threshold are expected to persist the May 2017 244 EEPGL

Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts magnitude of impacts on marine water quality from TSS increases resulting from drill cuttings discharge was rated as Negligible. Sensitivity of Resource Increased TSS Concentrations from Drill Cuttings Discharge The sensitivity of the marine environment to increased TSS concentrations is considered Low as densities of receptors e.g. fish and photosynthetic organisms are expected to be low in zones affected by shortlived higher TSS concentrations. Furthermore photosynthetic impacts are less relevant to the area near the seafloor which is well below the photic zone. Impact Significance and Mitigation Measures Increased TSS from Drill Cuttings Discharge These magnitude and sensitivity ratings lead to a significance rating of Negligible for marine water quality impacts from increased TSS concentrations during drilling. Based on this rating no mitigation is recommended.

7.1.4.4 Characterization of Impacts Changes to Water Quality and Temperature

ProjectRelated Discharges Impacting Water Quality and Temperature The Project will include several discharges with the potential to impact water quality and temperature. These discharges based on the preliminary design information are listed in Table 712.

Table 712
Summary of Projectrelated Discharges Type of Discharge and Effluent Characteristics Expected

Discharge VolumeRate SURF FPSO Installation Commissioning Discharges 500000 bbl total Ballast
 Water FPSO initial deballasting Hydrostatic Test Water Bioe 500 ppm Oxygen scavenger 100 ppm
 Corrosion inhibitor 100 ppm 25000 bbl total volume for all flowlines and risers occurring throughout
 SURF commissioning phase Discharge Criteria Treatment Required to Meet Criteria No 1 Perform
 in accordance with IMO requirements 2 No visible oil sheen on receiving water No visible oil sheen
 on receiving water No Gas Injection Line Commissioning Fluids 400 bbl total None NA Hydrate
 inhibitor e.g. methanol or ethylene glycol May 2017 245 Chapter 7 Assessment of Potential Impacts
 100000 bpd 700000 bpd Yes No Oil in water 29 mgL monthly average; 42 mgL daily maximum
 Temperature rise 3C at 100 m from discharge No visible oil sheen on receiving water Temperature
 rise 3C at 100 m from discharge 100000 bpd None NA EEPGL Environmental Impact Assessment
 Liza Phase 1 Development Project Production Discharges Produced Water Oil Grease Residual
 production and water treatment chemicals Cooling Water Hypochlorite 5 ppm Sulfate Removal
 Potable Water Processing Brines Hypochlorite 1 ppm Electrolyte 1 ppm Bioe 5 ppm Oxygen
 Scavenger 10 ppm Scale Inhibitor 5 ppm Subsea Hydraulic Fluid Discharge 5 bpd None NA Water
 soluble lowtoxicity FPSO Bilge Water Inert Gas Generator Cooling Water FPSO Slop Tank Water
 1800 bpd Negligible Negligible Oil in water 15 mgL Yes NA Yes None Oil in water 29 mgL monthly
 average; 42 mgL daily maximum Miscellaneous Discharges including Boiler Blowdown
 Desalinization Blowdown Lab Sink Drainage 10 bpd None NA Tanker Ballast Water 1100000 bbl
 total at each tanker crude loading No 1 Perform in accordance with IMO requirements 2 No visible
 oil sheen on receiving water BOP System Testing WaterSoluble Low Toxicity Hydraulic Fluid Rain
 WaterDeck DrainageWash Down Water 30 bbl every two weeks None Rainfall dependent No visible
 oil sheen on receiving water NA NA May 2017 246 EEPGL Environmental Impact Assessment Liza
 Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Gray Water Black Water
 sewage Food Preparation Wastes Notes bbl barrels bpd barrels per day 5000 bpd 4000 bpd 30 bpd
 NA Yes None Total residual chlorine as low as practical but not less than 1 ppm Macerated to 25
 mm diameter Yes Based on the above estimated discharge rates cooling water produced water and

brines from the Sulfate Removal Unit SRU and freshwater Reverse Osmosis RO system all associated with the production operations stage are the operational discharges that were the focus of modeling to assess the nature and extent of associated marine water quality impacts. Additionally although the discharge of hydrotest water and commissioning fluids will occur over only a short time period during the installation and SURF commissioning stage they were also included in the offshore discharge modeling as a conservative measure. Potential impacts from the other effluent discharges listed above were considered to be of Negligible significance. There may be localized toxic effects on fish crustacean plankton and benthos from chemicals in the low volume of subsea hydraulic fluid discharge but the chemicals used will be of low toxicity and will dilute and disperse rapidly. The constituents modeled for each of these discharges are listed in Table 713. The constituents are associated with potential indirect impacts on marine aquatic life as indicated in the table. The cooling water discharge is the return flow associated with a routine operational process used to cool selected machinery onboard the FPSO. The cooling water discharge will have an elevated temperature relative to the marine environment water temperature and will contain a limited amount of hypochlorite generated from seawater and added as an antibiofouling agent. Aquatic species may be indirectly impacted by the elevated temperature and residual chlorine in the discharge. Elevated temperatures may result in avoidance of the discharge area by aquatic species. Residual chlorine may interact with naturally occurring organic matter resulting in chlorinated byproducts with the potential to result in indirect toxicity impacts on aquatic species. There are no regulatory limits for residual chlorine in marine discharges in Guyana. Residual chlorine toxicity depends not only on doseage concentration and exposure time but also on individual species sensitivity. This makes defining a single impact threshold for residual chlorine exposure difficult.

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Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 713 Summary of Discharges and Modeled Constituents for Installation and Production Operations

Discharge	Modeled Constituents
Cooling Water	Temperature
Residual Chlorine	Produced Water
Sulfate Removal	and Potable Water Processing
Brines	Hydrotest Water

Oil Grease OG Temperature Residual production and water treatment chemicals e.g. scale and corrosion inhibitors Hypochlorite Electrolyte Bioe Oxygen Scavenger Scale Inhibitor Bioes Oxygen Scavenger Corrosion Inhibitor Potential Indirect Impacts on Marine Aquatic Life Temperature increase and associated impacts on marine species. Increased residual chlorine concentrations and associated toxicity impacts on marine species. Increased concentrations of OG production chemicals and associated toxicity impacts on marine species. Increased chemical concentrations and associated toxicity impacts on marine species. Increased chemical concentrations and associated toxicity impacts on marine species. Gas Injection Line Commissioning Fluid Hydrate inhibitor e.g. methanol or monoethylene glycol Increased concentrations of hydrate inhibitor and associated toxicity impacts on marine species. Discharge of produced water containing OG and residual quantities of certain production and water treatment chemicals can result in locally increased concentrations of chemical constituents in the marine environment. Depending on the specific constituent concentrations in these discharges some aquatic species may experience indirect toxicity impacts from these constituents. Hydrotest water discharges may contain bioes oxygen scavengers and corrosion inhibitors which can result in locally increased concentrations of chemical constituents and associated potential for indirect toxicity impacts on aquatic species. The hydrotest discharge hydrate inhibitor discharge and initial FPSO ballast discharge will occur only during a limited time period during SURF installation and commissioning activities unlike the discharge of cooling water produced water and wastewater all of which will occur continuously during production operations. May 2017 248 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Magnitude of Impacts Changes to Water Quality and Temperature The model used to predict the nature and extent of discharge plumes from the various discharges was USEPAs CORMIX dilution model. CORMIX is a design tool routinely used by regulatory agencies to estimate mixing zones resulting from water discharges. Understanding the mixing characteristics of the various discharges and assessing impacts requires understanding the properties of the discharged effluent e.g. temperature the properties of the

receiving ambient water and the method by which the discharge stream enters the ambient water e.g. pipe diffusers. Collectively these factors control the nearfield mixing and dilution of the discharge. Discharge velocity an important determinant of the mixing characteristics of a discharge is directly related to the discharge pipe diameter. At a given discharge flow rate smaller pipe diameters result in higher exit velocities which facilitate increased mixing. However engineering constraints may limit the degree to which the pipe diameter can be reduced. As the design for the Project has not been finalized conservative assumptions were used for the modeled pipe diameter. Pipe diameters that are smaller than those considered in the modeling will result in increased mixing and reduced concentrations at the edge of mixing zone. For the receiving environment the ambient currents selected for modeling consisted of bounding cases 5th and 95th percentile for the range of current velocities identified as well as a typical case 50th percentile for the range of current velocities identified. Ambient temperatures selected for modeling also consisted of bounding cases 1st and 99th percentiles and a typical case 50th percentile. The modeling of potential impacts from these discharges found that even under the most conservative bounding case for each discharge modeling scenario the discharges were subject to rapid mixing and consequently experienced substantial reductions in constituent concentrations within a relatively small distance from the point of discharge. Guyana has not established a specific thermal discharge limit; therefore 3C maximum temperature rise at a distance of 100 m from the discharge point was used as a reference point for cooling water and produced water discharges consistent with recognized international benchmarks and a level appropriately protective of the marine environment. Table 714 summarizes the results of the modeling study of discharges for the most conservative bounding cases including percent reduction in constituent concentrations at the 100 m reference distance. International standards and guidelines and established regulatory requirements provide appropriate benchmarks for OG in produced water and MARPOL specifies limits on OG in bilge water. There are no prescribed limits for the constituents contained in the other discharge streams. May 2017 249 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts

Table 714 Summary of Modeling Results for Most Conservative Bounding Case predictions at 100 m reference distance Discharge Scenario Most Conservative Bounding Case Conditions Modeled Parameters Constituents Modeled Results at 100 m Cooling Water Thermal Cooling Water Residual Chlorine Minimum ambient temperature maximum ambient current Minimum ambient temperature maximum ambient current Temperature Rise²² Ambient temperature rise 3C Residual Chlorine 89 reduction Produced Water Maximum ambient current Sulfate Removal Potable Water Processing Brines Maximum ambient current Hydrotest Water Minimum ambient current OG²³ Temperature Rise Residual production chemicals Hypochlorite Electrolytes Bioe Oxygen Scavenger Scale Inhibitor Bioe Oxygen Scavenger Corrosion Inhibitor Hydrate Inhibitor Gas Injection Line Commissioning Fluid Minimum ambient current ethylene glycol; high ambient current methanol Hydrate inhibitor either methanol or ethylene glycol 92 reduction 98 reduction 99 reduction Concentration reduces to 32 of published No Observed Effect Concentrations NOECs under worstcase discharge conditions In terms of impacts on marine water quality from hydrotesting and production operations Table 715 summarizes the assigned magnitude ratings based on consideration of the extent of impact and concentrations relative to the marine aquatic life thresholds identified. ²² Design specification for the cooling water discharge port were not finalized at the time of the EIA; modeling was conducted to determine the combinations of discharge port diameters and discharge depths that would result in a temperature rise less than 3C at the edge of the 100m mixing zone. ²³ Discharges will adhere to a limit of 42 mg/L oil grease daily maximum and 29 mg/L monthly average at the point of discharge consistent with recognized international benchmarks and appropriately protective of the PDA marine environment. May 2017 250 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 715 Magnitude Ratings for Modeled Hydrotesting and Production Operations Discharges Discharge Impact Magnitude Rating Rationale for Magnitude Rating Cooling Water Small Produced Water Negligible Sulfate Removal Potable Water Processing Brines Negligible Hydrotest Water Negligible Hydrate Inhibitor Gas Injection Line Commissioning Fluid Negligible Modeling indicates

the temperature differential in the water column will reduce to no greater than the reference temperature within the recommended 100 meter mixing zone. At this same distance chlorine concentrations are predicted to decrease by 89 percent. At the 100 meter reference distance OG and residual production and water treatment chemicals are predicted to decrease by 92 percent and temperature rise is predicted to be less than 3C. At the 100 meter reference distance hypochlorite electrolyte bioe oxygen scavenger and scale inhibitor concentrations are predicted to decrease by 98 percent. At the 100 meter reference distance bioe oxygen scavenger and corrosion inhibitor concentrations are predicted to decrease by 99 to 99.5 percent depending on pipe diameter. In addition to the minimal size of the plume the release is temporary approximately 60 minutes or less. At the 100 meter reference distance hydrate control fluid methanol or monoethylene glycol is predicted to decrease by 99.6 to 99.9 percent depending on the fluid selected. In addition to the minimal size of the plume the release is temporary matter of hours. Considering the information presented above the magnitude of quality and temperature impacts on marine water quality was rated as Negligible.

Sensitivity of Resource Changes to Water Quality and Temperature The sensitivity of the marine environment to elevated constituent concentrations and increased temperature is considered Low as the marine fauna used as representative receptors would not be sensitive to chemical constituent concentrations or temperatures at the modeled levels; furthermore species would only be expected to be present in the area of discharge for a limited time.

Impact Significance

Mitigation Measures

Changes to Water Quality and Temperature These individual magnitude and sensitivity ratings lead to a significance rating of Negligible for marine water quality impacts from the individual discharges.

7.1.4.5 Summary of Impact Significance Ratings Table 716 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on marine water quality and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment May 2017 251

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts methodology described in Chapter 4 and summarized at the beginning of this chapter. Although the

modeling results for the individual discharges predict that the impacts associated with each discharge would be individually insignificant the potential synergistic effects of these discharges on sensitive marine biota supports a higher rating than what would otherwise be supported by the impact ratings for each individual discharge. Therefore the overall magnitude of the water quality impacts has been elevated to Small for all Project stages.

Table 7.16	Marine Water Quality	PreMitigation	and	Residual	Impact	Significance	Ratings	Resource	Impact	Increased	TSS
	concentrations	Water quality	and	temperature	changes	Stage	Drilling and Installation	Drilling and Installation	Production Operations	Decommissioning	Water quality changes
		Magnitude	Sensitivity	PreMitigation	Significance	Rating	Proposed Mitigation Measures	Residual	Significance	Rating	Small
		Low	Minor	None	Minor	Small	Low	Minor	None	Minor	Small

7.2 Biological Resources For the purposes of this EIA biological resources is intended to include flora fauna and the habitats on which they depend.

7.2.1 Protected Areas and Special Status Species This section describes the assessment of potential impacts on protected areas and special status species.

7.2.1.1 Protected Areas Planned activities of the Project and associated air emissions effluent discharges and sound generation which will occur approximately 190 km 120 mi offshore will not impact Shell Beach Protected Area SBPA which is Guyanas only designated protected area within the Project AOI. The Projects only potential impacts on SBPA would be as a result of an unplanned event which is discussed in Section 7.4.

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7.2.1.2 Special Status Species Relevant Project Activities and Potential Impacts Chapter 7 Assessment of Potential Impacts Projectrelated impacts on special status species can be considered a subset of the biological resource impacts; however potential impacts on special status species require special consideration because these species are assumed to have a diminished capacity to recover due to their conservation status. A list of species occurring in Guyana and their conservation status is provided in Appendix H. As all of the marine turtles occurring in Guyanas waters carry a ranking of Critically Endangered Endangered or Vulnerable the assessment of potential impacts to marine turtles Section 7.2.6 effectively covers the assessment of

potential impacts to special status marine turtles. One of the marine mammals species observed in the PDA carries a Vulnerable status. Accordingly the assessment of potential impacts to marine mammals section 7.2.5 effectively covers the assessment of potential impacts to marine mammals. For these reasons marine turtles and marine mammals are not discussed in this section on special status species. With respect to fishes four Critically Endangered species Atlantic goliath grouper daggenose shark Caribbean electric ray and largetooth sawfish and six Endangered species Nassau grouper golden tilefish whale shark squatheaded hammerhead scalloped hammerhead and Atlantic bluefin tuna have the potential to occur in the nearshore and offshore areas of Guyana. All have been listed as Critically Endangered or Endangered due to a combination of fishing mortality both as target species or bycatch habitat loss slow maturation rates and low fecundity. For the Critically Endangered fish species all estuarine and nearshore fish species habitat loss is an important driver whereas for the Endangered fish species fish distributed farther offshore habitat loss is a much less important driver than fishingrelated mortality. As the Critically Endangered fish species are estuarine and nearshore species the planned activities of the Project will not directly impact habitat for these species. As the Endangered fishes are distributed farther offshore they will have the potential to encounter the Project marine vessels; however the Project will not permanently alter habitat conditions for these species. The Project will not impact fishingrelated mortality rates for any fish species. Furthermore the Project will not impact any of the underlying causes for these species declines across their ranges as cited by the IUCN. Giant otter *Pteronura brasiliensis* is also listed as Endangered. Giant otters are Endangered due to a combination of the legacy impacts of historically widespread hunting and presentday destruction of riparian tropical forests especially along large interior rivers IUCN 2014. The Project will not impact giant otter habitat nor will it impact the species capacity to recover or rate of recovery from legacy impacts. Vulnerable species other than whales and turtles include a mix of elasmobranchs sharks and their relatives marine mammals West Indian manatee fish groupers and snappers and the Agami heron *Agamia agami*. Deforestation hunting and use of pesticides are the primary factors for the Agami herons Vulnerable

status BirdLife International 2012b. Numerous May 2017 253 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts factors including habitat loss have been implicated in the declines of fish and the manatee. The Near Threatened category comprises fishes almost entirely of elasmobranchs the neotropical otter *Lontra longicaudis* and the semipalmated sandpiper *Calidris pusilla*. The elasmobranchs and bony fishes in both categories are listed primarily due to overfishing slow maturation rates and low fecundity. The neotropical otter is Near Threatened due to a combination of habitat destruction and local conflicts with fishermen and is also sensitive to chemical and organic pollution Rheingantz 2015. Deforestation hunting and use of pesticides are the primary factors for the semipalmated sandpipers Near Threatened status BirdLife International 2012c. Overfishing is the primary factor implicated in the status of the Near Threatened bony fish groupers snappers and tunas. The Project will be located within offshore habitat for several of these Vulnerable and Near Threatened species and near inshore habitats but will not alter the value of the habitats or the capacity of these habitats to support these species. The Project will not affect rates of coastal habitat loss recovery hunting or residual pesticide concentrations in the Agami herons or neotropical otters habitat so it will not affect these species capacity to recover from these impacts. The combination of overfishing slow maturation rates and low fecundity contribute to long recovery times for listed fishes but the Project will have no effect on these species capacity to recover. Characterization of Impacts Tables 717 and 718 provide the definitions used to assign impact magnitude and receptor sensitivity ratings for special status species the same rating definitions are employed for marine turtles and marine mammals in their respective sections. Table 717 Definitions for Magnitude Ratings for Special Status Species Criterion Definition Magnitude Negligible Impact is within the normal range of variation for the population of the species. Small Impact does not cause a substantial change in the population of the species or other species dependent on it. Medium Impact causes a substantial change in abundance and/or reduction in distribution of a population over one or more generations but does not threaten the long term viability/function of that population or any population dependent

on it. Large Impacts entire population or a significant part of it causing a substantial decline in abundance and/or change in and recovery of the population or another dependent on it is not possible either at all or within several generations due to natural recruitment reproduction immigration from unaffected areas.

Table 7.18 Definitions for Receptor Sensitivity Ratings for Special Status Species

Species	Criterion	Definition	Sensitivity
Negligible	Species with no specific value or importance attached to them.	Low	Species and subspecies of Least Concern on the IUCN Red List or not meeting criteria for medium or high value or without specific anatomical behavioral or ecological susceptibilities to Project-related impacts.
Medium	Species listed as Vulnerable Near Threatened or Data Deficient on the IUCN Red List species protected under national legislation nationally restricted range species nationally important numbers of migratory or congregatory species species not meeting criteria for high value and species vital to the survival of a medium value species.	High	Species on IUCN Red List as Critically Endangered or Endangered. Species having a globally restricted range i.e. endemic species to a site or found globally at fewer than 10 sites fauna having a distribution range less than 50,000 km ² internationally important numbers of migratory or congregatory species key evolutionary species and species vital to the survival of high value species.

For the marine fish species addressed in this section the starting assumption was that the same impact magnitude ratings used for potential impacts to marine fish in general section 7.2.7 are applicable for special status marine fish. However additional considerations were applied to the specific special status species to assess whether these magnitude ratings are appropriate. Based on these additional considerations magnitudes for the various special status marine fish categories were assigned as follows

- Critically Endangered** o These species are all nearshore species and thus will not be subject to the same level of potential interactions with planned Project activities that form the basis for the various potential impacts to marine fish in general. Accordingly a magnitude of Negligible was assigned.
- Endangered** o While Nassau grouper is listed as occurring in Guyana waters this species is primarily

a coral reef species. The PDA does not include coral reefs and this species is thus not likely to be present resulting in a magnitude rating of Negligible.

- o With the exception of golden tilefish the other species are pelagic species that are not prone to congregating around offshore structures; accordingly potential impacts that are predicated on marine fish occupying areas around Project vessels i.e those impacts related to marine discharges vessel sound attraction by light and entrainment by seawater intake are less of a concern than for other marine fish in general. Further related to bottom habitat disturbance and VSP or pile driving sound impacts are not a concern for pelagic species. Golden tilefish are known to prefer clay substrates and would not be expected to congregate over the mud substrate that dominates the PDA. For this reason the potential impacts listed in Section 7.2.7 are all assigned a magnitude rating of Negligible for Endangered fish species.
- o As described above the Project will not impact giant otter habitat nor will it impact the species capacity to recover from legacy impacts resulting in a magnitude rating of Negligible.

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- o While the same logic applies for some of the Vulnerable fish species as for the Endangered species described above some other Vulnerable species are likely to have similar behavioral characteristics as the marine fish in general; accordingly as a conservative measure the magnitude ratings from Section 7.2.7 were applied Small for several potential impacts.
- o The Agami heron is a coastal species unlikely to be subject to significant interaction with Project activities resulting in a Negligible impact magnitude.
- o Near Threatened
- o The same approach was used for Near Threatened fish species as for Vulnerable fish species i.e. a magnitude of Small was assumed consistent with marine fish in general.
- o The neotropical otter and semipalmated sandpiper are coastal species unlikely to be subject to significant interaction with Project activities resulting in a Negligible impact magnitude.

Considering the information above Table 719 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on special status species and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in

Chapter 4 and summarized at the beginning of this chapter. Table 719 Special Status Species PreMitigation and Residual Impact Significance Ratings Group Magnitude Sensitivity PreMitigation Negligible High Significance Rating Negligible Proposed Mitigation Measures None Residual Significance Rating Negligible Atlantic goliath grouper daggenose shark Caribbean electric ray and largetooth sawfish Critically Endangered Nassau grouper golden tilefish whale shark squatheaded hammerhead scalloped hammerhead and Atlantic bluefin tuna Endangered Giant otter Endangered Negligible High Negligible None Negligible Negligible High Negligible None Negligible May 2017 256

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Group Magnitude Sensitivity PreMitigation Small Medium Significance Rating Minor Chapter 7 Assessment of Potential Impacts Proposed Mitigation Measures None Residual Significance Rating Minor Negligible Medium Negligible None Negligible Small Medium Minor None Minor Negligible Medium Negligible None Negligible Several elasmobranchs sharks and their relatives fish Vulnerable. Agami heron Vulnerable Several fishes almost entirely elasmobranchs Near Threatened Neotropical otter semipalmated sandpiper Near Threatened

7.2.2 Coastal Habitats The planned Project activities and associated air emissions effluent discharges and sound generation which will occur approximately 190 km 120 mi offshore will not impact any coastal habitats. Operation of the Guyana shorebases will have little to no impact on coastal habitat. The shorebases are expected to be located in existing developed areas. The Projects only potential impact on coastal habitats would be as a result of an unplanned event which is discussed in Section 7.4. May 2017 257

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.2.3 Coastal Wildlife and Shorebirds The planned Project activities will not impact any coastal wildlife or shorebirds. The Project will not involve any direct disturbance of these species and their habitats and the Projects air emissions water discharges and sound generation which will occur approximately 190 km 120 mi offshore will not impact these species. The use of the Guyana shorebases will have little to no impact on coastal species other than common generalist species that are adapted to living in developed areas. The shorebases are expected to be located in existing

developed areas. The Projects only potential impact on coastal wildlife and shorebirds would be as a result of an unplanned event which is discussed in Section 7.4.

7.2.4 Seabirds

7.2.4.1 Introduction

This section discusses potential impacts on seabirds from planned Project activities. Thirty seabird species have been documented in Guyanas offshore waters including the area in and around the PDA. Several resident seabird species occur in the area throughout the year and migratory seabirds typically occur in the area starting late summer with many remaining through winter. When seabirds are not breeding they primarily live in offshore environments moving with prey resources and roosting and loafing on islands or artificial structures in the ocean or simply rafting²⁴ on the ocean surface. The presence of seabirds in a given area is heavily resource driven with individuals and groups of seabirds primarily attracted to prey concentrations. No evidence suggests that large concentrations of seabird prey primarily fish consistently occur in the PDA that would promote regular use by foraging seabirds. Rather seabirds in the area are likely transients moving opportunistically with schools of fish and other prey. The turbid conditions in the PDA further reduce the likelihood that the area has significant importance for foraging seabirds. Further no islands or artificial structures occur in the PDA so the area does not contain any known roosting or loafing areas where large numbers of seabirds might congregate. As such it is expected that seabirds occur in the PDA throughout the year but at a low density and for short transient periods depending on prey availability.

7.2.4.2 Relevant Project Activities and Potential Impacts

Table 720 summarizes the potential impacts of planned Project activities on seabirds.

²⁴ Rafting is a common seabird behavior involving a tight aggregation of seabirds floating on the ocean surface to form a raft.

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Assessment of Potential Impacts Table 720 Project Activities and Potential Impacts Seabirds

Stage	Project Activity	Presence of drill ships and installation vessels	Drilling and Installation	Operation of supply and support vessels	Key Potential Impact
Physical presence of drill ships and installation vessels with lighting potentially acting as an attractant to seabirds exposing them to collision risks	additional energy expenditure and compromised navigation for nightmigrating birds. Vessels may be				

of benefit to some species that use the vessel for rest or shelter during long flights or adverse weather. Strikerelated injury or mortality particularly with rafting seabirds. Light and sound disturbance leading to attraction to or avoidance of the exposed area. Discharge of drill cuttings Exposures to permitted discharges Discharge of wastewater effluents Marine aviation Presence of FPSO Production Operations potentially leading to toxicological or metabolic impacts. Bird strike by helicopters. Physical presence of FPSO with lighting potentially acting as an attractant to seabirds exposing them to collision risks additional energy expenditure and compromised navigation for nightmigrating birds. Structures may be of benefit to some species that use the structure for rest or shelter during long flights or adverse weather. Discharge of cooling water and produced water Discharge of wastewater effluents Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Operation of supply and support vessels Strikerelated injury and mortality lighting disturbance. Nonroutine flaring Marine aviation Decommissioning Decommissioning activities PDA and related vessel traffic Mortality or injury from bird exposure to radiant heat from the flare. Bird strike by helicopters. Ship and helicopter strikerelated injury or mortality. Light and sound disturbance from decommissioning activities leading to attraction to or avoidance of the exposed area. Removal of a reliable food source if the FPSO acts as an attractant for seabird prey. May 2017 259 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Potential impacts from seabird exposure to discharge of drill cuttings produced water and other wastewater effluents are expected to be negligible because the effluents are not highly toxic the discharges would rapidly mix with ambient water and the numbers of seabirds potentially exposed to the effluents is expected to be low. Sections 7.1.3 and 7.1.4 provide further analysis of the impacts of these discharges on marine sediment and water quality respectively. While individual seabirds could be significantly impacted through contact with the flare structure its flame or its radiant heat plume the likelihood of a seabird being present in the heat zone when temporary nonroutine flaring is occurring is extremely low. Accordingly the assessment of potential impacts on seabirds is focused on a direct mortality and

injury of seabirds related to attraction to offshore Project facilities; and b direct mortality and injury related to vessel ship or air strikes. Potential benefits from the Project to seabirds are use of the FPSO drill ship and installation vessels for rest or shelter during adverse weather conditions and if such vessels acts as consistent attractants for seabird prey providing a reliable food resource for seabirds. However this is not expected to be a significant benefit to seabirds at the population level and is not discussed further herein.

7.2.4.3 Characterization of Impacts Direct Mortality and Injury Related to Attraction to Offshore Project Facilities

Magnitude of Impact Direct Mortality and Injury Related to Attraction to Offshore Project Facilities

Seabirds are known to aggregate around large offshore installations such as drill ships and can be present in aboveaverage numbers due to artificially increased food concentrations lighting and attraction to the structure itself for roosting Weise et al. 2001. The impacts of attraction and aggregation by seabirds around an offshore facility can be both positive and negative and can vary considerably by species and more specifically a species typical behavior and the type and length of use of the impacted area. The structure may be beneficial to seabirds by providing a resting place or shelter during feeding migration or adverse weather in areas where these places would otherwise not be found. The negative impacts of seabird attraction to offshore facilities primarily relate to lighting. The drill ships installation vessels and FPSO will operate 24 hours a day so at night time there will be a considerable source of artificial light in an otherwise dark environment. Lights on offshore oil platforms and other installations are known to act as an attractant to seabirds and typical offshore installation lighting extends roughly 3 to 5 km 2 to 3 mi around the source Weise et al. 2001. Poor weather such as fog precipitation and low cloud cover can exacerbate the impact of nocturnal attraction to lights especially when coincidental with bird migrations Ronconi et al. 2015.

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Lighting on offshore facilities can be disorienting to night migrating birds particularly waterfowl which migrate using stellar cues that can be obscured by lights Gaston et al. 2013. Birds lose their stellar cues for nocturnal navigation under low cloud ceiling or other adverse weather conditions and in these circumstances

artificial lights become the strongest cues that birds have for navigation. As a result they are attracted to the lights and will fly around them for extended periods a phenomenon which is referred to in the scientific literature as the trapping effect or light circling. The time individual birds spend circling ranges from a few minutes to several hours to days with an average of around 15 minutes Marquenie 2007. The consequences of this may be 1 energy wasted circling the installation which can be problematic for individual birds undergoing long migrations; 2 collision with the structure or other birds resulting in mortality or injury which can cause individual birds to remain on the structure for long periods where there is no drinking water; 3 increased exposure to Project facilities and activities from the attraction to the area and potential exposure to radiant heat from flaring events which can cause injury or death; and 4 increased risk of predation due to weakness disorientation or injury following long periods of circling or collision with a Project structure Baird 1990; Ronconi et al.. 2015; Platteeuw and Henkens 1997; Deda et al. 2007. As an embedded control to manage lightingrelated impacts from the Project lighting on the FPSO and major vessels will be directed where practicable to required operational areas rather than at the sea surface or skyward. This will reduce the intensity and locations of lighting that seabirds may be exposed to by the Project. Further the Project area is not located within a major seabird migratory flyway nor is it known to support large numbers of seabirds; accordingly the number of individuals that could be impacted by the potential impacts described above is expected to be small meaning the Project would not impact any seabird species at the population level. As such the overall magnitude of the impacts from seabirds being attracted to Project facilities is considered to be Small. Sensitivity of Receptor Direct Mortality and Injury Related to Attraction to Offshore Project Facilities Seabirds are expected to occur in the PDA throughout the year but at low densities and primarily as transients moving with prey resources. All of the 30 species of seabirds known to occur in the area are listed on the IUCN Red List as Least Concern. Several impact exposure events are likely to occur for seabirds; however taking into account their conservation status and that only a few individuals are likely to be impacted rather than whole populations the sensitivity of the seabird receptor is considered Low. Impact

Significance and Mitigation Measures Direct Mortality and Injury Related to Attraction to Offshore Project Facilities These magnitude and sensitivity ratings lead to a significance rating of Negligible for direct mortality and injury impacts on seabirds related to attraction to offshore Project facilities.

May 2017 261 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.2.4.4 Characterization of Impact Direct Mortality and Injury Related to Vessel or Helicopter Strikes Magnitude of Impact Direct Mortality and Injury Related to Vessel or Helicopter Strikes Rafting seabirds may suffer injury or mortality from collision with vessels transiting to and from the FPSO. However rafters are not likely to be present in large aggregations in the PDA because of the metocean conditions offshore Guyana namely a strong surface current which is likely to make the surface waters unsuitable for the large aggregations of species that favor more calm and sheltered conditions. The EEPGL seismic surveys conducted in the Stabroek Block in 2015 and 2016 did not document any concentrations of rafting seabirds in the area during their survey period RPS 2016. On the rare occasions that suitable conditions for rafting occur in the PDA and seabirds are present in high enough concentrations to form rafts individual seabirds could be susceptible to vessel strike and related injury or mortality. However large seabird rafts are easily detectable by oncoming vessels and these vessels could maneuver to avoid them if the birds do not move out of the vessels path. Helicopters will be used as a form of transit to from the Guyana shorebases and offshore vessels and could adversely impact seabirds through helicopter strike of individuals flying near helicopters transiting around or in route to from the drill ships FPSO and installation vessels. Helicopter trips to and from the PDA are not expected to exceed more than a few each day so the duration and number of helicopterbird interactions is expected to be low. Given the low likelihood of vessels encountering rafting seabirds and EEGPLs embedded control of providing standing instruction to Project dedicated vessel masters to avoid any identified rafting seabirds when transiting to and from PDA where safe and feasible if the birds do not move out of the vessels path as well as the limited number of helicopter flights per day to the Project facilities and vessels the magnitude of this potential impact is Small. Sensitivity of Receptor

Direct Mortality and Injury Related to Vessel or Helicopter Strikes On the same basis as described in Section 7.2.4.3 the sensitivity of the seabird receptor to this impact is considered Low. Impact Significance and Mitigation Measures Direct Mortality and Injury Related to Vessel or Helicopter Strikes These magnitude and sensitivity ratings lead to a significance rating of Negligible for direct mortality and injury impacts on seabirds related to vessel or helicopter strikes.

7.2.4.5 Impacts Related to Decommissioning Decommissioning activities for the FPSO and related vessel traffic may impact seabirds in similar ways to that described for the installation and production operations stages including potential for ship and helicopter strike-related injury or mortality and light and sound disturbance from decommissioning activities leading to avoidance of the exposed areas. As May 2017 262 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts stated previously in this section these impacts are expected to impact individual seabirds but have negligible impacts on seabirds at the population level. Once decommissioning activities are completed the absence of the FPSO and the activities of the related support vessels ships and helicopters will remove the attraction and strike-related risks and impacts to seabirds providing a benefit due to the elimination of ongoing risks and impacts. However should the FPSO become an attractant for seabird prey or a regular resting place for migrating seabirds during the production operations stage removal of the facility could have a temporary adverse impact due to the removal of a reliable food source and/or rest area. This impact would be temporary since the birds should quickly adjust to the changed condition.

7.2.4.6 Summary of Impact Significance Ratings Table 721 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on seabirds and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Table 721 Seabirds PreMitigation and Residual Impact Significance Ratings

Stage	Receptor	Impact Magnitude	Sensitivity	PreMitigation Significance Rating	Negligible	Proposed Mitigation Measures	Residual Significance Rating	None
Negligible	Small	Low	Small	Low	Negligible	None	Negligible	Drilling and Installation Production

Operations All Project stages Seabirds direct mortality and injury from attraction to offshore Project facilities. Seabirds direct mortality and injury from vessel or helicopter strikes.

7.2.5 Marine Mammals

7.2.5.1 Introduction

As described in Section 6.2.6 toothed whales sperm melon headed and pilot whales and dolphins pantropical and bottlenose are the most likely marine mammal species that could be encountered in the PDA. Brydes whales and other unidentified baleen whales have also been observed in offshore waters in the PDA. Nearshore other dolphins such as common spotted and spinner dolphins may be encountered. The West Indian manatee is sparsely distributed in coastal and riverine waters of the region and may be encountered in the Demerara River area.

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7.2.5.2 Relevant Project Activities and Potential Impacts

As shown in Table 722 certain planned Project activities could impact marine mammals either through direct mortality vessel strikes or through disturbance leading to changes in behavior and reduced vigor i.e. as a result of light sound and/or actions from Project activities.

Table 722 Project Activities and Potential Impacts Marine Mammals
Stage Activity
Vessel operations Drilling and Installation Power generation VSP ROV operations Pile driving Lighting on Drill Ship and Installation vessels Permitted drill cuttings and fluids discharge Permitted liquid waste discharge Well stream production processing and storage operations Power generation Permitted cooling and produced water discharge Permitted other liquid waste discharge Lighting on FPSO Operation of tankers tugs and supply and support vessels Production Operations Decommissioning Vessel operations
Key Potential Impact
Injury and mortality from vessel strikes Sound exposure leading to permanent threshold shift PTS injury Sound disturbance leading to deviation from area Sound exposure leading to PTS injury Sound disturbance leading to deviation from area Offshore lighting is not considered to have a negative impact on marine mammals; it is considered to be an attractant for fishes and therefore as a secondary attractant for some marine mammals. Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Sound exposure leading to PTS injury Sound disturbance leading to deviation from area Exposures to permitted discharges potentially

leading to toxicological or metabolic impacts. Offshore lighting is not considered to have a negative impact on marine mammals; it is considered to be an attractant for fishes and therefore as a secondary attractant for some marine mammals. Injury and mortality from vessel strikes Sound exposure leading to PTS injury Sound disturbance leading to deviation from area Injury and mortality from vessel strikes Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Sound disturbance leading to deviation from area May 2017 264 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.2.5.3 Characterization of Impacts Injury and Mortality from Vessel Strikes Chapter 7 Assessment of Potential Impacts Collisions with vessels can injure or kill marine mammals. Marine mammals possess acute senses of hearing that they can use to detect approaching vessels and they have the necessary swimming speed capability to avoid collisions. Nevertheless marine mammals are inherently vulnerable to ship strikes when they surface to breathe or to feed. This vulnerability increases in shallow nearshore areas where opportunities to maneuver are reduced. Most Project activities will take place in deep ocean waters and vessel speeds within the PDA will be low reducing the potential for collisions. The only planned nearshore activities will be supply vessels entering/exiting shorebases but even at the peak of drilling and installation the incremental increase in traffic near shorebases will represent a small increase in overall risk to marine mammals. There is very little potential for collisions to occur within the PDA but the potential remains for individual dolphins or whales to collide with vessels transiting between the PDA and shorebases. The greatest potential for collisions to occur will be during drilling and installation when vessel traffic is at its peak; accordingly the risk of injury or mortality from vessel collisions will be higher during drilling and installation than during other stages of the Project. With respect to the potential for injury and mortality from vessels strikes EEPGL will utilize the following embedded controls measure for the Project see Section 2.11 Provision of awareness training to Project dedicated marine personnel to recognize signs of marine mammals at the sea surface; and Standing instruction to Project dedicated vessel masters to avoid marine mammals while underway and reduce speed or deviate from course as needed to reduce probability

of collisions. Injury from Underwater Sound The main sources of underwater sound associated with drilling activities are from the vertical seismic profiler VSP25 activities generating impulsive sound and marine vessels generating nonimpulsive sound. The primary sources of sound from installation activities is from impulsive sources impact pile drivers for the FPSO mooring system and for selected SURF equipment such as manifolds as well as nonimpulsive sources marine vessels. Sound from production operations and decommissioning activities is primarily limited to nonimpulsive sources marine vessels. Underwater sound can cause impacts on marine mammals due to behavioral changes impacting life functions e.g. feeding breeding migration route deviations direct physical impacts 25 The VSP has a small source that produces seismic impulses over a period of time for the purposes of this assessment it was assumed that the source will produce 20 to 40 seismic pulses less than 1 second in length over a 6 to 12 hour period. The wavefield generated by this source is recorded by instruments in the borehole. May 2017 265 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts affecting auditory systems or in extreme cases other physical damage or behavioral reactions leading to death. 7.2.5.4 Marine Mammal Auditory Functions The potential for anthropogenic sound to impact marine animals depends on how well the animals can hear the sound. Sounds are less likely to disturb if they are at frequencies that the animals cannot hear well. However when the sound pressure is high enough it can cause physical injury through nonauditory mechanisms i.e. barotrauma. For sound levels below such extremes frequency weighting may be applied to scale the importance of sound components at particular frequencies in a manner reflective of an animals sensitivity to those frequencies. Auditory weighting functions for marine mammals called Mweighting functions were proposed by Southall et al. 2007 and modified by the U.S. National Oceanic and Atmospheric Administration NOAA 2013 and Finneran 2015. For this study results are presented for both the Southall et al. 2007 Mweighting functions and the weighting functions suggested by Finneran 2015. Southall et al. 2007 proposed Mweighting functions for five functional hearing groups of marine mammals Lowfrequency cetaceans LFCsmysticetes baleen

whales; Midfrequency cetaceans MFCs some odontocetes toothed whales; Highfrequency cetaceans HFCs odontocetes specialized for using highfrequencies; Pinnipeds in water seals sea lions and walrus; and Pinnipeds in air not addressed here. NOAA 2013 suggested further modifications to the LFC function as well as two variations for pho and otariid pinnipeds to the Southall et al. 2007 Mweighting curve for pinnipeds in water. In 2015 a U.S. Navy Technical Report by Finneran 2015 recommended new auditory weighting functions. The overall shape of the auditory weighting functions is similar to human Aweighting functions which follows the sensitivity of the human ear at low sound levels. Although the inclusion of some species changed e.g. the addition of hourglass [*Lagenorhynchus cruciger*] and Peales [*Lagenorhynchus australis*] dolphins to the highfrequency functional hearing group the five recommended functional hearing groups remain those presented in the NOAA 2013. More information on the marine mammal auditory weighting functions described above including the analytical formulation of these metrics is provided in the document Underwater Sound Associated with Liza Phase 1 Project Activities JASCO 2016. The auditory weighting functions recommended by Southall et al. 2007 and Finneran 2015 are shown on Figure 74 and 75 respectively. 26 Pinnipeds were included in Southall et al 2007 but are not relevant to the analysis of auditory impacts because pinnipeds are either very rare or likely extinct offshore Guyana. May 2017 266 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 74 Auditory Weighting Functions for Marine Mammal Hearing Groups as Recommended by Southall et al. 2007 Source JASCO 2016 Figure 75 Auditory Weighting Functions for Marine Mammal Hearing Groups as Recommended by Finneran 2015 Source JASCO 2016 LFCs including baleen whales and MFCs including dolphins and small whales have been observed within or near the PDA so this section focuses on these marine mammal hearing groups only. JASCO Applied Sciences conducted underwater sound modeling for the proposed Project activities JASCO 2016. The modeling was performed for two types of sources impulsive and nonimpulsive. Impulsive sources such as VSP and impact pile driver activities are typically brief and intermittent with a rapid rise time and decay. Piles

can be driven to the seabed using different types of impact hammer types such as diesel hammer air or steam hammer and hydraulic hammer. Diesel hammers produce underwater sound waveforms with each pile strike that are similar to those of air hammers; hydraulic hammers produce a somewhat different waveform signature with a much more rapid rise time. Driven piles may be used in lieu of or in combination with suction piles. A suction pile or suction caisson can be conceptually described as an upturned bucket that is embedded in the marine sediment through pushing or May 2017 267 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts by creating a negative pressure inside the caisson skirt. The suction caisson technology functions very well in a seabed with soft clays or other low strength sediments and is in many ways easier and quieter to install than driven piles which must be hammered into the seabed. For the purpose of this assessment it was conservatively assumed that only impact pile drivers would be used i.e. no suction piles. In contrast nonimpulsive sources such as marine vessels main propulsion systems and internal machinery e.g. generators cranes can be brief or prolonged and continuous or intermittent. However nonimpulsive sources do not have the high peak pressure and rapid rise time that impulsive sounds do. Three complementary acoustic models AASM²⁷ MONM²⁸ and FWRAM²⁹ were used to predict underwater acoustic fields for the Projects potential sound sources. The model results were used to estimate distances to marine mammal injury permanent threshold shift [PTS]³⁰ thresholds based on best available science. Source levels for the VSP were predicted using JASCOs AASM. The VSP source considered here is a sixelement source array with a total volume of 1200 cubic inches. AASM produces a set of notional signatures for each array element based on Source array layout Volume tow depth and firing pressure of each element in the source array Interactions between different elements in the array For the modeling source level spectra from measurements of surrogate vessels including FPSO drill ship pipelaying vessel tugs and support vessels were adjusted to the specifications of the proposed Project vessels. Surrogate vessels were chosen based on the similarity in vessel specifications and types of operation. Underwater sound propagation i.e.

transmission loss was modeled with JASCOs MONM and FWRAM4. The 3D acoustic fields were computed by modeling transmission loss within multiple 2D vertical planes extending from the source. The underwater sound fields were modeled for water column sound speed profiles representative of the month of April. This time corresponds with historically lowest surface temperatures which lead to upward sound refraction and longer distance sound propagation. Predicted sound fields were assessed across three dimensions and the received sound level reported at each point in the horizontal plane is the maximum predicted sound level over all modeled depths for that point.

27 Airgun Array Source Model
28 Marine Operations Noise Model
29 Full Waveform Rangedependent Acoustic Model
30 PTS is a soundinduced impact that results in a permanent loss in hearing sensitivity due to destruction of sensory cells in the inner ear. This damage can be caused by longterm exposure to sound or acoustic trauma <https://www.osha.gov/dts/ostm/noise/health/effect/effects.html>. May 2017

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Based on these reported sound levels in the horizontal plane two distance parameters were reported for each threshold Rmax maximum horizontal distance from the source where the predicted sound level reaches the threshold; and R95 maximum horizontal distance from the source where the predicted sound level reaches the threshold after the 5% of the predicted thresholdexceeding area farthest from the source is excluded. Regardless of the geometric shape of the maximumoverdepth footprint R95 is the predicted range encompassing at least 95% of the area in the horizontal plane that would be exposed to sound at or above the threshold. Six scenarios were considered in this modeling study which include

1. The operation of an FPSO vessel
2. The installation of the FPSO vessel which includes mooring the FPSO and using several installation and service vessels and
3. The installation and operation of a drill center which includes the operation of a drill ship and a pipelaying vessel for the installation of subsea flowlines and risers at Drill Center 2P approximately 13 km (8 mi) north of the FPSO
4. The operation of a VSP in the vicinity of Drill Centers 2P and 2I
5. The installation of manifold foundation piles for SURF equipment at Drill Center 2P through

underwater impact pile driving and 6. The installation of anchor mooring piles at the FPSO location through underwater impact pile driving. The sound footprint for each scenario was modeled to estimate the abovereferenced distance parameters assuming thresholds are equal to the injury criteria prescribed by Southall et al. 2007 and Finneran 2015. The sound footprints were calculated as frequencyweighted Mweighted sound exposure levels SELs assuming 24 hours of operation. The sound footprints account for sourcespecific sound emission characteristics and sitespecific environmental parameters. Additional information on the underwater sound modeling methodology including a detailed description of all model input parameters and approximate locations of modeled sources for all scenarios is provided in the document Underwater Sound Associated with Liza Phase 1 Project Activities JASCO 2016. Underwater Sound Criteria No regulations regarding underwater sound exist for Guyana. Accordingly in the absence of any such limits auditory impacts of the Project on marine mammals were evaluated using Southall et al. 2007 and Finneran 2015 acoustic threshold levels for onset of PTS in LFCs and MFCs Table 723. May 2017 269 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 723 Acoustic Threshold Levels for Onset of Permanent Threshold Shifts PTS in LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Marine Mammal Hearing Group Estimated Auditory Bandwidth PTS Onset Acoustic Thresholds Injury Criteria Impulsive Nonimpulsive Peak Sound Pressure Level unweighted dB peak Sound Exposure Level SEL Mweighted SEL24h; dB re 1 Pa2.s Peak Sound Pressure Level unweighted dB peak Sound Exposure Level SEL Mweighted SEL24h; dB re 1 Pa2.s Southall et al. 2007 LFCs baleen whales MFCs dolphins toothed whales beaked whales bottlenose whales Finneran 2015 LFCs baleen whales MFC dolphins toothed whales beaked whales bottlenose whales 7 Hz to 22 kHz 150 Hz to 160 kHz 7 Hz to 25 kHz 150 Hz to 160 kHz 230 230 230 230 198 198 192 187 230 230 Not available Not available 215 215 207 199 Hz hertz kHz kilohertz dB decibel; SEL sound exposure level 24h 24 hour exposure Pa micro Pascal s second m meters Modeling Results Tables 724 to 729 present the abovereferenced distance parameters describing modeled horizontal distances to

PTS onset acoustic thresholds for LFCs and MFCs according to Southall et al. 2007 and Finneran 2015 criteria for the Scenarios 1 to 6 respectively. Decommissioning activities are currently not included in the scope for underwater sound modeling. Activities during the decommissioning stage would be similar to those of installation activities in terms of types of sound sources i.e. marine vessels only. However decommissioning activities would be shorter in duration and involve a smaller fleet of marine vessels; therefore the potential underwater sound impacts on marine fauna for decommissioning are expected to be less than or similar to those of the installation scenario Scenario 3. The results presented in the tables below account for embedded underwater control measures. Specifically EEPGL will utilize the following embedded underwater sound control measures for the Project see Section 2.11 Gradually increasing intensity of seismic impulses to allow sensitive species to vacate the area before injury occurs i.e. soft starts use of Marine Mammal Observers MMOs during VSP and implementation of other measures recommended by the Joint Nature Conservation Committee JNCC 2010 as applicable; and Maintaining equipment marine vessels and helicopters in good working order and operating them in accordance with manufacturers specifications so as to limit sound levels to the extent reasonably practicable. May 2017 270 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 724 Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 1 FPSO Operations Marine Mammal Hearing Group Injury Criteria and Distances to Criteria Levels Southall et al 2007 Rmax m R95 m Threshold Mweighted SEL24h; dB re 1 Pa2.s Finneran 2015 Rmax m Threshold Mweighted SEL24h; dB re 1 Pa2.s R95 m Nonimpulsive sources marine vessels Lowfrequency cetaceans Midfrequency cetaceans 215 215 Source JASCO 2016 6 5 6 5 207 199 5 5 5 5 SEL sound exposure level 24h 24 hour exposure dB decibel Pa micro Pascal s second m meters Rmax the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all azimuths; R95 the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all

azimuths after the 5 of the thresholdexceeding area farthest from the source is excluded. Table 725

Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 2 Installation of the FPSO Vessel Including Mooring the FPSO and Using Several Construction and Service Vessels Marine Mammal Hearing Group Lowfrequency cetaceans Midfrequency cetaceans Source JASCO 2016 Injury Criteria and Distances to Criteria Levels Southall et al 2007 Threshold Mweighted SEL24h; dB re 1 Pa2.s 215 215 Rmax m R95 m 5 5 No value No value Threshold Mweighted SEL24h; dB re 1 Pa2.s 207 199 5 5 Finneran 2015 Rmax m R95 m SEL sound exposure level 24h 24 hour exposure dB decibel Pa micro Pascal s second m meters R max the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all azimuths; R95 the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all azimuths after the 5 of the thresholdexceeding area farthest from the source is excluded predicted sound levels at all locations are below injury criteria in the midfrequency range May 2017 271 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 726 Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 3 Installation of a Drill Center Including Operation of a Drill Ship and a Pipelaying Vessel Injury Criteria and Distances to Criteria Levels Southall et al 2007 Finneran 2015 Marine Mammal Hearing Group Threshold Mweighted SEL24h; dB re 1 Pa2.s Nonimpulsive sources marine vessels Lowfrequency cetaceans Midfrequency cetaceans 215 215 Rmax m R95 m Threshold Mweighted SEL24h; dB re 1 Pa2.s Rmax m R95 m 9 5 9 5 207 199 6 6 Source JASCO 2016 SEL sound exposure level 24h 24 hour exposure dB decibel Pa micro Pascal s second m meters Rmax the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all azimuths; R95 the maximum distance from the source at which the given threshold is predicted in the modeled maximumoverdepth sound field over all azimuths after the 5 of the thresholdexceeding area farthest

from the source is excluded predicted sound levels at all locations are below injury criteria in the midfrequency range.

Table 727 Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 4 Operation of a Vertical Seismic Profiler Marine Mammal Hearing Group Lowfrequency cetaceans Midfrequency cetaceans Injury Criteria and Distances to Criteria Levels Southall et al 2007 Finneran 2015

Threshold	Mweighted SEL24h; dB re 1 Pa2.s	198	198	Rmax m	R95 m	73	35	68	32
Threshold	Mweighted SEL24h; dB re 1 Pa2.s	192	187	Rmax m	R95 m	39	36		

Table 728 Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 5 Installation of Manifold Foundation Piles Marine Mammal Hearing Group Lowfrequency cetaceans Midfrequency cetaceans Injury Criteria and Distances to Criteria Levels Southall et al 2007 Finneran 2015

Threshold	Mweighted SEL24h; dB re 1 Pa2.s	198	198	Rmax m	R95 m	1300	762	NV	NV
Threshold	Mweighted SEL24h; dB re 1 Pa2.s	192	187	Rmax m	R95 m	1025	136	NV	NV

May 2017 272 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 729 Modeled Horizontal Distances to PTS Onset Acoustic Thresholds for LowFrequency Cetaceans LFCs and MidFrequency Cetaceans MFCs Scenario 6 Installation of Mooring Piles for the FPSO Marine Mammal Hearing Group Lowfrequency cetaceans Midfrequency cetaceans NV No value Injury Criteria and Distances to Criteria Levels Southall et al 2007

Threshold	Mweighted SEL24h; dB re 1 Pa2.s	198	198	Rmax m	R95 m	1375	725	NV	NV
Threshold	Mweighted SEL24h; dB re 1 Pa2.s	192	187	Finneran 2015	Rmax m	1075	100	R95 m	NV

NV NV Modeling results for the six scenarios are presented below. It is important to note these results assume that the sources are stationary for 24 hours and that the marine mammal is present within the stated distance for the entire accumulation period 24 hours. This adds an element of conservatism to the assessment because no marine mammal would be expected to stay within the modeled injury zone for the entire 24 hour duration on which the threshold is based.

Scenario 1 Marine Vessels during FPSO Operations Modeling predicted that nonimpulsive underwater sound for Scenario 1 would attenuate to PTS onset acoustic

thresholds for LFCs and MFCs at maximum horizontal distances of 6 and 5 meters respectively based on the more conservative injury criteria for the marine mammal hearing groups. Scenario 2 Marine Vessels during FPSO Installation Modeling predicted that nonimpulsive underwater sound for Scenario 2 would attenuate to PTS onset acoustic thresholds for LFCs at a maximum horizontal distance of 5 meters based on the more conservative injury criteria for the marine mammal hearing group. Modeling predicted that MFCs would not be impacted at any distance under this scenario because the predicted underwater sound in the midfrequency range would be below PTS onset acoustic thresholds at all locations. Scenario 3 Marine Vessels Drill Ship SURF installation vessels Modeling predicted that nonimpulsive underwater sound for Scenario 3 would attenuate to PTS onset acoustic thresholds for LFCs and MFCs at maximum horizontal distances of 9 and 5 meters respectively based on the more conservative injury criteria for the marine mammal hearing groups. Scenario 4 Vertical Seismic Profiler during Drilling and SURF Installation Modeling predicted that impulsive underwater sound from the VSP for Scenario 4 would attenuate to PTS onset acoustic thresholds for LFCs and MFCs at maximum horizontal distances of 73 and 35 meters 240 and 115 ft respectively based on the more conservative injury criteria for the marine mammal hearing groups. May 2017 273 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Scenario 5 Pile Driving during Drilling and SURF Installation Modeling predicted that impulsive underwater sound from pile driving for Scenario 5 would attenuate to PTS onset acoustic thresholds for LFCs and MFCs at maximum horizontal distances of 1300 and 762 meters 4270 and 2500 ft respectively based on the more conservative injury criteria for the marine mammal hearing groups. These maxima occur at depths of greater than 1000 meters. Scenario 6 Pile Driving during FPSO Installation Modeling predicted that impulsive underwater sound for Scenario 6 would attenuate to PTS onset acoustic thresholds for LFCs and MFCs at maximum horizontal distances of 1375 and 725 meters 4510 and 2380 ft respectively based on the more conservative injury criteria for the marine mammal hearing groups. These maxima occur at depths of greater than 1000 meters. Summary of Potential for Injury Due to

Underwater Sound Modeling results indicate sound levels from vessels and the VSP are insignificant compared to the predicted sound levels from impact pile driving. The distances to injury thresholds for both LFCs and MFCs would be determined by sound from pile driving both at the FPSO and the drill centers although the area within which injury could potentially occur would be over 40 smaller for MFCs than for LFCs. Regardless of which type of pile installation methodology impact driven or suction is used neither group of marine mammals would be expected to result in a populationlevel impact. Based on the premise that marine mammals would actively avoid physical discomfort associated with Projectrelated sound if impactdriven piles are used MFCs would be expected to generally avoid the area within at least 700 m from the location where pile driving is taking place and LFCs would be expected to generally avoid the area within at least 1400 m of the activity. Both categories of cetaceans would avoid these areas for the duration of the pile driving activity. Some species including many of the larger baleen whales and dolphins would naturally avoid the area of potential effect especially around Drill Center 2 because it would be deeper than their typical maximum dive depths. Others such as sperm whales dive deep enough that they could potentially be exposed to injurious sound levels throughout the PDA; however they would not be expected to dive to sufficient depths for a sufficient duration to be exposed to potential injury. PTS were it to occur would be irreversible by definition but given the depth of the water in the PDA and the physiological limitations that would prevent marine mammals from diving deep enough and for a long enough period of time to experience PTS piling driving is not expected to cause permanent injury to marine mammals or irreversible effects on their hearing abilities. Disturbance from Underwater Sound Anthropogenic sounds below injury thresholds have the potential to mask relevant sounds in the animals environment. This masking can occur due to both natural and anthropogenic sounds Hildebrand 2005. The behavioral changes that can occur due to masking can have major ecological consequences for marine mammals. These may include changes in biologically May 2017 274 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts important behaviors e.g. breeding calving

feeding or resting; changes in diving behavior e.g. reduced or prolonged dive times increased time at the surface or changes in swimming speed; and changes in historical migration routes NMFS undated. Although the above changes could occur in the PDA as a result of Projectgenerated sound findings from US territorial waters suggest that the populationlevel significance of disturbance from impulsive sound over a small area such as the PDA would likely be minor. NMFS reported that available data do not indicate that sound and disturbance from oil and gas exploration and development activities since the mid1970s had lasting population level adverse impacts on bowhead whales. Data indicate that bowhead whales are robust increasing in abundance and have been approaching or have reached the lower limit of their historic population size at the same time that oil and gas exploration activities have been occurring in the Beaufort Sea and to a lesser extent the Chukchi Sea. NMFS 2006. BOEM found that despite over 50 years of oil and gas exploration and development in the Gulf of Mexico there are no data to suggest that these activities are significantly impacting marine mammal populations BOEM 2014. Furthermore the PDA is not known to be an important feeding breeding or calving area. Therefore individual animals may divert around an operating pile driver or VSP to avoid Projectgenerated sound but no significant impacts to life functions or potential populationlevel implications from underwater sound are expected.

Exposure to Permitted Discharges The Project will involve routine permitted discharges of waste streams to the sea. These discharges would begin during the drilling and installation stages and continue into the decommissioning stage. As described in Section 7.1.4 these discharges will be treated as needed in accordance with industry guidelines. Furthermore marine mammals would be transient in the PDA and their exposure to any discharges would be very limited. Any impacts would be expected to be acute and recovery would be expected to occur quickly after the affected individuals exit the mixing zone.

Impacts from Artificial Lighting Artificial lighting is not known to directly attract or disturb marine mammals so any impacts of artificial light on marine mammals are likely to be indirectly caused by a potential change in local forage availability through changes in prey distribution. Fish are known to be attracted to artificial light and even plankton are sometimes capable of weak

volitional movement through the water column in response to changing ambient light levels. Small fish and/or plankton make up a substantial part of most marine mammals' diets so to the extent that Project vessels could facilitate the concentration of plankton and/or small fish at the surface or around the vessels food density would increase and marine mammals may also be attracted to the vessels to feed more efficiently. This impact is expected to be limited to only the immediate vicinity of the vessels.

May 2017 275 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Summary of Impact Significance Ratings

As discussed in Section 7.2.1 because one of the marine mammals observed in the PDA is listed as Vulnerable by IUCN the impact assessment was conducted with the conservative assumption that this Vulnerable species i.e. sperm whale would be the receptor for the potential impact. Accordingly the sensitivity rating definitions used for special status species Table 730 was used for all potential impacts.

Table 730 Definitions for Receptor Sensitivity Ratings for Impacts to Special Status Species

Criterion	Sensitivity Definition
Negligible	Species with no specific value or importance attached to them.
Low	Species and subspecies of Least Concern on the IUCN Red List or not meeting criteria for medium or high value or without specific anatomical behavioral or ecological susceptibilities to Project-related impacts.
Medium	Species listed as Vulnerable Near Threatened or Data Deficient on the IUCN Red List species protected under national legislation nationally restricted range species nationally important numbers of migratory or congregatory species species not meeting criteria for high value and species vital to the survival of a medium value species.
High	Species on IUCN Red List as Critically Endangered or Endangered. Species having a globally restricted range i.e. endemic species to a site or found globally at fewer than 10 sites fauna having a distribution range less than 50000 km ² internationally important numbers of migratory or congregatory species key evolutionary species and species vital to the survival of high value species.

Considering the description of potential impacts above Table 731 summarizes the impact magnitude and receptor sensitivity ratings for each potential impact together with the rationale for the ratings.

Table 731 Impact Magnitude and Receptor Sensitivity Ratings Marine

Mammals Key Potential Impact Injury and mortality from vessel strikes Sensitivity Rating Medium
Magnitude Rating Negligible Injury PTS from underwater sound Medium Negligible May 2017 276

Rationale for Magnitude Ratings Although vessel traffic will be substantial during installation the likelihood of a collision event with an Project vessel would be mitigated due to embedded controls such as standing instructions to vessel operators low vessel operating speeds and typical marine navigation good practices. Accordingly the magnitude of impact considering embedded controls is considered to be Negligible. With no control measures in place magnitude ratings for VSP and pile driving would be Medium based on the predicted extent of impact zones; however the Negligible magnitude rating is based on several factors including

EEPGL Environmental Impact Assessment
Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Rationale for Magnitude Ratings

The activity that presents the greatest risk of injury to marine mammals pile driving would only occur during the initial stages of the installation phase and at great depth and therefore represents a short term risk to mammals. EEPGL has committed to using MMOs and soft start procedures for VSPs in accordance with JNCC guidelines and soft starts for pile driving to further reduce the potential for impacts on marine mammals. Many marine mammals do not dive to the depths that would be required or remain submerged for sufficient time to be exposed to impacts above injury thresholds especially near Drill Center 2. If an individual mammal were to approach an operating VSP or pile driver they would experience disturbance prior to being exposed to sound levels above injury thresholds and would be expected to divert away from the source. The potential impact zone for disturbance effects is expected to be larger than the extent for potential injury effects; accordingly the magnitude of potential impact is considered Medium. Permitted discharges will be treated as needed prior to discharge and will reduce in concentration rapidly with increasing distance from the discharge point. The magnitude is therefore considered Negligible. Impacts to marine mammals from Project lighting are considered to be Positive due to the potential for attraction of food sources and no documented adverse effects on marine mammals from lighting.

Key Potential Impact Sensitivity Rating Magnitude Rating Disturbance from underwater sound

Medium Medium Impacts from permitted discharges Medium Negligible Impacts from artificial lighting Positive Positive May 2017 277

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 732 Marine Mammals PreMitigation and Residual Impact Significance Ratings Stage Potential Impact All Project Stages Injury from vessel strikes Exposures to permitted discharges liquid effluent discharges containing various chemical substances plus elevated temperature during production operations Offshore lighting as an attractant of food sources for marine mammals Injury from sound exposure Magnitude Rating Sensitivity Rating PreMitigation Significance Rating Proposed Mitigation Measures Negligible Negligible Medium Medium Negligible None Negligible None Residual Significance Rating Negligible Negligible Positive Positive Positive Not applicable Positive Negligible Medium Negligible None Negligible Drilling and Installation Disturbance from sound exposure Medium Medium Moderate None but robust Moderate implementation of embedded controls e.g. soft start procedures for VSP and pile driving May 2017 278

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Based on consideration of all of the potential impacts on marine mammals assessed the overall residual significance rating for potential impacts on marine mammals from planned Project activities is considered to be Negligible to Moderate.

7.2.6 Marine Turtles 7.2.6.1 Introduction As described in Section 6.2.6 five sea turtle species are found in the Guyanese waters and could be encountered in the PDA. Four of these speciesgreen turtle leatherback hawksbill and Olive Ridley turtlenest on Guyanas beaches particularly in the SBPA located near Guyanas border with Venezuela. Loggerhead turtles also occur in offshore Guyanese waters but rarely come ashore.

7.2.6.2 Relevant Project Activities and Potential Impacts As shown in Table 733 planned Project activities could potentially impact marine turtles through direct mortality from vessel strikes disturbance leading to changes in behavior from underwater sound lighting and/or actions from Project activities and exposures to permitted discharges. Key potential sources of impact include impulsive sound from acoustic sources VSP activity driven piles and nonimpulsive sound from marine vessels FPSO drill ship supply vessels

work vessels barges light installation vessels pipelay vessels multi service vessels field intervention vessels large crane vessels and tug boats. Table 733 Project Activities and Potential Impacts Marine Turtles

Stage	Project Activity	Vessel operations	Key Potential Impact
Installation	Power generation VSP and pile driving	ROV operations	Lighting on drill ship and installation vessels Disturbance leading to reduced Displacement from habitat to avoid disturbance from vessel activity. Permitted drill cuttings and fluids discharge Exposures to permitted discharges Permitted liquid waste discharge potentially leading to toxicological or metabolic impacts. fecundity.
	Production Operations	Vessel operations e.g. FPSO supply barges support vessels drill ship platform supply vessels fast supply vessels large crane vessel fast supply vessel field intervention vessel light installation vessel and multipurpose support vessels	Permitted cooling and produced water discharge Displacement from habitat to avoid disturbance from vessel activity. Exposures to permitted discharges

May 2017 279 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Stage Project Activity Other permitted liquid waste discharge Lighting on FPSO Key Potential Impact potentially leading to toxicological or metabolic impacts. Disturbance leading to reduced fecundity. Decommissioning vessels ROVs Injury and mortality from vessel Decommissioning

7.2.6.3 Characterization of Impacts Injury and Mortality from Vessel Strikes

strikes. Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Displacement from habitat to avoid disturbance from vessel activity. Collisions with vessels can injure or kill marine turtles. Sea turtles tend to spend most of their time at sea at or near the sea surface and do not possess the acute sense of hearing or the swimming speed that cetaceans use to avoid collisions. Sea turtles are inherently more vulnerable to ship strikes in the shallow nearshore areas where they congregate prior to coming ashore to nest than they are in the open ocean. This increased vulnerability is caused by the higher concentrations of turtles and reduced opportunity to maneuver in shallow water. Most Project activities will take place in deep ocean waters and vessel speeds within the PDA will be low further reducing the potential for

collisions. The only planned nearshore activities will be supply vessel entering/exiting shorebases; the anticipated options for shorebases are all located over 100 km away from the nearest portion of the SBPA where most sea turtle nesting in Guyana occurs. There is very little potential for collisions to occur within the PDA but the potential remains for individual turtles to collide with vessels transiting between the PDA and shorebases. The potential for the greatest number of collisions to occur will be during drilling and installation when vessel traffic is at its peak so the risk of injury or mortality from vessel collisions will be slightly higher during drilling and installation than during other stages of the Project. With respect to the potential for injury and mortality from vessels strikes EEPGL will utilize the following embedded control measure for the Project see Section 2.11 Standing instruction to Project dedicated vessel masters to avoid marine turtles while underway and reduce speed or deviate from course as needed to reduce probability of collisions. May 2017 280 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Injury from Underwater Sound Chapter 7 Assessment of Impacts Hearing capabilities have been studied in only a few individual marine turtles but the available data suggest that turtles have limited hearing capacity compared to other marine taxa e.g. cetaceans. Turtles have been shown to respond to low frequency sound with indications that they have the highest hearing sensitivity in the frequency range 100 to 700 Hz Bartol and Musick 2003. Startle responses to sudden sounds have also been observed in sea turtles. For example McCauley et al. 2000 found that turtles showed behavioral responses to approaching seismic survey sound at approximately 166 dB re 1 uPa and more significant disturbance at 175 dB re 1 uPa. Startle responses and other behavioral changes are more likely from high level pulsed sound sources such as those produced during VSP activities and pile driving rather than from nonpulse sources such as those from vessels. Since turtles have been shown to respond to low frequency sounds modeling results pertinent to low frequency cetaceans LFCs see Section 7.2.5 were used as a proxy for injury predictions for marine turtles. Modeling predicted that impulsive underwater sound from VSP and pile driving activities would attenuate to PTS onset acoustic thresholds for LFCs at maximum horizontal distances of 73 and 1300 meters

240 and 4270 ft based on the more conservative injury criteria for the LFC marine mammal hearing group. Diveprofile data from tagged Kemps ridleys showed that they spent an average of 97 percent day or 87 percent night of their time within 1 m of the surface and observational records suggest that most sea turtles show a similar pattern. The VSP source for the Project will be located within 5 m of the ocean surface so marine turtles may be present at the same general depth as the source. However since the sound pressure field is zero at the surface the sound levels in excess of the proxy injury threshold will be limited to depths well below the zone where marine turtles will typically be present. While the horizontal extent of the modeled potential impact zone is significantly larger for pile driving than for VSP turtles are not known to dive a sufficient depth 1000 m to enter the zone within which PTS would occur as a result of pile driving. The only low frequency sound that marine turtles could potentially be exposed to other than VSP and pile driving would derive mainly from vessels operating in the Project area and vessel sounds will decrease below the threshold for injury to LFCs at 5 to 6 meters from the source. At that range injury from a collision with the vessel poses a more likely risk to a marine turtle than injury from sound. Anthropogenic sounds below injury thresholds have the potential to mask relevant sounds in the animals environment Hildebrand 2005; however there are no quantitative data demonstrating masking impacts for sea turtles and turtles do not vocalize or use sound for communications so the potential risk of impacts from masking is considered insignificant. The highest potential for auditory impacts on marine turtles will occur during VSPs and the use of marine observers to detect sea turtles and soft start techniques will further reduce the risks to sea turtles when VSPs are occurring. May 2017 281 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts With respect to the potential for injury from underwater sound EEPGL will utilize the following embedded underwater sound control measures for the Project see Section 2.11 Gradually increasing intensity of seismic impulses to allow sensitive species to vacate the area before injury occurs i.e. soft starts Use of MMOs during VSP although use of MMOs is more effective for identification of marine mammals these individuals can also detect marine turtles depending on weather conditions and they

will be tasked with observing for marine turtles as well and implementation of other measures recommended by the Joint Nature Conservation Committee JNCC 2010 as applicable; and Maintaining equipment marine vessels and helicopters in good working order and operating them in accordance with manufacturers specifications so as to limit sound levels to the extent reasonably practicable Displacement from Habitat as a Result of Disturbance During the Project life cycle levels of human activity e.g. vessel traffic equipment and materials in the water will be higher than the very low levels that currently exist in the PDA. Marine turtles are not known to be sensitive to human activity while at sea so this increase in human activity is expected to have little or no impact on them within the PDA. Project activity related to potential disturbance would decrease during the production operations phase so impacts on sea turtles would decrease as well. There would be a small increase in human activity during decommissioning but that increase would be of relatively short duration and would not rise to the same level of activity associated with drilling and installation. In summary disturbance from human activity would be expected to have little to no impact on marine turtles throughout the duration of the Project.

Exposure to Permitted Discharges The Project will involve routine permitted discharges of waste streams to the sea. These discharges would begin during the drilling and installation stage and continue into the decommissioning stage. As described in Section 7.1.4 these discharges will be treated as needed in accordance with industry guidelines. Furthermore sea turtles would be transient in the PDA and their exposure to any discharges would be very limited. Any impacts would be expected to be acute and recovery would be expected to occur quickly after the affected individuals exit the mixing zone.

Disturbance to Nesting from Artificial Lighting Sea turtles are known to be sensitive to artificial light in close proximity to nesting beaches because artificial light can cause a variety of impacts on the behavior of nesting turtles and hatchlings including reduced nesting rates premature abandonment of nests interruption of the egg laying process and disorientation of hatchlings Witherington and Martin 2003; NOAA 2014. There will be artificial lights in the PDA from various vessel types and the amount of light in the PDA will vary between stages of the Project; however at no point is offshore light

Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts expected to have significant impacts on marine turtles because sea turtles are not known to be sensitive to artificial light in the open ocean and the PDA is located so far offshore that light from the PDA will not be visible from the shore. Summary of Impact Significance Ratings As discussed in Section 7.2.1 because the marine turtles occurring in the PDA carry listings of Critically Endangered Endangered or Vulnerable by IUCN the impact assessment was conducted with the conservative assumption that the Critically Endangered or Endangered species i.e. Hawksbill green loggerhead would be the receptor for the potential impact. Accordingly the sensitivity rating definitions used for special status species Table 734 was used for all potential impacts. Table 734 Definitions for Receptor Sensitivity Ratings for Impacts to Special Status Species Criterion Definition Sensitivity Negligible Species with no specific value or importance attached to them. Low Species and subspecies of Least Concern on the IUCN Red List or not meeting criteria for medium or high value or without specific anatomical behavioral or ecological susceptibilities to Projectrelated impacts. Medium Species listed as Vulnerable Near Threatened or Data Deficient on the IUCN Red List species protected under national legislation nationally restricted range species nationally important numbers of migratory or congregatory species species not meeting criteria for high value and species vital to the survival of a medium value species. High Species on IUCN Red List as Critically Endangered or Endangered. Species having a globally restricted range i.e. endemic species to a site or found globally at fewer than 10 sites fauna having a distribution range less than 50000 km² internationally important numbers of migratory or congregatory species key evolutionary species and species vital to the survival of high value species. Table 735 summarizes the impact magnitude and receptor sensitivity ratings for marine turtles. Table 736 summarizes the potential impact significance ratings for marine turtles based on the discussion presented above. The impact significance ratings were assigned based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Based on consideration of all of the potential impacts on marine turtles assessed the overall residual significance rating for potential

impacts on marine turtles from planned Project activities is considered to be Negligible to Minor.

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Chapter 7 Assessment of Impacts Table 735 Impact Magnitude and Receptor Sensitivity Ratings

Marine Turtles Key Potential Impact Injury and mortality from vessel strikes Sensitivity Rating

Magnitude Rating High Small drilling and installation Injury PTS from underwater sound High

Negligible other Project stages Negligible Displacement from habitat to avoid disturbance from

vessel activity Low Small Impacts from permitted discharges Disturbance to nesting from artificial

lighting High Negligible Low open ocean Small open ocean High on or near shore Negligible on or

near shore Rationale for Ratings Although vessel traffic will be substantial during installation the

likelihood of a collision event with a Project vessel would be mitigated due to embedded controls

such as standing instructions to vessel operators low vessel operating speeds and typical marine

navigation good practices. The magnitude of impact considering embedded controls is considered to

be Small during drilling and installation when higher vessel traffic level will occur and Negligible

during other stages. Sea turtles spend most of their time within a few meters of the sea surface

where the intensity of sound from VSP will be highest but sound from pile driving will be lowest.

Considering the relatively small size of the PTS radius surrounding the VSP and the embedded

controls described above the likelihood of marine turtle exposure to sound levels above injury

thresholds is low resulting in an overall magnitude rating of Negligible. Increased activity in the PDA

and between the PDA and shorebases could cause turtles approaching nesting beaches from the

northeast to deviate from their normal migration route but marine turtles are not known to be

sensitive to human activity while at sea. Accordingly sensitivity is considered Low; this is used in lieu

of the special status rating based on the lack of an anticipated sensitivity. The increase in vessel

traffic between the shorebases and PDA could cause general avoidance in the nearshore area but

would represent an incrementally insignificant increase in total vessel traffic in the area. Permitted

discharges will be treated as needed prior to discharge and will reduce in concentration rapidly with

increasing distance from the discharge point. The magnitude is therefore considered Negligible.

Adults and newly hatched turtles are highly sensitive to artificial light in the immediate proximity to nesting beaches but much less sensitive while offshore. Accordingly an overall sensitivity rating of Low for the open ocean and Medium for the nearshore environment was assigned; the open ocean rating is used in lieu of the special status rating based on the lack of an anticipated sensitivity for this impact. Project vessels will constitute a source of light that is distinct from the surrounding environment yielding a magnitude rating of Small for the offshore environment. The PDA is located so far offshore that light from the PDA will not be visible from the shore yielding a magnitude rating of Negligible for the nearshore environment.

May 2017 284 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 736 Summary of Impacts Significance Ratings and Recommended Mitigation Measures Marine Turtles

Stage	Key Potential Impact	Sensitivity Rating	Magnitude Rating	PreMitigation Significance Rating
All Project Stages	Drilling and Installation	Disturbance from offshore lighting	Injury from vessel strikes	Injury from sound exposure
	Low to Medium	Medium	Low	Small to Negligible
	Small	Negligible	Small	Negligible
Proposed Mitigation Measures	None	Residual Significance Rating	Negligible	None
	None	Minor	Negligible	Production Operations; Decommissioning
	Displacement from habitat to avoid disturbance from vessel activity	Exposures to permitted discharges	elevated TSS concentrations	liquid effluent discharges containing various chemical substances
discharge of hydrotesting fluids	Injury from vessel strikes	Injury from sound exposure	Displacement from habitat to avoid disturbance from vessel activity	Exposures to permitted discharges
	liquid effluent discharges containing various chemical substances	and elevated temperature streams	Low	Small
	Negligible	None	Negligible	Low
Negligible	None	Negligible	Medium	Low
	Negligible	Negligible	Negligible	None
	Negligible	Low	Negligible	Negligible
Negligible	None	Negligible	None	Negligible
	None	Negligible	Low	Negligible
	None	Negligible	None	Negligible

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7.2.7.1 Introduction This section describes the potential impacts of the Project on marine fish. Key potential impacts on marine fish assessed include localized changes in the distribution of pelagic

species as a result of altered water quality; localized changes in distribution and habitat usage due to altered bottom habitats and the presence of Project infrastructure; entrainment in water intakes; auditory impacts from vessel traffic and installation activities; and the attractive potential of artificial lights on the FPSO drill ship and major installation vessels. Marine Fish receptors will include pelagic and demersal marine fishes. These groups include a combination of migratory and resident species. Some receptors will receive a larger proportion of certain impacts than others. For example surface dwelling pelagic fish will potentially experience greater water quality impacts related to planned discharges than will bottomdwelling species and bottom dwelling species will be more impacted by changes in physical habitat structures than pelagic species.

7.2.7.2 Relevant Project Activities and Potential Impacts

Table 737 summarizes the Project stages and activities associated with each potential impact assessed. The highest number of impacts would be expected to occur during the initial stages of the Project when most habitatdisturbing activities take place and humanvessel activity in the PDA will be highest. At this stage impacts will occur throughout the water column and at the seafloor. Once drilling and installation and hookupcommissioning are complete and production operations are the only activities occurring offshore biological conditions at the seafloor will return to equilibrium and most of the ongoing impacts will be isolated to the upper portions of the water column and to the pelagic segment of the fish community.

Table 737 Project Activities and Potential Impacts
Marine Fish Stage Project Activities
Drilling operations and VSP
Key Potential Impact
Gill fouling and reduced visibility caused by Drilling and Installation
Artificial lighting on drill ship and major installation vessels
Installation of FPSO moorings and SURF equipment including pile driving
Permitted liquid waste discharge
TSS. Auditory impacts from vessel sound.
Auditory impacts from sound from VSP and pile driving.
Attraction of structureoriented species.
Localized improved access to forage for predatory fish due to prey species attraction to artificial light.
Exposures to permitted discharges potentially leading to toxicological or metabolic impacts.

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Chapter 7 Assessment of Impacts Stage Project Activities Permitted drill cuttings and fluids

discharge Key Potential Impact Production Operations Permitted liquid waste discharge primarily cooling water and chlorinated effluent Tanker and tug operations Intake of seawater for cooling water injection water and ballast water Abandonment and removal activities Decommissioning Permitted liquid waste discharge

7.2.7.3 Discussion of Potential Impacts

Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Auditory impacts from vessel sound. Attraction of structure-oriented species. Loss of fish eggs and larvae due to entrainment of immature life stages. Temporary disturbance of deepwater fish communities and possible gill fouling during decommissioning TSS. Permanent loss of structural habitat FPSO only and artificial light due to decommissioning. Exposures to permitted discharges potentially leading to toxicological or metabolic impacts. Changes in the Distribution of Fish Due to Altered Water Quality

The Project will routinely discharge several waste streams to the sea. These discharges would begin during the drilling and installation stages and continue into the decommissioning stage. Two discharges unique to the drilling and installation phases will be discharges of drilling fluids and cuttings. For the initial well sections which will use WBDF the cuttings and fluids will be discharged either at the seafloor causing turbidity around the immediate vicinity of each well or from the drill ship. For subsequent well sections cuttings and residual drilling fluids will be discharged from the drill ship. For discharges from the drill ship turbidity plumes will impact a larger area as the cuttings fall through the water column but the turbidity plume will be diluted across a larger area thereby reducing impacts in any single location. Fish will be expected to generally avoid these turbidity plumes while drilling is occurring reducing respiratory impacts associated with gill fouling but would be expected to return after drilling is complete. WBDF and the residual quantities of low-toxicity NABF adhered to discharged cuttings are expected to have no measureable impacts on fish.

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As described in Section 7.1.4 most of the planned discharges that would occur during production operations are not known to have negative impacts on marine life or would occur at negligible volumes but the increased temperature and chlorine concentrations in the cooling water

discharges were identified as having the potential to negatively impact marine life. Elevated temperature is known to have several physiological lethal and sublethal impacts on fish including reduced reproductive success reduced early life stage survivorship and increased metabolic stress. Thermal thresholds for such impacts vary widely by species but thresholds from the scientific literature range from about 1.5 C to 6 C Donelson et al. 2014; Pankhurst and Munday 2011. Under the conservative assumptions described in Section 7.1.4 localized sea surface temperatures are expected to increase as a result of the Project but these increases are predicted to diminish to 3 C above ambient temperatures within 100 m 330 ft horizontal distance from the discharge outlet. This finding indicates that within 100 m 330 ft of the FPSO the thermal impact of routine discharges would diminish to near the lower end of the range within which thermal impacts on fish are expected to occur. Most of the research on thermal thresholds for these types of impacts has focused on reef or structureoriented species that spend their entire adult lives in a small area rather than the openocean pelagic species that would occur near the surface in the PDA. Pelagic species would be much more likely to move away from a thermal mixing zone that exceeds their optimum range than would structureoriented species so not only would thermal impacts affect a very small area of the ocean surface but the species that occur within the PDA would also be resilient to these thermal impacts based on their propensity to actively avoid suboptimal water temperatures. Similar to temperature increases chlorine can also induce a range of negative impacts in fish including disruption of cardiac function respiration and growth. There are no regulatory limits for residual chlorine in marine discharges in Guyana. Chlorine toxicity depends not only on dosage concentration and exposure time but also on individual species sensitivity to chlorine. This makes defining a single impact threshold for chlorine exposure difficult. While chlorine concentrations within the immediate vicinity of the FPSO could exceed levels that may result in toxicity impacts to fish assuming the fish remained in the area long enough to experience the impact concentrations are expected to decrease by approximately 89 percent within 100 m of the discharge point. The combined impact of increased temperature and chlorine concentrations would make the localized

mixing zone inhospitable to some species. However unless they are physically confined or otherwise prevented from escaping lethal water quality conditions or water quality conditions decline so quickly that escape is impossible fish are usually capable of detecting and avoiding harmful water quality conditions. This is especially true of water quality conditions that cause discomfort or are otherwise physically apparent at sublethal levels like chlorine and is also especially true of the pelagic species that move throughout their lives and would be in the most direct contact with elevated temperatures and chlorine concentrations. Decommissioning will cause small turbidity plumes near the seafloor if selected components of the SURF are removed and as mooring lines from the FPSO are placed on the seafloor. Impacts from these turbidity plumes will be similar to those associated with drilling and installation although they will be smaller and have a shorter duration. May 2017 288 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts For these reasons declines in water quality would be expected to negatively impact fish abundance in the immediate vicinity of the well heads SURF and drill ship during drilling and installation the FPSO and tankers during production operations and the SURF during decommissioning but would not be expected to cause significant fish mortality. Limited localized impairments in water quality will not be significant enough to cause substantial changes in fish populations nor will they significantly impact sensitive or important species see Section 7.2.1 but they will likely cause limited changes in the distribution and composition of the fish community within parts of the PDA. As discussed below the physical attraction that offshore facilities can exert on fish could actually result in net increases in the abundance of certain fish species even under slightly impaired water quality conditions. The net impact in this case is often a shift away from sensitive species including some pelagic and sedentary species toward sedentary or structureoriented species that are more tolerant of minor water quality impairments. Any impacts on transient fish swimming through the mixing zone would be expected to be acute and affected individuals would be expected to recover quickly after exiting the mixing zone. Auditory Impacts to Fish from Vessel Activity Vertical Seismic Profiling and Pile Driving The same sound sources associated with the

Project that could impact marine mammals Section 7.2.5 could also impact fish. These can be broadly separated into nonimpulsive sources e.g. vessel sound and impulsive sources pile driving and VSP. Hearing abilities and sensitivities differ significantly among fish species. Certain species can be classified as hearing generalists or specialists³¹ based on differences in hearing ability conveyed by specific anatomical traits. Although hearing specialists are thought to be more susceptible to auditory impacts within certain audio frequencies than other species there are no generally accepted thresholds for auditory impacts in either specialist or generalist species and many species hearing abilities have yet to be quantified.

Nonimpulsive Sound A recent EIS conducted by the U.S. Department of the Interior as part of a Programmatic Environmental Impact Statement for proposed geological and geophysical investigations in the Atlantic Outer Continental Shelf off the south eastern U.S. in 2014 BOEM 2014 contained a comprehensive review of auditory impacts on fish from nonimpulsive and impulsive sources including seismic surveys. This study found that fish may experience a range of impacts from nonimpulsive sound including increased stress and threshold shift and fish may employ behavioral strategies to avoid the sound source BOEM 2014. However the extent to which these impacts would actually occur is highly dependent on the hearing abilities and sensitivities ³¹ Hearing specialists are species that have developed heightened sensitivities to sounds in a specific frequency range. This adaptation occurs in some species to facilitate feeding or social behavior. Hearing specialists are distinguished from hearing generalists which hear equally well across a wider range of frequencies but do not possess the acuity of the specialists within their specific frequency range. May 2017 289

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts of the species of fish that occur within the PDA and these abilities and sensitivities are currently unknown.

Impulsive Sound The impact of impulsive sounds on hearing specialists is the most important factor to consider when rating Projectrelated auditory impacts on fish because of the following Impulsive sound is usually considered more important than nonimpulsive sound in terms of impacts on fish because impulsive sound is the category most often associated with hearing loss injury or death of

fish; Impulsive sources also tend to have more severe impacts on hearing specialist species and those species with welldeveloped swim bladders³² than others because they tend to be more sensitive to auditory impacts especially within the range of frequencies that they are specially adapted to detect; High peak pressures and rapid onset and decay tend to be associated with the most severe auditory impacts on fish and are characteristic of impulsive sources; and As described in Section 7.1.2 impulsive sound from driven piles and VSP would impact a larger area of the ocean than the nonimpulsive sources modeled by JASCO especially to the north of the source and therefore could impact a larger number of species and individual fish than would the nonimpulsive sources. Larson 1985 concluded that lethal impacts in the most sensitive taxa can occur at peak pressures exceeding 229 Db re 1Pa with onsetdecay times less than 1 ms. Turnpenny and Nedwell 1994 reviewed historical studies of seismic impacts on fish and determined that for exposures at close range 10 m transient behavioral impacts began appearing at 192 dB re 1Pa a variety of injuries appeared at about 220 dB re 1Pa and mortality began appearing at exposures above 230 dB re 1Pa although these impacts did not always occur and some exposures up to 240 dB re 1Pa resulted in no observable adverse impacts. There have been no published reports to date documenting a lasting impact on fishing or fish stock as a result of seismic surveys. BOEM 2014 concluded that although hearing specialists are more susceptible than hearing generalists to hearing loss from impulsive sound such impacts do not always occur and are generally not permanent. Impacts would be expected to be most severe in resident fish that are oriented to structural bottom habitats and would therefore be exposed to repeated impulses at a given location over time. One such genus *Sebastes* spp. showed startle and alarm responses to 10min exposures of seismic impulses at 180 dB re 1 Pa at ranges from 11m to several kilometers but the impacts appeared to be transitory Pearson et al. 1992. Another study of the reeforiented pollack *Pollachius pollachius* documented only minor changes in behavior when exposed to seismic impulses with peak sound pressures 32 Caged exposure tests have determined that species with large swim bladders or other highly vascularized low density organs or structures tend to be more susceptible to acute acoustic

injury than species that lack these features when exposed to such sources within a few meters. May 2017 290 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts between 195-218 dB re 1 Pa at ranges of 5.3-109 m Wardle et al 2001. Documented recovery times vary but generally range from a few hours to a few days. The available literature described above suggests that behavioral impacts from impulsive sound sources may begin to occur at peak sound pressures between 180-195 dB re 1 Pa and that injury could occur at peak sound pressures around 220 dB re 1 Pa. Given the most sensitive receptors do not always experience impacts from impulsive sound they usually recover from such impacts and impulsive sound would only occur during the initial phases of the Project population level impacts on marine fish from auditory impacts are highly unlikely. Auditory impacts will not significantly impact any rare sensitive or important species see discussion in Section 7.2.1. Changes in Distribution and Habitat Usage Due to Altered Bottom Habitats and the Presence of Project Infrastructure Installation of moorings for the FPSO installation of SURF equipment and drilling wells will disturb the seafloor temporarily within the PDA. These disturbances will create turbidity plumes and alter localized bottom contours within the area. The main potential impacts of turbidity plumes on fish are gill fouling and reduced visibility. Visibility is a minor factor at the depths that occur in the PDA but fouled gills can lead to respiratory distress over long exposures. The turbidity plumes are expected to dissipate rapidly downcurrent and fish will be expected to temporarily vacate the immediate vicinity of activities at the seafloor until turbidity reaches acceptable levels. This behavioral response will limit fishes exposure to turbidity and fish would be expected to return to the vicinity of the Project subsea infrastructure once seafloor disturbance activities are complete. Some of the deepwater species from the red fish zone and all of the reef-associated species identified in the McConnell study Section 6.2.7 are structure-oriented species. Physical structures provide many benefits to these species including refuge from currents and predators as well as foraging opportunities. These species would be expected to congregate around the well heads and manifolds once the disturbance associated with installation has abated and the Project enters the production operations

stage. The isolated marine communities that develop around the SURF components could contain some species that are rare or absent elsewhere in the Project AOI due to the apparent lack of hard substrate outcrops in the area. These communities could be disturbed temporarily during decommissioning if the flowlines are disconnected from the manifolds and retrieved. However the manifolds and well heads may remain in place in perpetuity subject to the decommissioning plan so these facilities will continue to provide habitats for the fish community over the long term. Minor localized impairments in water quality will not be significant enough to cause substantial changes in fish populations nor will they significantly impact sensitive or important species see discussion in Section 7.2.1 but they will cause small changes in the distribution and composition of the fish community within the PDA. May 2017 291 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Attraction to Artificial Light Chapter 7 Assessment of Impacts Artificial light has been known for many years to attract fish in a variety of settings and this phenomenon has been documented around floodlights on offshore petroleum infrastructure Hastings et al. 1976 Stanley Wilson 1997 Lindquist et al. 2005. Results from studies of platforms in the northern Gulf of Mexico suggest that platforms benefit all life stages by attracting and concentrating prey and providing sufficient light to locate and capture them Keenan et al. 2007. While this may benefit predatory species in the short term artificially lit structures have the potential to alter predatorprey interactions by creating conditions that favor predatory species at night and disadvantaging the prey while simultaneously attracting the prey species. This could ultimately have longterm negative impacts on predatory species if localized depletion of prey resources occurs Becker et al. 2012; Nightingale et al. 2103. The artificial light produced from vessels will not be substantial enough to alter fish populations nor will it significantly impact sensitive or important species see discussion in Section 7.2.1 but may cause small changes in the distribution and/or behavior of fish in the immediate vicinity of the FPSO and possibly the drill ships and installation vessels. . Entrainment in Water Intakes Seawater will be withdrawn from the ocean to provide water to inject into the reservoir to cool the FPSOs processing equipment during the production operations stage and for ballast of vessels.

Larval and juvenile fish have the potential to be entrained in the intake or impinged on the screens that will be installed to remove particulates from the water before it is pumped into the treatment unit on the FPSO. Most research on entrainment and impingement involves sitespecific studies at onshore power plants and has been conducted in North American and European estuaries or nearshore coastal areas where immature fish are concentrated Barnthouse 2013. Nearshore intakes generally pose a higher risk of entrainment and impingement than offshore intakes WaterReUse 2011. Information on the entrainment andor impingement rates at offshore intakes is sparse but there is some recent evidence that losses from entrainment and impingement are insignificant at the population level even at power plants in coastal and estuarine settings Barnthouse 2013 and the U.S. Minerals Management Service noted that coastal power plants require much higher volumes of water than individual offshore oil and gas facilities approximately 10 million gallons per minute for a nuclear power plant; MartinezAndrade and Baltz 2003 meaning that the entrainment losses at oil and gas facilities would likely be much lower than at power plants. In most cases extrapolation of the losses of larval fish and eggs at power plant intakes to an equivalent number of adults indicates that entrainment losses are insignificant compared to natural and fishingrelated mortality Barnthouse 2013; WaterReUse 2011. Cooling and ballast water intakes on the FPSO and drill ships will be equipped with screens to prevent fish entrainment. Entrainment will not significantly impact sensitive or important species see discussion in Section 7.2.1. May 2017 292 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.2.7.4 Characterization of Impacts Magnitude of Impact Chapter 7 Assessment of Impacts The assessment of the Projects magnitude of impacts on marine fish from the potential impacts described above is determined based on the size of the impact relative to natural variations in the impacted population where known the temporal scale of the impact and the population level at which the impact is anticipated to occur. The magnitude of potential impacts on marine fish is defined according to the definitions provided in Table 738. Table 738 Definitions for Magnitude Ratings for Potential Impacts to Marine Fish Criterion Magnitude Definition Negligible Impact is within the normal range of variation for the population of the species.

Small Impact does not cause a substantial change in the population of the species or other species dependent on it. Medium Impact causes a substantial change in abundance and/or reduction in distribution of a population over one or more generations but does not threaten the long term viability/function of that population or any population dependent on it. Large Impacts entire population or a significant part of it causing a substantial decline in abundance and/or change in and recovery of the population or another dependent on it is not possible either at all or within several generations due to natural recruitment reproduction immigration from unaffected areas. The Project includes several embedded controls that will reduce the magnitude of impacts on marine fish including FPSO onboard treatment of produced water bilge water and sanitary wastewater prior to discharge; Use of oilwater separators to ensure compliance with an oil in water of 15 ppm per MARPOL for bilge water; Use of WaterBased Drilling Fluids WBDF and lowtoxicity IOGP Group III NABF; Utilization of solids control and drill cuttings dryer systems to treat cuttings prior to discharge; Gradually increase intensity of seismic pulses during VSP and hammer energy during pile driving to allow sensitive species to vacate the area before injury occurs; and Provide screening on vessels for cooling water and ballast water intakes for FPSO and drill ship to minimize the entrainment of fish.

Sensitivity of Receptor The assessment of marine fish as a receptor of impacts from the Project is based on the conservation status of the marine fish expected to occur in the vicinity of the Project. The sensitivity of marine fish is defined according to the definitions provided in Table 739.

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Assessment of Impacts Table 739 Definitions for Receptor Sensitivity Ratings for Impacts to Marine Fish

Criterion	Definition
Sensitivity	Negligible Species with no specific value or importance attached to them.
Low	Species and subspecies without specific anatomical behavioral or ecological susceptibilities to Projectrelated impacts.
Medium	Species with one of the following characteristics: specific anatomical behavioral or ecological susceptibilities to Projectrelated impacts; importance to local or regional fisheries; or vital importance to the survival of another medium sensitivity species but not meeting criteria for high value sensitivity.
High	Species with two of more of the following

characteristics specific anatomical behavioral or ecological susceptibilities to Project-related impacts; importance to local or regional fisheries; or vital importance to the survival of another medium-sensitivity species. Impact Significance and Mitigation Measures Table 740 summarizes the magnitude sensitivity and impact significance ratings for the potential impacts on marine fish discussed above. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Table 740 Summary of Impact Significance Ratings and Recommended Mitigation Measures Marine Fish

Stage	Key Potential Impact	All Project stages	All Project stages	Drilling and Installation	Auditory impacts on fish from vessel activity	pelagic species	Disturbance from or attraction to offshore lighting	pelagic species	Distribution and habitat changes from altered bottom habitats and presence of Project infrastructure	demersal species	Auditory impacts from pile driving and VSP	demersal species	Exposure to permitted discharges	elevated TSS	Magnitude	Sensitivity	PreMitigation	Significance Rating	Proposed Mitigation Measures	Residual Significance Rating
Small	Low	Negligible	Negligible	Small	Low	Negligible	None	Negligible	Small	Medium	Minor	None	Minor	Small	Medium	Minor	None	Minor	Small	
Medium	Minor	None	Minor	Negligible	Low	Negligible	None	Negligible	Small	Medium	Minor	None	Minor	Small	Medium	Minor	None	Minor	Small	

May 2017 294 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Stage Key Potential Impact Magnitude Sensitivity PreMitigation Significance Rating Chapter 7 Assessment of Impacts Proposed Mitigation Measures Residual Significance Rating Production Operations concentrations liquid effluent discharges containing various chemical substances discharge of hydrotesting fluids Distribution changes due to altered water quality liquid effluent discharges containing various chemical substances and elevated temperature streams pelagic species only Entrainment via water withdrawals pelagic species Attraction to artificial light pelagic species Small Low Negligible None Negligible Small Low Negligible None Negligible Small Low Negligible None Negligible

7.2.8 Marine Benthos

7.2.8.1 Introduction

This section describes the potential impacts of the Project on marine benthic biological resources. The key potential impacts assessed include injury to benthos as a result of deposition of drill cuttings via smothering and/or toxicity impacts from residual oil contained

in the cuttings and as a result of disturbance of the seafloor during installation of Project components.

7.2.8.2 Relevant Project Activities and Potential Impacts The PDA is located in the eastern portion of the Stabroek Block in water depths ranging from approximately 1500 to 1900 m. This area's macrofauna community is dominated by polychaete worms as the most abundant major taxonomic group followed by crustaceans, mollusks, and other taxa. Benthic epifauna appear scarce on the basis of the EBS survey results; however, tube-dwelling may be present. May 2017 295 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts building polychaetes possibly Sabellidae and Terebellidae and burrowing shrimp were observed. The Project has the potential to impact these organisms through smothering from deposition of drill cuttings, toxicological impacts from NABF adhered to deposited cuttings, and crushing or displacement from placement of subsea infrastructure. These impacts will be balanced somewhat by the creation of artificial substrate in the form of manifolds, wellheads, and other infrastructure permanently installed on the seafloor, which will provide small amounts of hard substrate available for colonization. Table 741 summarizes potential Project impacts on marine benthos.

Table 741 Project Activities and Potential Impacts

Marine Benthos Stage	Drilling and Installation	Discharge of drill cuttings and Project Activity	accumulation on seafloor	Installation of FPSO anchor structures and SURF infrastructure on the seafloor	Production Operations	Presence of nonmoving infrastructure on seafloor	Decommissioning	Presence abandonment of subsea infrastructure on the seafloor	Key Potential Impacts
									Smothering of benthos as a result of accumulation of drill cuttings. Toxicological impacts on benthos from NABF adhered to deposited drill cuttings. Crushing of benthos where subsea infrastructure is placed. Creation of artificial substrate for use by benthos temporary for duration of production operations positive. Creation of artificial substrate for use by benthos positive.

7.2.8.3 Characterization of Impacts

Drill Cuttings Deposition Magnitude of Impact Drill Cuttings Deposition Planned discharges of drill cuttings and fluids will impact marine benthos as a result of accumulation of cuttings on the seafloor around the well locations. Potential routes of impact include physical and toxicological pathways. With regard to potential physical impacts, discharged drill

cuttings will accumulate on the seafloor close to the individual wells and some benthic fauna will likely be impacted through burial and smothering. Smothering is a biological impact on benthos induced by the physical impact of burial. The severity of burial impacts depends on the sensitivity of the benthic organism the thickness of deposition the amount of oxygen depleting material and the resulting anoxic conditions beneath the depositional layer and the duration of the burial. Thickness thresholds vary by species and sediment permeability. A threshold deposition rate of 5 cm per month for smothering impacts to benthic communities is recommended based on publications by Ellis and Heim 1985 and MarLIN 2011. Smaller threshold values as low as 1 mm have been reported e.g. Smit et al. 2006; however they are associated with instantaneous burials on benthic species not gradual smothering impacts. May 2017 296 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts As described in Section 7.1.3 modeling of drill cuttings discharges for four wellcurrent combination scenarios indicated the maximum depositional thickness of cuttings on the seafloor is predicted to be between 19 cm and 75 cm depending on currents and well locations. The model predicted extent of cuttings deposition above the 5 cm per month threshold will be confined to within a relatively short distance from the well locations with the largest area predicted to be approximately 43 m 141 ft in diameter. Figure 7.6 depicts the maximum total accumulated cuttings as predicted by modelling in the vicinity of both drill centers. May 2017 297 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Figure 76 Sediment Sample Locations and Deposition Areas deposited cuttings over time and additional noncutting sediments will gradually mix with and overlay the cuttings gradually returning the surficial sediment layer to a chemical state similar to existing conditions. Additionally the NABF used by EEPGL will be a lowtoxicity substance reducing the potential that changes in sediment quality will lead to toxicological impacts on benthic fauna. Based on consideration of the above the overall magnitude of drill cuttings deposition impacts on marine benthos was rated as Negligible. Sensitivity of Receptor Drill Cuttings Deposition A study of benthic megafauna in a similar environment offshore Venezuela found that abundances in the

vicinity of offshore development sites were significantly reduced after drilling. Highly mobile organisms returned to the area soon after drilling was completed. However the species composition of sessile taxa was altered with analyses suggesting that their density increased further away from areas that had been disturbed. The recovery potential of deepsea marine benthic biological resources particularly sessile taxa following cessation of drilling activities is unknown Jones et al. 2012. Sessile individuals will likely experience injury or mortality in areas where drill cuttings deposition exceeds the abovereferenced threshold; however longterm impacts on the benthos population are not expected as a result of smothering of these individuals.

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With respect to toxicity impacts contaminants deposited on the seafloor can pose risks to those deepsea benthos living within or in close association with bottom substrates that are unable to avoid exposure due to their relatively sedentary existence. These benthos perform functional roles in the deepsea ecosystem including sediment bioturbation and stabilization organic matter decomposition and nutrient regeneration and serve as food sources to higher trophic levels; accordingly toxicity could impact the population size as well as move up the food chain via bioaccumulation. Based on consideration of the above the overall sensitivity of marine benthos to drill cuttings deposition impacts was rated as Low.

Impact Significance and Mitigation Measures

Drill Cuttings Deposition These magnitude and sensitivity ratings lead to a significance rating of Negligible for impacts on marine benthos from drill cuttings deposition. Based on this rating no mitigation is recommended.

7.2.8.1 Characterization of Impacts FPSO and SURF Installation

Magnitude of Impact FPSO and SURF Installation The shallow sediment layer would be disturbed during installation of subsea infrastructure SURF and FPSO mooring structures on the seabed. In addition to disturbance of the habitat individual benthic organisms are likely to be crushed dislocated from the substrate sessile organisms or dismembered as a result of these occurrences. With respect to installation impacts as indicated in Table 742 which summarizes the area that will be disturbed by installation of various infrastructure components approximately 390000 m² 30 ha 74 acres

incorporating a 50 percent contingency factor will be subject to essentially onetime disturbance by the installation activity. The use of anchors by vessels other than the FPSO is not expected; other vessels will utilize dynamic positioning to maintain station offshore.

Table 742 Area of Benthic Habitat Disturbed by FPSO and SURF Subsea Infrastructure Installation Equipment Quantity Unit

Area	Width	Subtotal	m2	Trees	Flying Leads	Production Manifolds	Flowline Structures	Flowlines	Water Injection WI Manifolds	WI Pipeline Structures	WI Pipeline Gas Injection GI Manifolds	GI Pipeline Structures	GI Pipeline Production Umbilical
17	2474	m	2	5	29809	m	2	2	16491	m	1	1	4352
m	13168	m	May 2017	299	21	m2	1	m	width 12.5	m2	70	m2	3
m	width 12.5	m2	70	m2	3	m	width 12.5	m2	70	m2	3	m	width 12.5
m2	70	m2	3	m	width 3	m	width 3	m	width 3	m	width 3	m	width 3
357	2474	25	350	89427	25	140	49473	13	70	13056	39504		

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Equipment Quantity Unit Area Width Subtotal m2 Injection Umbilical Subsea Distribution Units SDUs FPSO Anchor Piles and Chains FPSO Mooring Leg Prelay 4259 m 4 16 16 3 m width 40 m2 250 m2 3000 m2 Subtotal Total w50 Contingency 12777 160 4000 48000 259851 390000

The mortality of benthos particularly sessile taxa which are directly contacted during installation of subsea infrastructure within this area is anticipated to be high. Although some organisms will survive they may be left with injuries that may impair their survival by making them prone to infection or vulnerable to predators. In addition the population structure in the specific disturbance areas may temporarily change as more motile benthos taxa enter the disturbed area to scavenge organisms that did not survive. However this impact will only occur within a small percentage of the Stabroek Block approximately 0.001 percent by area. From a benthic population standpoint this leads to an impact magnitude rating of Negligible.

Sensitivity of Receptor FPSO and SURF Installation The sensitivity of the marine benthos population to FPSO and SURF installation impacts is considered Low. While the mortality rate of sessile taxa individuals from physical disturbance resulting from installation of the subsea infrastructure will be high the population is not anticipated to be sensitive to the reduction in individuals.

Impact Significance and Mitigation Measures FPSO and SURF Installation These magnitude and sensitivity ratings lead to a

significance rating of Negligible for impacts on marine benthos from FPSO and SURF installation. Based on this rating no mitigation is recommended.

7.2.8.2 Characterization of Impacts Presence and Abandonment of Subsea Infrastructure

Magnitude of Impact Presence and Abandonment of Subsea Infrastructure As described in Section 2.12 at the end of operations some subsea infrastructure including the SURF equipment that is connected to the FPSO e.g. risers umbilical SURF equipment sited on the seafloor and FPSO mooring system may be disconnected and abandoned in place on the seafloor in accordance with standard industry practice consistent with the decommissioning plan. This would constitute an irreversible loss of natural soft bottom habitat within the collective footprint of these structures but some species of benthos may colonize this hard substrate or be attracted to it as an artificial reef as found in shipwrecks in the Gulf of Mexico Kilgour and Shirley 2008. This will only occur within the immediate footprint of the abandoned infrastructure and is expected to affect a relatively small number of organisms. The addition of small amounts of hard substrate will likely increase the diversity of the local benthic community as species that require hard substrate colonize the area where none existed before but this must be balanced with the loss of soft substrate that will continue to be unavailable within the footprint of the subsea infrastructure. These effects will occur over a small area of the direct AOI. The magnitude of the net effect on marine benthos will be Small. This positive impact is also relevant for the production operations stage as benthic organisms will have the opportunity to colonize elements of subsea infrastructure which remain stationary through the production operations stage. These positive impacts will be temporary for any infrastructure that is removed at the time of decommissioning.

Sensitivity of Receptor Presence and Abandonment of Subsea Infrastructure The sensitivity of the marine benthos to this impact is considered Low as only a small number of organisms would be impacted and those are species that are accustomed to colonizing hard substrate in an area where this type of surface is not common.

Impact Significance and Mitigation Measures Presence and Abandonment of Subsea Infrastructure These magnitude and

sensitivity ratings lead to a significance rating of Negligible for impacts on marine benthos from the presence and subsequent abandonment of subsea infrastructure. Based on this rating no mitigation is recommended.

7.2.8.3 Summary of Impact Significance Ratings Table 743 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on marine benthos and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

Table 743 Marine Benthos PreMitigation and Residual Impact Significance Ratings	Stage	Key Potential Impact	Drilling and Installation	Production Operations	Decommissioning
		Smothering and/or toxicity impacts	Injury or disturbance	Marine benthos from creation of artificial substrate	Sensitivity Magnitude
		PreMitigation	Significance Rating	Proposed Mitigation Measures	Residual Significance Rating
		Low	Negligible	Negligible	None
		Negligible	Low	Positive	Negligible
		None	Negligible	May 2017	301

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7.2.9 Ecological Balance and Ecosystems

7.2.9.1 Introduction This section describes the potential impacts of the Project on the key components and functions of the marine ecosystem. For over 30 years the US National Oceanographic and Atmospheric Administration NOAA has used the Large Marine Ecosystem LME concept as a model to assess and manage ecological functions at the regional scale. LMEs are defined as relatively large areas of ocean space of approximately 200000 km² 20000000 ha or 80000 mi² or greater adjacent to the continents in coastal waters where primary productivity is generally higher than in open ocean areas. The PDA is located in the northwestern portion of the North Brazil Shelf LME which comprises the coastal waters adjacent to northeastern South America from the eastern edge of the Caribbean Sea to the Parnaiba River in Brazil. Its width varies but it extends roughly 500 km 300 mi off the coast of Guyana NOAA 2016.

7.2.9.2 Discussion of Potential Impacts All of the Project activities are broadly relevant to an assessment of impacts on ecological balance and ecosystems because the potential impacts will occur within the ecosystem and could impact one or more of its components. Therefore rather than focusing on individual Project activities and

their separate impacts on specific ecosystem components this section identifies key ecosystem components and functions and assesses the ecosystem level implications of the impacts identified in Sections 7.2.1 through 7.2.8 that could impact those key components and functions. Although there is no universally accepted definition of key ecological functions in generic terms or with respect to the North Brazil Shelf LME they generally include such basic processes as nutrient cycling gene flow and maintenance of biodiversity.

Changes in the Marine Nutrient Cycle

The three most important nutrients in the marine nutrient cycle are nitrogen phosphorous and silicon Nihoul and Chen 2008. The primary source of all of these nutrients in the marine food web is phytoplankton which assimilate the nutrients from the surrounding seawater. Nitrogen and phosphorous are essential nutrients to all plant life and silicates enter the marine nutrient cycle largely through diatoms a specific class of phytoplankton that construct hard silicate exoskeletons. The Project could potentially indirectly impact the marine nutrient cycle through its impacts on marine water quality which could in turn impact phytoplankton growth. As discussed in Section 7.1.4 the Project is predicted to have negligible impacts on water quality and these impacts are predicted to be limited to a relatively small localized mixing zone around the FPSO. These impacts are likely to reduce nutrient uptake by phytoplankton within the mixing zone but based on the significance of water quality impacts as assessed in Section 7.1.4 and the very small portion of the North Brazil Shelf LME that would be exposed to these impacts the Project is predicted to have little if any ecosystemlevel impacts on nutrient cycling.

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Maintaining gene flow

is critical to supporting the genetic diversity in marine biological populations which in turn is an important factor in the general resilience and vigor of marine flora and fauna. Obstacles to efficient gene flow occur whenever physiochemical barriers to migration breeding or dispersalcolonization occur. Oceanic currents are a key driver of biological dispersal because many marine species spend all or part of their lives drifting as part of the plankton. A project could potentially have significant impacts on gene flow if it impacted large scale current

patterns or prevented site specific reproductive events such as spawning aggregations from occurring. The Project is not predicted to have any appreciable impact on regional current patterns that define the North Brazil Shelf LME nor is it predicted to impact any sitespecific reproductive activities that could be considered significant at a regional or ecosystem scale. Impacts on Biodiversity The Project is predicted to have numerous impacts on marine species but is not expected to impact largescale distribution of species or cause the loss of any species from within the North Brazil Shelf LME. Some benthic species may be locally displaced from the footprint of the SURF components and some pelagic species may be locally displaced from the surface mixing zone that will form around the wastewater outfall but these impacts would be insignificant at the ecosystem scale. Additionally there is a negligible risk of the Project causing the extinction or extirpation of any species from the North Brazil Shelf LME or exacerbate any of the risk factors that have contributed to the listing of the special status species assessed in Section 7.2.1.

Ballast Water and Invasive Species Ballast water is water carried in ships ballast tanks to improve vessel stability balance and trim; it is essential for the safe operations of oceangoing ships. It is taken onboard or discharged when cargo is unloaded or loaded or when a ship needs extra stability in foul weather. When ships take on ballast water aquatic plants and animals may also be entrained into the ballast tanks. These organisms are transported in the ballast tanks of the ships and upon being discharged some of these organisms may survive and establish themselves in the new environment if the habitat conditions are suitable. The global movement of ballast water is considered to be the largest transfer mechanism for marine nonindigenous species Ruiz et al. 2005 . If the nonindigenous species become invasive they may cause serious ecological economic and public health impacts MCA 2008. If the invasive species become dominant in the new environment they can displace native species change localregional biodiversity and affect local economies based on fisheries. In addition these invasive species may also affect industries that withdraw coastal water and affect public health ESMA 2017 . The Caribbean Invasive Alien Species Working Group of which Guyana is a member has identified one species the green mussel *Perna viridis* as having been introduced to

Assessment of Impacts The Project has the potential to contribute to the spread of marine invasive species as the discharges of ballast water will be required for initial FPSO installation and recurring tanker offloading during production operations. As discussed in Section 2.5.8.4 ballast water will be required for FPSO transit from the shipyard to the site. Once on site the unneeded ballast water from the FPSO may be discharged overboard. The initial FPSO ballast discharge will occur only during a limited time period during SURF installation and commissioning activities. It is estimated that no more than 500000 barrels of ballast water would be discharged into Guyanese waters Table 25 during this time. In order to mitigate the risk of invasive species the ballast water taken on will be exchanged with water from deep international waters. This practice is generally thought to reduce the likelihood of introducing invasive species to new coastal habitats because oceanic organisms are considered unlikely to colonize coastal habitats Ruiz et al. 2005. The environmental conditions at the point where the water is withdrawn will likely be similar to the conditions in the PDA which means that at least some organisms discharged into the PDA would be likely to survive the event but it also means that these organisms would likely include many of the same openocean species that occur naturally in the PDA. During production operations offloading tankers will routinely discharge ballast water in Guyanese waters as oil from the FPSO is loaded. It is estimated that a maximum of 1100000 barrels of ballast water Table 25 will be discharged during each loading. These ballast water discharges would be conducted in accordance with internationally recognized standards and in compliance with IMO requirements. The ecological effect would be similar to the effect of the ballast discharge from the FPSO in the sense that organisms from the open ocean could be discharged at the FPSO. However ballast discharges from tankers will occur routinely during the production phase as opposed to the onetime FPSO ballast discharge during the installation phase.

7.2.9.3 Characterization of Impacts Magnitude of Impact The Projects predicted ecosystemlevel impacts are indirect impacts that would potentially occur as a result of direct impacts

on specific abiotic and abiotic components of the larger ecosystem. The assessment of the Projects magnitude of impacts on the North Brazil LME from the potential impacts described above is determined based on the geographic extent of the impact compared to the size of the North Brazil LME and the initial rating of the direct impact that would drive the indirect ecosystemlevel impact. The magnitude of potential ecosystemlevel impacts is defined according to the definitions provided in Table 744. Table 744 Definitions for Magnitude Ratings for Potential Impacts to Ecological Balance and Ecosystems Criterion Magnitude Definition Negligible Impact is within the normal range of variation for the ecosystem as a whole. Small Impact is predicted to be outside the range of natural variation but does not cause a substantial change in any of the key ecosystem functions identified in Section 7.2.9.1. May 2017 304 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Medium Impact is predicted to be outside the range of natural variation and causes a substantial change in one or more of the key ecosystem functions identified in Section 7.2.9.1. Large Impact is predicted to be outside the range of natural variation and causes a substantial change in two or more of the key ecosystem functions identified in Section 7.2.9.1. All of the embedded controls identified in Section 2.11 will minimize impacts on one or more physical biological or chemical attributes of the ecosystem and will therefore play a role in reducing the initial magnitude of impacts on the ecosystem. Sensitivity of Receptor The assessment of the ecosystem as a broad receptor of indirect impacts from the Project is based on the sensitivity of the receptor to the initial direct impact that will drive the ecosystemlevel impacts. Ecosystem level sensitivity is defined according to the definitions provided in Table 745. May 2017 305 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 745 Definitions for Receptor Sensitivity Ratings for Impacts to Ecological Balance and Ecosystems Criterion Definition Sensitivity Negligible Biological impacts affect receptors with no specific value or importance attached to them. Low Biological impacts affect species and subspecies of Least Concern on the IUCN Red List or not meeting criteria for medium or high value or without specific anatomical behavioral or ecological susceptibilities to Projectrelated

impacts. Medium Biological impacts affect species listed as Vulnerable Near Threatened or Data Deficient on the IUCN Red List species protected under national legislation nationally restricted range species nationally important numbers of migratory or congregatory species species not meeting criteria for high value and species vital to the survival of a medium value species. High Biological impacts affect species on IUCN Red List as Critically Endangered or Endangered. Species having a globally restricted range e.g. fauna having a distribution range less than 50000 km² 20000 mi² internationally important numbers of migratory or congregatory species key evolutionary species and species vital to the survival of high value species. Impact Significance and Mitigation Measures Table 746 summarizes the magnitude sensitivity and impact significance ratings for the potential ecosystem level impacts discussed above. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Table 746 Summary of Impact Significance Ratings and Recommended Mitigation Measures Ecological Balance and Ecosystems Sensitivity Magnitude PreMitigation Low Small Significance Rating Negligible Proposed Mitigation Measures None Residual Significance Rating Negligible Low Medium Minor None Minor Stage Resource Receptor Impact All Project stages Production Operations Nutrient uptake by phytoplankton; localized and temporary changes in species distribution Marine biota that could be affected by invasive species introduced by ballast water May 2017 306 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.3 Socioeconomic Environment Chapter 7 Assessment of Impacts For the purposes of this EIA socioeconomic environment is intended to encompass the human aspects of the affected environment with specific emphasis on the social and economic characteristics of society that could be affected by the Project. This section identifies and assesses the potential impacts on the existing socioeconomic environment in the Project AOI including community health and cultural heritage as a result of Projectrelated activities. The methodologies specific to the assessment of socioeconomic impacts build upon the general assessment methodology outlined in Chapter 4. This general approach and methodology has been adapted for use in evaluating impacts

to socioeconomic receptors. The evaluation criteria used to determine impact magnitude and sensitivity for specific socioeconomic receptors are summarized in Table 42. Stakeholder engagement is critical to a robust impact assessment process. A range of stakeholders were interviewed to deepen ERM's understanding of the existing socioeconomic conditions presented in Chapter 6. The information gathered was also used to inform the sensitivity and magnitude designations used in this assessment. The following socioeconomic resources with the potential to be impacted by the Project within the Project AOI are assessed in this section: Economic conditions, Employment and livelihoods, Community health and wellbeing, Marine use and transportation, Social infrastructure and services, Land use, Ecosystem services, Indigenous Peoples, Cultural Heritage.

7.3.1 Project Activities and Receptors As the Project's primary activities are located more than 190 kilometers (120 miles) offshore, impacts on socioeconomic resources as a result of planned Project activities are expected to be limited. The main Project activities³³ with potential to result in socioeconomic impacts are: Installation and operation of the FPSO and SURF, Drilling of wells, Government revenue generation from Project, Project employment and procurement, Worker presence in the Georgetown area. ³³ Other Project activities considered in this assessment include discharges of process and waste waters; utilization of an FPSO marine exclusion zone; changes in land use; and aviation activities. However, impacts on socioeconomic conditions from these activities were considered negligible.

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Project use of emergency and health services in the Georgetown area, Project use of roads and transportation services in the Georgetown area, Marine vessel transit between the PDA and shorebase facilities in Guyana and Trinidad.

Potential receptors for socioeconomic impacts during planned Project activities are outlined in Table 747 along with the rationale for their inclusion and the associated potential impacts.

Table 747 Socioeconomic Receptors and Potential Impacts as a Result of Project Activities

Receptor: General Guyanese population

Rationale for Inclusion: The Project could have far-reaching economic impacts throughout the country, which could impact all segments of the population. Potential Impacts

Increased government revenues potentially leading to increased social spending and investment throughout the country. Increased business activity and related employment. General population of Georgetown Road users in Georgetown both motorized and nonmotorized [e.g. cyclists pedestrians] modes Marine vessel operators in the Georgetown Harbour and along the coast The limited amount of time that offshorebased Project workers those who are foreign will be onshore will likely be spent in transit in Georgetown where they will interact with and make use of the same resources and infrastructure as the local population. Project procurement and increased worker spending level may result in higher demand for goods and services. The Project may result in induced influx of jobseekers from other areas of Guyana to the Georgetown area. The Project may rely in a very limited manner on some medical and health facilities in the Georgetown area to address worker illness and injury. The Project will use existing roads for transporting materials and equipment from warehouses or storage facilities to the Georgetown area shorebases. The Project will involve transit of various marine vessels such as support vessels and tugs from the Georgetown area shorebase facilities to the PDA. Changes to community dynamics identity and sense of safetysecurity. Increased cost of living. Increased risk of communicable disease transmission. Decreased accessibility or quality of medical and health service. Increased traffic congestion. Increased risk of property to injury due damage and vehicle acent. Increased traffic marine congestion Georgetown in Harbour and coastal waters between Georgetown and the PDA. Increased acent. of marine risk Marine vessel operators in the vicinity of the PDA The Project will establish marine safety exclusion zones around the FPSO drill ship and major installation vessels precluding use of this area for other activities such as fishing. Reduced availability of ocean areas for nonProject livelihood activities such as fishing. May 2017 308 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Receptor Archaeology and heritage resources Rationale for Inclusion The Project will disturb the seafloor in the process of drilling development wells installing FPSO components and installing SURF components Chapter 7 Assessment of Impacts Potential Impacts Damage to underwater archaeological or historical sites. 7.3.2 Economic Conditions 7.3.2.1

Introduction This section assesses potential Project impacts on economic conditions in the Project AOI. The key impacts considered for planned Project activities include Projectrelated revenue generation and increased tax revenues for the government potentially resulting in increased government spending typically on social services and infrastructure; potential increased local business activity and related employment as a result of Project procurement and employment; potential increased Project worker spending levels; and potential increased cost of living to citizens due to higher demand for goods and services. The extent and type of Guyanese employment and procurement opportunities are outside the scope of the EIA. Such considerations will be addressed as part of EEPGLs preparation of a local plan consistent with the requirements of the petroleum agreement.

7.3.2.2 Relevant Project Activities and Potential Impacts The Project would contribute directly and positively to increased national revenues through a petroleum agreement between EEPGL and the government. The Project would also benefit the economy through local procurement of select goods and services limited direct local employment and spending in local communities by Project workers. In addition to direct expenditures and employment the Project would also likely generate induced economic benefits as other nonProject related businesses benefiting from direct Project purchases or worker spending will reinvest locally or expand spending in the area thereby also generating more local valueadded tax. These beneficial multiplier impacts will occur throughout the Project life. Potential adverse impacts of the Project on economic conditions associated with planned Project activities could include the potential for cost of living to increase due to a higher demand for some goods and services either through direct Project procurement or through Project worker purchases. Potential impacts on economic conditions from the Project are summarized in Table 748.

May 2017 309 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 748 Project Activities and Potential Impacts

Economic Conditions	Stage	Receptors	Project Activity	Project revenue generation	Key Potential Impacts
Potential government investment in social services and economic development diversification.					Potential government infrastructure projects. Project procurement of selected goods

and services Increased sales tax revenues. Increased local All Project stages Guyanese population Project worker spending business activity and growth. Increased demand for services and infrastructure leading to increased cost of living. Limited local employment direct and indirect 7.3.2.3

Magnitude of Impact Economic Conditions The Project has the potential to impact economic conditions both positively and negatively. Project revenues to the government through its revenue sharing agreement with EEPGL can allow for increased government spending on social infrastructure services and programs as well as investment in infrastructure programs and different economic sectors. Economic conditions can also be impacted positively by select local Project procurement and through Project worker spending. An adverse impact could occur from increases in the cost of living due to higher demand for some goods and services. Given the Projects small workforce and predominantly offshore footprint such increases are expected to be limited. Economic benefits of the Project are expected to outweigh potential negative impacts such that overall impacts on the economy are expected to be Positive. As described in Chapter 4 this assessment does not develop ratings for positive impacts. May 2017 310 EEPGL Environmental Impact Assessment Liza

Phase 1 Development Project Chapter 7 Assessment of Impacts 7.3.2.4 Sensitivity of Receptors

Economic Conditions The receptors most likely to be most impacted by impacts to economic conditions are residents in the Georgetown area. As discussed below vulnerable lowerincome populations are considered to be more sensitive to this impact and are therefore considered separately. Sensitivity of the receptors is determined based on the definitions in Table 749. Table

749 Definitions for Receptor Sensitivity for Impacts to Economic Conditions Criterion Definition

Sensitivity Low The local and regional economies are highly diversified and not highly dependent on any one sector. The workforce is highly skilled would not experience major challenges in shifting to different occupations and is well positioned to benefit from the Project. Medium The local and regional economies are somewhat diverse and dependent on a few key industrial sectors that are not all natural resourcesbased. Alternate economic opportunities including from the Project are possible but the workforce may require additional training to be able to pursue such opportunities.

High The local and regional economies are highly dependent on one or a few industrial sectors that are largely natural resource sectors. There are few alternate economic opportunities in the area and the workforce does not have the skills to shift to pursue alternate economic opportunities. Receptors in the Georgetown area Region 4 are considered to have a Medium level of sensitivity to economic impacts since the economy in this region is relatively diverse and less dependent on natural resources than in other areas of the country with 12 percent of jobs in the primary sector 21 percent in the secondary sector and 67 percent in the tertiary sector³⁴. Individuals and households of lower socioeconomic status are considered to have a High level of sensitivity to economic impacts due to their lower capacity to benefit from the Project and the business opportunities it may bring and to their higher level of vulnerability to an increased cost of living. However this vulnerable population would benefit from increased government revenues along with the general population should such government revenues be invested in social infrastructure services and programs as well as investment in infrastructure programs and different economic sectors.

7.3.2.5 Impact Significance and Mitigation Measures

Economic Conditions As discussed above this impact is considered to be Positive for both the general population and the lowincome subpopulation in the Georgetown area. As described in Chapter 4 this assessment does not develop significance ratings for positive impacts. ³⁴ According to the BSG the primary industrial sectors e.g. agriculture fishing forestry and mining make direct use of natural resources and include the production of raw materials and basic foods. The secondary sector is engaged in manufacturing using raw products from the primary sector and includes processing construction textile production brewing and bottling etc. The tertiary sector provides services to the general population and businesses including retail and wholesale trade transportation and distribution entertainment tourism healthcare etc. May 2017 311 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts As this is a positive impact no mitigation measures are required. To enhance the benefits from this positive impact the Project intends to procure select Project goods and services locally to the extent reasonably practicable. While it is expected that the number of Guyanese workers will be

small the Project also intends to utilize Guyanese nationals where reasonably practicable. Table 750 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on economic conditions and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

Table 750	Economic Conditions	PreMitigation	and	Residual Impact	Significance Ratings	Magnitude	Sensitivity	Not assessed	Medium	PreMitigation
Significance Rating	Positive	Proposed	Mitigation Measures	None	Residual	Significance Rating	Positive	High	lower socioeconomic groups	Phase All Project stages
Resource	Receptor	Impact	Guyanese population including lower income subpopulation	increased government revenues	increased employment	increased local business activity	potential for increased cost of living.	7.3.3	Employment and Livelihoods	7.3.3.1 Introduction

This section assesses potential Project impacts on employment and livelihoods in the Project AOI. The key impacts considered for planned Project activities are potential increased local business activity and employment due to select Project employment and select Project procurement and due to Project worker spending; potential occupational health and safety impacts to Project workers; and potential for restricted access to fishing locations and damage to fishing vessels and equipment from Project vessel movements. The extent and type of Guyanese employment and procurement opportunities are outside the scope of the EIA. Such considerations will be addressed as part of EEPGLs preparation of a local plan consistent with the requirements of the petroleum agreement.

May 2017 312 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts 7.3.3.2 Relevant Project Activities and Potential Impacts

The primary Project activities will occur approximately 190 kilometers 120 miles offshore and are not expected to significantly impact nonProject activities occurring on the Guyana coast. Project workers onboard the FPSO and other Project vessels may be exposed to occupational hazards which will be managed through training and the use of protective equipment as appropriate. The only direct planned Project activities that will be perceptible from the shore will be support vessel trips originating from and returning to

shorebase facilities in Georgetown. In addition the Project will engage select local companies for the provision of various goods and services e.g. catering transportation logistics to support Project activities. Table 751 summarizes potential Project impacts on employment and livelihoods. Table 751 Project Activities and Potential Impacts Employment and Livelihoods Stage Receptors Project Activity Project procurement of select goods and services Population of Georgetown and vicinity Worker spending All Project stages Fishing vessel operators in the coastal area Limited local employment direct and indirect Transit of Project vessels between the PDA and shorebases in Georgetown and in Guyanese waters between PDA and shorebases in Trinidad and Tobago Key Potential Impacts Increased local business activity and growth Increased employment Damage to fishing vessels and equipment impacting fishing livelihoods

7.3.3.3 Magnitude of Impact

Employment and Livelihoods

The assessment of the Projects magnitude of impacts on employment and livelihoods is determined based on consideration of geographic extent frequency duration and scale. The scale of potential impacts on employment and livelihoods is defined according to the definitions provided in Table 752.

May 2017 313 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 752 Definitions for Scale Ratings for Potential Impacts on Employment and Livelihoods

Criterion	Scale	Definition
Negligible	Changes do not bring about any loss of livelihood or employment. Small	The changes impact some individual receptors ability to engage in their current livelihoods at the same level of productivity.
Medium	The changes impact the receptors ability to engage in their current livelihoods at the same level of productivity and/or cause a loss of working days. An entire sector within a community may be impacted in this way.	Large
Large	The changes cause the receptors to cease their current livelihood activities for an extended period of time or indefinitely. An entire sector within a community or region may be impacted in this way. Few adverse impacts on employment or livelihoods are expected as a result of planned Project activities. Current fishing activities both industrial and artisanal rarely occur as far offshore as the PDA and therefore the FPSO marine safety exclusion zone will have little or no impact on existing current fishing activity. There is an emerging deepwater tuna fishery that may	

approach the southern boundary of the PDA and abandoned fishing gear has been found entangled in the mooring lines for the metocean instruments described in Section 6.1.1.1. If this fishery continues to develop in the vicinity of the PDA then the number of industrial fishing vessels affected by Projectrelated activities offshore may increase modestly in the future. Considering the small number of operators that are currently participating in this fishery the uncertainty concerning the ultimate size of the fishery and the relatively small area of ocean that would be affected the magnitude of the Projectrelated impacts on industrial fishing operations is considered Small. As a mitigation measure the Project intends to issue notices to mariners via MARAD the Trawlers Association and fishing coops for major marine vessel movements including movements of the FPSO drill ship and major installation vessels. The Project will also communicate major vessel movements to commercial cargo commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and where possible communicate Project activities to those individuals to aid them in avoiding Project vessels through the stakeholder engagement process. This will allow fishing boat operators to adjust their fishing locations if needed to avoid these offshore locations with higher densities of Project vessels. The highest probability for Project interactions with fisherfolk would likely remain limited to encounters with support vessels transiting between the PDA and the shorebases in Georgetown and Trinidad and Tobago. This could result in some limited and temporary disruption to fishing activity. Unlike the deepwater industrial fisheries the artisanal fisheries would not lose access to any fishing areas or be affected by expansion of oil and gas industryrelated traffic into areas where it does not currently exist however the increase in shipping traffic near the coast and within the Demerara Harbour carries a small increase in the potential for support vessels to cause damage to fishing vessels or equipment such as nets during transiting. Many of the artisanal craft engaged in subsistence fishing activities do not carry radios may use remote ports and/or may not receive notices of increased vessel activity issued by the Project through May 2017

314 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts the channels described above. Considering

the occasional and temporary nature of impacts on subsistence fishing activity from the Project-related marine traffic balanced with the abovementioned limitations on the effectiveness of the measures proposed to manage these impacts the magnitude of the impacts is considered to be Small. In addition to direct employment the Project will result in the indirect employment of workers through procurement of select local goods and services such as food transportation and logistical support. Local and foreign workers that are off shift also will spend a portion of their salaries in the Georgetown area on local accommodations food transportation and entertainment. This increase in business for these local service providers could potentially lead to increased incomes additional hiring and continued investment in these local businesses allowing for further growth. This impact is considered to be Positive and as such a magnitude rating is not assigned.

7.3.3.4 Sensitivity of

Receptors Employment and Livelihoods Potential receptors for employment and livelihood impacts are the general population in Georgetown and its vicinity; subsistence and commercial fisherfolk as well as farmers operating on the Guyanese coast; and Project workers based offshore. The receptor sensitivity ratings for employment and livelihoods are defined according to the definitions provided in Table 753.

Table 753	Definitions for Receptor Sensitivity Ratings for Employment and Livelihood Impacts	Criterion	Definition
Sensitivity	Low	The receptor can easily adapt to the change without assistance or can shift to alternate livelihood opportunities without impacting ability to subsist and/or earn income.	
Medium	The receptor may adapt to the change or shift to alternate livelihood activities with assistance and with some disruption to ability to subsist and/or earn income.		
High	The receptor cannot adapt to the change without difficulty and cannot easily transition to alternate livelihood activities. Impacts on current livelihood activities will pose a threat to the receptors ability to subsist earn income and maintain current quality of life.		

The Guyanese population continues to rely heavily on primary sector livelihoods such as agriculture and fisheries; however the share of primary sector jobs has been decreasing steadily in favor of more secondary and tertiary service sector jobs. Based on the definitions above the general Guyanese population is considered to have a Medium level of sensitivity to potential employment and livelihood impacts from planned Project activities. Fisherfolk

engaging in fishing on the Guyanese coast are also considered to have a Medium level of sensitivity to such impacts.

7.3.3.5 Impact Significance and Mitigation Measures Employment and Livelihoods

Based on the magnitude of impact and the receptor sensitivity ratings the significance of livelihood and employment impacts on fisherfolk operating in the coastal area is Minor. The May 2017 315

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Assessment of Impacts significance of livelihood and employment impacts for Project workers based offshore is also Minor. As discussed above the positive impacts on employment and livelihoods that will result from Project employment procurement and worker spending will outweigh potential adverse impacts for an overall Positive impact. As discussed above the Project will as a mitigation measure seek to enhance positive benefits by procuring select goods and services locally potentially leading to enhanced local employment and livelihood benefits to the extent reasonably practicable and this has been considered as part of the Positive rating. Beyond these mitigation measures no additional mitigation measures for potential adverse impacts are necessary. Table 754 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on employment and livelihoods and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

Table 754	Employment and Livelihoods PreMitigation	and Residual Impact Significance Ratings	Magnitude	Sensitivity	PreNot assessed	Medium
Mitigation	Significance Rating	Positive	Proposed Mitigation Measures	Residual	Significance Rating	None
None	Positive	Small	Medium	Minor	None	Minor
Stage	Resource	Receptor	Impact	All Project stages	Population of Georgetown and vicinity increased employment local business activity and household incomes.	Fisherfolk
Impacts on fishing livelihoods	exclusion from PDA for commercial fishing operations;	nearshore navigation and safety for subsistence fishing operations	May 2017 316	EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7	Assessment of Impacts	7.3.4 Community Health and Wellbeing
7.3.4.1 Introduction	This section assesses potential impacts from the Project on community health and wellbeing in the Project AOI.					

The key potential impacts considered as a result of planned Project activities are increased risk of communicable disease transmission decreased public safety from interactions with Project activities and decreased availability of emergency medical and health services. Increased risks of marine and road accidents to the public are assessed in Section 7.3.5 and Section 7.3.6 respectively.

7.3.4.2 Relevant Project Activities and Potential Impacts

The Project will involve a range of activities that could potentially impact public health. Shifts in demographic patterns including the influx of foreign workers or the spatial concentration of working-age populations has the potential to cause changes in disease transmission patterns and to impact public safety. Project onshore and nearshore transportation activities could increase the risk for vehicular and marine accidents. The potential for these impacts are limited due to the Project's limited onshore footprint.

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Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 755 Project Activities and Potential Impacts Community Health and Wellbeing Stage All Project Stages Receptors General population of Georgetown and vicinity Project Activity Project worker presence

Key Potential Impacts

Increased risk of Project use of medical and health resources in the Georgetown area
Road users in Georgetown and vicinity
Project transportation marine and road
Marine users in vicinity of Georgetown shorebases
communicable disease transmission. Impacts on public safety. Overburdening of medical and health services. Increased risk of vessel collisions and vehicle accidents refer to assessments in section 7.3.5 and 7.3.6.

7.3.4.3 Magnitude of Impact Community Health and Wellbeing

The assessment of the Project's magnitude of impacts on community health and wellbeing is determined based on consideration of geographic extent frequency duration and scale. The scale of potential impacts on community health and wellbeing is defined according to the definitions provided in Table 756.

Table 756 Definitions for Scale Ratings for Potential Impacts on Community Health and Wellbeing	Criterion	Definition
Scale		
Negligible		No discernible change in health status of the population. Small Changes to health status occur in some individuals and households but changes are minor temporary and reversible without medical or public health intervention.
Medium		Changes to health status occur at the population level

and are reversible over time or with medical or public health intervention. Large Profound and measurable changes to health status are evident at the population level. Some health impacts may be severe or permanently debilitating requiring medical or public health intervention or other forms of assistance for treatment and recovery. Population shifts caused by the influx of workers from other parts of the country or from foreign countries has the potential to cause changes in transmission patterns of some communicable diseases particularly if workers originate from countries with higher rates of diseases that are transmitted person to person such as TB and sexually transmitted infections. At this time the countries of origin of the Project workers are not known. Guyana has a lower rate of TB incidence than the global average 90 cases per 100000 population versus the global average of 133 but has a higher rate than most developed countries. Guyana's rate of HIV prevalence is comparable to the global average. Potential communicable disease transmission risks will vary according to the workforce's primary countries of origin; however regardless of worker origin the Project will establish a worker health screening program and take May 2017 318 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts precautions to avoid both internal and external communicable disease risks. Given the small size of the Project workforce in comparison with the receiving community less than one percent of the population of Georgetown the Project workers limited onshore presence and the embedded health controls in place to further reduce risk the magnitude of impact is expected to be Negligible. Increases in population and the presence of transient populations has the potential to contribute to increased rates of crime. Georgetown has a high rate of crime with reported cases on the rise in recent years. This is attributed largely to high rates of poverty and unemployment. It is not expected that the influx of Project workers through the Georgetown area would contribute significantly to local crime rates. Furthermore the Project workforce will represent less than one percent of the population of Georgetown and workers onshore presence will be limited and occasional. As such the magnitude of impact is expected to be Negligible. The Project will have a medical facility onboard the FPSO to treat minor medical issues. Installation vessels will also have

their own medical facility and a medical professional. In the event that an offshore worker requires medical evacuation referral onshore a medical professional will be available onshore to support the response referral. In the event of more serious illness or injury that cannot be handled by the offshore medical professionals patients would be medically evacuated to a healthcare facility in Georgetown and potentially outside of Guyana depending on the type of medical issue. Reliance on Guyanese healthcare facilities could potentially compromise availability and access for the Guyanese local population. The Project currently plans to make use of a designated local Guyanese physician as well as hospitals in Georgetown in the event of both work related and nonwork related medical and health emergencies. However for the most part these hospitals will be relied upon only for initial evaluations or in the case of lifethreatening emergencies stabilization before evacuation of foreign workers out of country to another facility. Given that reliance on local Guyanese facilities will be limited the magnitude of impact is therefore considered to be Small.

7.3.4.4 Community Health and Wellbeing Sensitivity of Receptors

The receptors that could potentially experience health and wellbeing impacts as a result of planned Project activities are residents of Georgetown and its vicinity. The receptor sensitivity ratings for community health and wellbeing are defined according to the definitions provided in Table 757 below.

May 2017 319 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 757

Definitions for Receptor Sensitivity Ratings for Community Health and Wellbeing Impacts

Criterion	Definition
Sensitivity Low	The population does not have many areas of health vulnerability. Individuals and households have the personal resources and capacity to protect and promote health. The community is well equipped with resources and infrastructure to provide routine medical and health care and address medical and health emergencies.
Medium	The population has multiple areas of health vulnerability due either to environmental or social factors. Portions of the population face socioeconomic challenges that act as barriers to health protection and promotion. There are shortfalls in local medical and health resources and infrastructure that compromise ability to provide timely and appropriate medical and health care in some situations.
High	The population has many

areas of health vulnerability due to environmental and social factors. A large proportion of the population is disadvantaged which acts as a barrier to protecting and promoting health. Adequate medical health resources and infrastructure are lacking often not allowing for timely and appropriate medical and health care. The Guyanese population is in a transitional phase whereby both communicable and noncommunicable diseases contribute considerably to the burden of illness and mortality. However urban populations have measurably higher health status than rural populations and are less likely to suffer from some communicable diseases such as malaria lymphatic filariasis and soiltransmitted helminths. Georgetown has a high concentration of medical and health facilities relative to other parts of Guyana although emergency care capacity and health related human resources are considered lacking throughout the country. Guyanas emergency medical system is in transition at this time; until recently the country did not have an ambulance system to respond to emergencies. As of 2014 an ambulance pilot program through the Georgetown Public Hospital Corporation GPHC and with assistance from Vanderbilt University had been established with seven ambulances and 21 trained emergency medical technicians EMTs. According to Guyanas Chief Medical Officer the countrys emergency medical services are still insufficient to respond to the needs of the population. The country does not have an air ambulance to transfer injured patients from mining areas in the hinterland and to respond to serious vehicle collisions that occur on Guyanas roads. Hospital capacity is also lacking; at this time the GPHC has 450 beds but requires about 600 to adequately serve the population ERM Personal Communication 7. Based on the definitions above the population in Georgetown has a Medium level of sensitivity to community health and wellbeing impacts. 7.3.4.5 Impact Significance and Mitigation Measures Community Health and Wellbeing Based on the magnitude of impact and receptor sensitivity ratings the significance of increased communicable disease risk is Negligible while the significance of impacts on public safety is Negligible and impacts on emergency health services access are Moderate. Assessment of transportation safety risks are presented in Sections 7.3.5 and 7.3.6. May 2017 320

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Assessment of Impacts Given the Negligible significance of communicable disease and public safety impacts from the Project mitigation measures are not required but the Project will nonetheless work closely with police and other public safety authorities to address any related concerns. In addition the Project workers will be required to adhere to a worker code of conduct. Table 758 summarizes the impact magnitude and resource sensitivity ratings for potential Project impacts on community health and wellbeing and the impact significance ratings resulting therefrom. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

Table 758	Community Health and Wellbeing
PreMitigation	Impact Significance Rating Negligible
Proposed Mitigation Measures	None
Residual	Impact Significance Rating Negligible
All Project stages	General population of Georgetown and vicinity increased risk of communicable disease transmission
General population of Georgetown and vicinity	impacts on public safety
General population of Georgetown and vicinity	reduced access to emergency and health services
Medium	Negligible
Negligible	None
Negligible	Medium
Small	Minor
Minor	None

7.3.5 Marine Use and Transportation

7.3.5.1 Introduction

The Project involves the drilling of development wells the installation and longterm operations of an FPSO and SURF and transit of Project support vessels between the PDA and the Guyana shorebases as well as between the PDA and shorebases in Trinidad and Tobago. The specific shorebases and onshore support facilities e.g. warehouses laydown yards to be utilized in Guyana have not yet been identified by EEPGL. Accordingly ERM has performed

May 2017 321 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts the impact assessment on the basis that the Project will utilize existing shorebases located in Georgetown. Should any new or expanded shorebases or onshore support facilities be utilized the constructionexpansion and any required dredging as well as the associated permitting of such facilities would be the responsibility of the owneroperator and such work scope would not be included in the scope of the EIA. The assessment of potential impacts on marine use and

transportation from these Project activities was based on the following assumptions. Most support vessel trips would originate from and return to shorebase facilities in Georgetown while larger draft vessels such as drill ships could transit between the PDA and shorebases in Trinidad and Tobago. The drilling stage could potentially utilize up to two drill ships on station simultaneously. The marine safety infrastructure available in Guyana e.g. navigation aids is adequate.

7.3.5.2 Relevant Project Activities and Potential Impacts

Table 759 summarizes the relevant Project activities and their potential impacts on marine use and transportation. The FPSO will be anchored to the seafloor for the duration of the production operations stage which is intended to last approximately 20 years. During the production operations stage the FPSO will have a 2 nautical mile (nm) radius marine safety exclusion zone covering approximately 4300 ha in which no unauthorized vessels will be allowed to enter. In addition the drill ship and drill centers will have 500 meter radius marine safety exclusion zones during drilling operations and well workovers; a 500 meter radius marine safety exclusion zone will also be maintained around major installation vessels during the installation stage. Notices to mariners would be issued via MARAD to the Trawlers Association and fishing coops for planned Project marine vessel movements including the FPSO drill ship and major installation vessels to be utilized during the installation stage. EEPGL will also communicate major Project vessel movements to commercial cargo commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and where possible communicate Project activities to those individuals to aid them in avoiding Project vessels through the stakeholder engagement process. The Project would generate a variety of marine support vessel trips throughout the Project life. Support vessel activities would consist of approximately five vessels conducting resupply trips to the FPSO and drill ships; Tanker movements and tugs supporting tanker loading activities; Subsea installation and maintenance activities; and Other vessels supporting installation activities. Based on similar developments the Project would generate an average of 12 vessel roundtrips between the PDA and shorebase per week during development drilling and FPSOSURF installation and 7 vessel roundtrips per week during FPSOSURF production.

operations. May 2017 322 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts These vessel roundtrips would originate from and return to shorebase facilities in Guyana and/or Trinidad and Tobago. As described in Section 2.9 End of Operations EEPGL has not prepared detailed plans for the decommissioning phase. As such the number of vessel trips associated with decommissioning is not known. For the purposes of the impact analysis vessel traffic associated with Project decommissioning is assumed to be similar to that for the drilling and installation stage 12 vessel round trips per week. For the purposes of the impact assessment marine safety exclusion zones are an embedded control considered part of the Project design. Accordingly the premitigation impact assessment considered the inclusion of this measure.

Table 759 Project Activities and Potential Impacts Marine Use and Transportation Stages		
Project Activity	Maritime transport of Project materials supplies and personnel	Key Potential Impacts
Increased vessel traffic in Georgetown Harbour coastal waters between Georgetown and the PDA along transit routes leading to Georgetown.	Drilling and Installation	Presence of FPSO drill ship and installation vessels
Maritime transport of Project materials supplies and personnel	Production Operations	Presence of FPSO tanker drill ship and workover vessel
Decommissioning	Maritime transport of Project materials supplies and personnel	FPSO removal and decommissioning vessel support
Increased risk of marine casualty event e.g. collision grounding involving third parties and Project vessels in Georgetown Harbour or in coastal waters.	Reduced availability of ocean surface areas for nonProject activities due to marine safety exclusion zones around the FPSO drill ship and major installation vessels.	Increased risk of marine casualty events e.g. collision grounding involving third parties and the FPSO in transit and while anchored as well as drill ship installation vessels in transit and on station.
Increased vessel traffic in Georgetown Harbour coastal waters between ports and the PDA and along transit routes leading to Georgetown.	Increased risk of marine casualty event e.g. collision grounding involving third parties and Project vessels in Georgetown Harbour or in coastal waters.	Reduced availability of ocean surface areas for nonProject activities due to marine safety exclusion zones around the FPSO tanker drill ship and workover vessel.
Increased risk of		

marine casualty event e.g. collision grounding involving third parties FPSO tanker drill ship and tankers on station. Increased vessel traffic in Georgetown Harbour coastal waters between ports and the PDA and along transit routes leading to Georgetown. Increased risk of marine casualty events e.g. collision grounding involving third parties and the FPSO in transit as well as decommissioning support vessels. May 2017 323 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts 7.3.5.3 Magnitude of Impact Marine Use and Transportation Table 760 summarizes the definitions used to rate impact scale of the Projects potential impacts on marine use and transportation. Considering these definitions Table 761 summarizes the assigned impact magnitude ratings for the various impacts. The Projects marine activities would impact cargo vessel traffic into and out of the Port of Georgetown openocean shipping in the vicinity of the Stabroek Block in Guyanese waters and commercial and subsistence fishing activity throughout impacted portions of Guyanas coastal waters. As described in Section 7.3.5.1 support vessel traffic would be higher during the development drilling stage relative to the production operations stage. Because the FPSO and support vessels would be present throughout the duration of the Project the nature of impacts on marine use and transportation would generally be similar across various stages of the Project. Vessels transiting the PDA would need to avoid the marine safety exclusion zones around the drill ships major installation vessels and the FPSO. The FPSO marine safety exclusion zone would require nonProject vessels to avoid approximately 4300 ha 10600 acres approximately 0.2 percent of the Stabroek Blocks approximately 2.7 million ha 6671845 acres for approximately 20 years. Because the FPSO will be anchored to the seafloor its marine safety exclusion zone would essentially be a permanent navigation feature until the decommissioning stage. The marine safety exclusion zones around the drill shipsdrill centers would be small 79 ha and would be in force only during development drilling activity which is anticipated to last approximately 3 years and on occasion during well workover activity in later years. Similar sized marine safety exclusion zones around major installation vessels would occur only during the installation stage or in the event repairs or maintenance. The Stabroek Harbour Master has advised

EEPGL that Jamaican and Trinidadian vessel shipping lanes intersect the Stabroek Block. As such shipping traffic could potentially intersect the PDA as well. Shipping lane maps indicate the FPSO would likely be more than 30 nautical miles from the nearest generalized shipping lane. More importantly the shipping lanes in question are traditional and are not precisely demarcated. Accordingly even if Project vessels are in close proximity of mapped lanes shipping lane users would have ample warning and space to navigate and there is no reason to believe that the Project would meaningfully impede nonProject shipping traffic. No interference with shipping traffic was experienced during previous seismic surveys or the Liza exploration drilling activities. Fishing vessels would lose use of the defined marine safety exclusion zones for fishing activities and as described in Sections 6.3.2 and 6.3.3 most subsistence fishing occurs in nearshore areas. Most commercial fishing occurs between the coast and the edge of the continental shelf i.e. shoreward of the PDA but as described in Section 7.3.3.3 the recovery of derelict fishing gear from the PDA indicates that some fishing activity does take place within or near the PDA and the emerging deepwater tuna fishery may potentially increase this activity in the future. The highest potential for interactions between fishing vessels and Project vessels in Guyana waters is near the Port of Georgetown and the Demerara River mouth where commercial vessel traffic is already present. As a result the Projects impacts on marine use for subsistence activity are likely to be limited but challenges in communicating with the May 2017 324 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts subsistence fishing fleet may limit the effectiveness of efforts to advise the fleet of Project operations. The social and economic impacts of the Projects exclusion zones on commercial and subsistence fishing are described in Sections 7.3.2 and 7.3.3. With respect to commercial fishing the majority of the PDA is in deeper waters that are less often used for commercial fishing and the size of the FPSO marine safety exclusion zone is negligible relative to the water available for fishing. As a result the Projects impacts on marine use for current commercial fishing activities also are likely to be limited. During development drilling and again during decommissioning the Project could generate one or two daily

vessel departures and arrivals from the Port of Georgetown. Although call data for the Port are not available this frequency of activity is unlikely to exceed the Ports vessel throughput capacity. Support vessels would typically be smaller and more maneuverable than the cargo or tanker vessels that call on the Ports of Georgetown or ports in Trinidad and Tobago and thus would not present significant incremental navigation hazards within or near these ports. The scale of potential impacts on maritime use and transportation are defined according to the definitions provided in Table 760 below.

Table 760	Definitions for Scale Ratings	Potential Impacts on Maritime Use and Transportation	Criterion Definition
Negligible	No discernible change in transportation activity or demands on other infrastructure.	Small	Increased transportation activity or marine infrastructure demand is perceptible but does not measurably impact the capacity of transportation or other infrastructure and does not measurably increase safety risks on waterways.
Scale Medium	Increased transportation activity or marine infrastructure demand is perceptible reduces transportation system or infrastructure capacity and/or measurably increase safety risks on waterways. These impacts do not require a change in typical travel behavior.	Large	Increased transportation activity or marine infrastructure demand causes substantial delay congestion and/or increased safety risks on waterways to the point where vessel operators or other users of infrastructure must consistently and frequently change their typical daily behavior.

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 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7
 Assessment of Impacts Table 761 Magnitude Ratings Potential Impacts on Marine Use and Transportation

Stage	Drilling and Installation	Decommissioning	Potential Impact	Maritime safety in Georgetown Harbour and shipping channel	Offshore maritime travel and safety	Production Operations	Maritime safety in Georgetown Harbour and shipping channel	Offshore maritime travel and safety	Magnitude	Rationale for Rating
Small	Small	Small	Small	Small	The drilling and installation stages would involve regular supply vessel trips in and out of Georgetown Harbour. While the marine safety exclusion zones around the FPSO and drill ships would be medium to longterm the FPSO will remain moored in one location and the drill ships would only move between the two					

established drill centers. Operations stage marine transport activity would be similar to but less frequent than for the drilling and installation stages. The FPSO will be stationary for the life of the Project and its associated marine safety exclusion zones would become a known mapped navigation feature for other vessel operators.

7.3.5.4 Sensitivity of Receptors Marine Use and Transportation

Potential receptors for the Project's marine use and transportation impacts include current users of Georgetown Harbour and Guyanese coastal waters. Table 762 defines the receptor sensitivity ratings used in the assessment.

Table 762	Definitions for Receptor Sensitivity Ratings
Potential Impacts to Maritime Use and Transportation	Criterion Definition
Sensitivity Low	The receptor is accustomed to or specifically anticipates the type of activity proposed by the Project; existing transportation activities can easily adapt to additional transportation activity with no outside assistance or mitigation.
Medium	The receptor is not specifically accustomed to the type of activity proposed by the Project. The receptor can adapt to additional transportation activity and maritime safety risks with outside assistance or mitigation.
High	The receptor is poorly suited to the type of activity proposed by the Project and cannot fully adapt to increased transportation activity and maritime safety risks even with outside assistance or mitigation.

Table 763 identifies and characterizes the sensitivity of receptors that could potentially experience marine use and transportation impacts from the Project.

May 2017 326 EEPGL Environmental Impact Assessment
Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 763 Sensitivity Ratings for Marine Use and Transportation Receptors

Sensitivity	Vulnerability Rating
Low	Medium

Receptor Definition and Rationale for Inclusion

Commercial cargo vessels	Commercial fishing vessels
Includes all international and regional commercial cargo vessel activity making calls at Georgetown Harbour as well as traversing the northern coast of South America. Project activities would occur in areas potentially used by commercial shipping organizations and would require use of Georgetown Harbour.	Includes commercial fishing vessels i.e. those who sell their product to local or international markets that operate in Guyana coastal waters. These vessels may interact with Project vessels or may currently conduct fishing operations in or near defined marine safety

exclusion zones in the PDA. Subsistence fishing vessels Includes individuals whose fishing activity is primarily or solely to feed themselves their family or their community and not for commercial sales. These individuals generally operate near shore. Medium Rationale for Rating Georgetown Harbour is an active commercial port where vessel trafficsuch as Projectrelated trafficis expected. Commercial vessels in international waters are expected to be able to safely navigate around other vessels whether in transit or stationary. Commercial fishing vessel would lose access to fishing areas that are currently available to them and would have to avoid Projectrelated vessel traffic where none currently exists; however industrial operators are likely to be aware of Project activities or at least of commercial shipping activity in the vicinity of Georgetown and can alter their fishing grounds to avoid defined marine safety exclusion zones in the PDA. Subsistence fishing vessels are usually small with limited ability to identify or avoid Project vessels. They will not lose access to existing fishing areas or encounter Projectrelated vessel traffic outside of existing areas of high vessel traffic but may not receive notice of Project related activities.

7.3.5.5 Impact Significance and Mitigation Measures Marine Use and Transportation

To further reduce the possibility and severity of marine use and transportation impacts EEPGL will augment its ongoing stakeholder engagement process and will work with government authorities through their existing notificationcontrol processes to identify commercial cargo commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and communicate Project activities to those individualsentities to aid May 2017 327 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts them in avoiding major Project vessels where possible as further mitigation. No additional mitigation measures have been proposed related to vessel activity or maritime navigation. Considering these mitigations Table 764 summarizes the premitigation and residual significance of the Projects potential maritime use and transportation impacts. Residual impacts related to maritime capacity navigation and safety are Negligible to Minor. As discussed above impacts during decommissioning are assumed to be similar to those experienced during drilling and installation. The Project may induce shorebase operators to make

improvements to existing facilities to make the shorebases fit for purpose. These improvements would enhance the value of the shorebases as material assets. Assuming that these improvements were small in scale and did not require physical expansion of the existing facilities they would be considered a Positive impact on Guyana's marine infrastructure. Larger scale improvements would be outside the scope of the EIA. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Considering all of the individual impacts listed in Table 764 the Project would have overall Negligible residual impact significance for marine use and transportation.

May 2017 328 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 764 Marine Use and Transportation PreMitigation and Residual Impact Significance Ratings

Stage	Resource	Impact	Receptor	Embedded Controls	Drilling and Installation	Decommissioning	Commercial cargo vessels	port and channel operations and maritime safety	Commercial fishing vessels	exclusion from PDA	Commercial cargo vessels	offshore navigation and maritime safety	Commercial fishing vessels	offshore navigation and maritime safety	Subsistence fishing vessels	nearshore navigation and maritime safety	Commercial cargo vessels	port and channel operations and maritime safety	Commercial fishing vessels	exclusion from PDA	Commercial cargo vessels	offshore Production Operations	Marine safety exclusion zones around FPSO drill ship and major installation vessels.	Magnitude	Sensitivity	PreMitigation	Significance	Rating															
Proposed	Mitigation Measures	Residual	Significance	Rating	Small	Low	Negligible	Communication and notification	Negligible	Small	Low	Negligible	Small	Low	Negligible	Communication and notification	Negligible	Small	Medium	Minor	Communication and notification	Minor	Small	Medium	Minor	Communication and notification	Minor	Marine safety exclusion zones around FPSO and major installation vessels.	Small	Low	Negligible	Communication and notification	Negligible	Small	Low	Negligible	Small	Low	Negligible	Communication and notification	Negligible	Communication and notification	Negligible

May 2017 329 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Stage Resource

Impact Receptor Embedded Controls Magnitude Sensitivity PreMitigation Significance Rating

Chapter 7 Assessment of Potential Impacts Proposed Mitigation Measures Residual Significance

Rating navigation and maritime safety Commercial fishing vesselsoffshore navigation and maritime safety Subsistence fishing vesselsnearshore navigation and maritime safety Small Medium Minor

Communication and notification Minor Small Medium Minor Communication and notification Minor

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Chapter 7 Assessment of Impacts 7.3.6 Social Infrastructure and Services 7.3.6.1Introduction This section assesses potential Project impacts on social infrastructure and services in the Project AOI. The planned Project activities that have the potential to impact social infrastructure and services are Project worker presence with the potential to impact availability or cost of housing and utilities and ground and air transportation with the potential to increase traffic congestion and impact public safety. The impacts associated with these two Project activities are assessed separately in this section. Impacts on health service access are assessed in Section 7.3.4. 7.3.6.2 Housing and Utilities Relevant Project Activities and Potential Impacts The Projects limited onshore activity during drilling installation production operations and decommissioning has the potential to impact housing and utilities in the Georgetown area. Table 765 summarizes the potential impacts on housing and utilities. Table 765 Project Activities and Potential Impacts Social Infrastructure and Services Housing and Utilities Stage All Project Stages Receptors General population in Georgetown and vicinity Project Activity Project worker presence in Georgetown area Induced influx of jobseekers to Georgetown area Key Potential Impacts Increased demand or use of housing and utilities service and infrastructure leading to reduced availability and/or increased cost Magnitude of Impact Housing and Utilities The assessment of the Projects magnitude of impacts on housing and utilities is determined based on consideration of geographic extent frequency duration and scale. The scale of potential impacts on housing and utilities is defined according to the definitions provided in Table 766. May 2017 331 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 766 Definitions for Scale Ratings for Potential Impacts on

Housing and Utilities Criterion Definition Negligible No discernible change in demand for housing or utilities. Small Limited increases in demand for housing and utilities are perceptible causing slight changes in the availability quality and/or cost of these resources and services. Scale Medium Increases in demand for housing and utilities are evident and lead to frequent and widespread shortfalls in availability or quality of housing and utilities or measurable increases in costs. Large Increases in demand for housing and utilities are sufficient to cause conditions of chronic shortage and inflated costs. The Project will require up to approximately 1200 workers during the peak of drilling and installation stages and up to approximately 140 workers during the production operations stage. Since the majority of the workforce for these stages will be based offshore the limited time spent onshore would be in temporary accommodations such as hotels. As such the Project workforce is not expected to impact forsale or rental housing stock and thus would not be expected to require any new utilities connections. It is not anticipated that the Projects worker presence onshore at any given time would be enough to drive development of new temporary housing hotel establishments. Some induced population influx from other regions of Guyana may occur as jobseekers move to the Georgetown area seeking direct or indirect employment from the Project; this incoming population could access forsale or rental housing stock. This influx is expected to be limited and short term in nature given EEPGLs efforts to communicate the Projects limited workforce requirements to stakeholders. Based on the definitions presented in Table 766 the magnitude of impact on housing and utilities is considered to be Minor during the drilling installation and decommissioning stages of the Project and Negligible during the production operations stage.

Sensitivity of Receptors Housing and Utilities The receptors that could be potentially impacted by changes to housing and utilities are the current general population of Georgetown. The receptor sensitivity ratings for housing and utilities are defined according to the definitions provided in Table 767. Table 767 Definitions for Receptor Sensitivity Ratings for Housing and Utilities Impacts

Criterion Definition Sensitivity Low Existing infrastructure and services have excess capacity and/or the community has the resources and capability to expand in a timely manner. Medium Existing

infrastructure and services have little excess capacity and the community has limited resources or capability to expand in a timely manner and thus would require assistance in upgrading or supplementing current infrastructure and service provision in the community. High Existing infrastructure and services have little or no excess capacity and the community does not have the resources or capability to respond to a potential increase in population. May 2017 332 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts As the capital of Guyana Georgetown has a relatively high concentration of social services and infrastructure; however according to a study by the InterAmerican Development Bank IDB there are currently shortfalls of housing and appropriate utilities infrastructure in Georgetown which the government is addressing with regularization initiatives for informal communities. Given these shortfalls the population has a Medium level of sensitivity to increased demand for housing and utilities infrastructure. Impact Significance and Mitigation Measures Housing and Utilities Based on the magnitude of impact and receptor sensitivity ratings the significance of housing and utilities impacts for the drilling installation and decommissioning stages is Minor. During the production operations stage this is reduced to a Negligible level of significance. No mitigation measures are required to address potential impacts on housing and utilities. However the Project will proactively manage messaging about the Projects limited workforce needs to stakeholders in order to reduce the potential for induced population influx. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Table 768 below summarizes potential Project impacts on housing and utilities. The impact will remain Negligible after mitigation. Table 768 Housing and Utilities PreMitigation and Residual Impact Significance Ratings Magnitude Sensitivity PreSmall Medium Mitigation Significance Rating Minor Proposed Mitigation Measures Residual Significance Rating Minor Proactive messaging regarding Project employment opportunities Negligible Medium Negligible None Negligible Stage Drilling Installation and Decommissioning Production operations Resource Receptor Impact General population of Georgetown and vicinity Decreased availability increased cost of housing and utilities

General Georgetown population and vicinity Decreased availability increased cost of housing and utilities May 2017 333 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.3.6.3 Onshore and Air Transportation Relevant Project Activities and Potential Impacts Chapter 7 Assessment of Impacts The specific shorebases and onshore support facilities e.g. warehouses laydown yards to be utilized in Guyana have not yet been identified by EEPGL. Accordingly ERM has performed the impact assessment on the basis that the Project will utilize existing shorebases located in Georgetown. Should any new or expanded shorebases or onshore support facilities be utilized the construction expansion and any required dredging as well as the associated permitting of such facilities would be the responsibility of the owner operator and such work scope would not be included in the scope of the EIA. The travel route frequency and type of vehicle trips between the Georgetown shorebases and offsite facilities i.e. not contained within the shorebases are not known. Such offsite activity could impact onshore transportation by adding vehicle trips likely in the form of heavy truck trips between the offsite facility and the Georgetown shorebases. As was the case for the Liza exploration activities a Road Safety Management Procedure would be developed for all Project related land transport activities. This assessment includes a qualitative analysis of the impacts of those land based trips. The impact scenario assumes vehicle movements between an offsite facility somewhere along the East Bank Demerara Road and a shorebase within the Port of Georgetown. Table 769 summarizes the potential impacts to onshore transportation. The Project would also generate up to 35 roundtrip helicopter flights per week during development drilling and installation and up to 25 roundtrips per week during production operations. All roundtrip flights would originate from and return to Correia International Airport hereafter referred to as Ogle Airport east of Georgetown. As described in Section 2.9 End of Operations EEPGL has not prepared detailed plans for the decommissioning stage. As such the level of onshore and air transportation activity associated with decommissioning is not known. For purposes of impact analysis onshore and air traffic associated with Project decommissioning is assumed to be similar to that of the drilling and installation stage. Table 769 Project Activities and Potential Impacts Onshore

and Air Transportation Stage All Project stages Receptors Road users including drivers cyclists and pedestrians Project Activity Onshore movement of Project materials supplies and personnel All Project stages Other aircraft and users of Ogle Airport Helicopter flights to/from PDA Key Potential Impacts Increased vehicle traffic on public roads in and around Georgetown. Increased air traffic leading to potential impacts on Ogle Airport capacity. May 2017 334 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Magnitude of Impact Onshore and Air Transportation If offsite storage/warehousing facilities are required materials would be transported between the offsite facilities and the shorebases by road. The Projects land activities would impact vehicle traffic in Georgetown particularly in the vicinity of the shorebases and any offsite yards or warehouses. As stated above the assessment assumes that land transport would include heavy truck trips along the East Bank Demerara Road. The number and frequency of these trips is unknown. It is assumed that truck trips would occur over the course of the Project. During this period of time truck trips are unlikely to measurably change existing traffic congestion due to the relatively small number of likely truck trips. Project-related air activity would include approximately five helicopter flights per day during the drilling installation and decommissioning stages and three to four flights per day during the production operations stage. This level of activity is unlikely to meaningfully impact Ogle Airports capacity or operations. The assessment of the Projects magnitude of impacts on onshore and air transportation is summarized in Table 770. Table 770 Magnitude of Impacts Onshore and Air Transportation Stage Drilling and Installation; Decommissioning Production Operations Impact Road capacity and congestion from transportation of materials to the Georgetown shorebases. Capacity limitations and safety risks from Project-related helicopter flights to and from Ogle Airport. Road capacity and congestion from transportation of materials to the Georgetown shorebases. Capacity limitations and safety risks from Project-related helicopter flights to and from Ogle Airport. Magnitude Rationale for Rating Small Although the number of trips between yard/warehouse sites is not known these trips are unlikely to contribute to traffic congestion. Negligible Five helicopter round trip flights per day i.e. less than one movement

per daylight hour are unlikely to meaningfully impact operations or air safety. Negligible Similar type of impacts but lower traffic volume than during the drilling and installation stages. Negligible Three to four helicopter round trip flights per day i.e. less than one movement per daylight hour are unlikely to meaningfully impact operations.

May 2017 335 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Sensitivity of Receptors Onshore and Air Transportation

The receptors that could potentially experience impacts on onshore transportation include current users of the Georgetown road network. Existing drivers would have a medium level of sensitivity. This rating reflects relatively high traffic volumes and existing congestion in the vicinity of the Demerara Harbour Bridge as well as the lack of travel alternatives i.e. other travel routes or modes of transportation for nonProject drivers. Receptors for air transportation impacts include airport and airspace users and commercial cargo and private pilots crew and passengers. The receptor sensitivity ratings for onshore and air transportation are summarized in Table 771.

Receptor	Drivers	Definition and Rationale for Inclusion of Receptors	Sensitivity Rating	Rationale for Rating
Onshore	Drivers of motor vehicles	Includes existing travelers in and around Georgetown who could interact with and be impacted by Projectrelated traffic.	Medium	Existing traffic congestion and road safety risks in parts of Georgetown. Additional traffic would likely be viewed as incremental but not a fundamental shift in conditions.
Air Transportation	Airport and airspace users	Includes existing air travelers who could be impacted by Projectrelated aviation operations.	Low	The aviation environment is highly regulated. Other air trafficsuch as Projectrelated flightsis expected. All pilots are expected to be able to navigate in the presence of other aircraft.

Impact Significance and Mitigation Measures

Onshore and Air Transportation Based on the magnitude of impact and receptor sensitivity ratings the significance of onshore transportation impacts for the drilling installation and decommissioning stages will be Minor. During the production operations stage this is reduced to Negligible. The significance of air transportation impacts would be Negligible. No mitigation measures are required to address potential impacts on onshore and air transportation. Table 772 below summarizes

potential Project impacts on onshore and air transportation. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter.

May 2017 336 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Impacts Table 772 Onshore and Air Transportation Summary of PreMitigation and Residual Impacts Stage Resource Receptor Impact Embedded Controls Magnitude Sensitivity PreMitigation Significance Rating Proposed Mitigation Measures Residual Significance Rating

Drilling and Installation	Decommissioning	Production Operations
NonProject driversProjectrelated traffic congestion Air travelersair operations NonProject driversProjectrelated traffic congestion Air travelersair operations None identified Small Medium Minor None Minor None identified Negligible Low Negligible None Negligible None identified Negligible Medium Negligible None Negligible None identified Negligible Low Negligible None Negligible		

May 2017 337 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.3.7 Cultural Heritage 7.3.7.1 Introduction This section assesses potential Project impacts on cultural heritage. The laws and conventions governing the protection and management of Guyanas cultural heritage include Guyanas National Trust Act 1972 Guyanas Maritime Zones Act 2010 the 1972 United Nations Educational Scientific and Cultural Organization UNESCO Convention on Cultural Heritage and the 2001 UNESCO Convention on Underwater Cultural Heritage. Guyanas National Trust Act as well as the 2001 UNESCO Convention on Underwater Cultural Heritage urge the protection of submerged monuments within Guyanas territorial waters and encourage the practice of in situ preservation of cultural heritage whenever possible.

7.3.7.2 Relevant Project Activities and Potential Impacts Project drilling and installation activities that have the potential to adversely impact cultural heritage located on or beneath the seafloor include the drilling of development wells the installation of FPSO anchoring structures and the installation of SURF components. The Project is not expected to require grounddisturbing activities in onshore areas that have not already been disturbed by prior development. Furthermore any constructionexpansion of onshore facilities which would disturb new

onshore areas would be performed by the owners/operators of such facilities and would be out of the scope of this EIA. As a result the Project will not impact any terrestrial archaeological sites. Onshore logistical support would involve use of Guyana port facilities warehouses pipe yards and waste management facilities e.g. landfills. Use of these facilities will not impact any archaeological sites as these lands have already been disturbed and therefore are unlikely to contain intact archaeological sites. Table 773 summarizes potential Project impacts on marine cultural heritage. Table 773 Summary of Relevant Project Activities and Potential Key Impacts Stage Drilling and Installation Project Activity Drilling of Development Wells. Installation of FPSO Anchoring Structures Installation of SURF Components. Key Potential Impact Damage to Shipwrecks and Submerged Archaeological Sites 7.3.7.3 Magnitude of Impact Cultural Heritage The assessment of the Projects magnitude of impacts on cultural heritage in the Project AOI is determined based on consideration of geographic extent frequency duration and scale. The scale of potential impacts on cultural heritage is defined according to the definitions provided in Table 774. May 2017 338 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 774 Definitions for Scale Ratings for Potential Impacts on Cultural Heritage Impacts Criterion Definition Scale Negligible No discernible change in the physical condition setting or accessibility of sites. Small A small part of sites are lost or damaged resulting in a loss of scientific or cultural value; setting undergoes temporary or permanent change that has limited impact on the sites perceived value to stakeholders; stakeholderpublic or scientific access to the sites is temporarily impeded. Medium A significant portion of sites are lost or damaged resulting in a loss of scientific value; setting undergoes permanent change that permanently diminishes the sites perceived value to stakeholders; sites become inaccessible for the life of the Project to stakeholders including traditional users or researchers. Large Entire sites are damaged or lost resulting in a nearly complete or complete loss of scientific or cultural value; setting is sufficiently impacted to cause sites to lose nearly all or all cultural value or functionality; sites become permanently inaccessible to stakeholders including traditional users or researchers. The Project will not impact any known

underwater cultural heritage based on the geophysical survey and remote sensing studies conducted for the Project. However there is the potential for previously unrecorded cultural remains or chance finds to be encountered and impacted during Project drilling and installation activities. Underwater chance finds could include shipwrecks and associated artifact scatters that were not identified during the geophysical survey and remote sensing studies. It is conservatively assumed that the scale of impact on a previously unidentified cultural resource could be as high as Medium if seabed disturbing activities took place in the location of a previously unidentified cultural heritage site. If this were to occur the Project would most likely relocate the SURF component up to a few meters to the extent practicable. Given this and considering the low likelihood that surveys failed to identify significant cultural heritage in the planned disturbance area the magnitude of impact for drilling and installation stages is considered Low. For the production operations stage disturbance of the seafloor will not occur; accordingly the magnitude rating for this stage is Negligible.

7.3.7.4 Sensitivity of Resource Cultural Heritage The resource sensitivity ratings for cultural heritage are defined in Table 775.

May 2017 339 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 775 Definitions for Sensitivity Ratings for Potential Impacts on Cultural Heritage

Criterion	Definition
Sensitivity Low	Site is not specifically protected under local national or international laws or treaties; site can be moved to another location or replaced by a similar site or is of a type that is common in surrounding region; site has limited or no cultural value to local national or international stakeholders; and/or site has limited scientific value or similar information can be obtained at numerous sites.
Medium	Site is specifically or generally protected by local or national laws but laws allow for mitigated impacts; site can be moved or replaced or data and artifacts recovered in consultation with stakeholders; site has considerable cultural value for local and/or national stakeholders; and/or site has substantial scientific value but similar information can be obtained at a limited number of other sites.
High	Site is protected by local national and international laws or treaties; site cannot be moved or replaced without major loss of cultural value; legal status specifically prohibits direct impacts or encroachment

on site and/or protection zone; site has substantial value to local national and international stakeholders; and/or site has exceptional scientific value and similar site types are rare or nonexistent. Depending on the nature of the specific resources encountered, encountered shipwrecks and/or submerged archaeological sites could be specifically protected by national laws such as the Guyana National Trust Act or international conventions such as the 2001 UNESCO Convention on Underwater Cultural Heritage and could possess research and cultural value. For the purpose of this assessment it was assumed that an as-yet unidentified cultural resource could have a sensitivity rating of Medium.

7.3.7.5 Impact Significance and Mitigation Measures Cultural Heritage

Based on the magnitude of impact and the receptor sensitivity ratings the significance of potential cultural resource impacts during drilling and installation is Minor. Since production operations are not anticipated to involve any seabed-disturbing activities the significance of potential cultural resource impacts during production operations is Negligible. As discussed in Chapter 6 ERM has conducted a survey of the planned seabed disturbance area to assess the presence of any marine cultural heritage. This has significantly increased the level of certainty that planned Project activities will not disturb significant cultural heritage. In any case ERM has developed a Chance Finds Procedure which requires temporary cessation of Project activities in the event of a chance find, assessment of the chance find by a cultural heritage specialist and the development of a treatment plan for significant chance finds in consultation with the Guyana National Trust and other cultural heritage stakeholders as appropriate. The Chance Finds Procedure also addresses monitoring and training requirements to support the Procedure. Considering the implementation of the measures outlined in the Chance Finds Procedure the scale of impact would be expected to be reduced as activities would be adjusted/curtailed upon discovery of a previously unidentified cultural resource. This would reduce the impact significance rating to Negligible.

May 2017 340 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 7.76 summarizes potential Project impacts on cultural heritage. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at

the beginning of this chapter. Table 776 Summary of PreMitigation and Residual Impacts Cultural Heritage Magnitude Sensitivity PreMitigation Significance Rating Proposed Mitigation Measures Residual Significance Rating Low Medium Minor Implement Chance Finds Procedure as needed Negligible Negligible Medium Negligible NA Negligible Stage Drilling and Installation Production Operations Resource Receptor Impact Marine cultural heritage destruction from Project activities disturbing the seabed Marine cultural heritage destruction from Project activities disturbing the seabed

7.3.8 Land Use

7.3.8.1 Introduction

This section assesses potential impact on land use and ownership by the Project. The key potential to another physicaleconomic displacement and change of land ownership type. impacts considered are conversion of from one use land

7.3.8.2 Relevant Project Activities and Potential Impacts

The majority of the Projects activities will occur offshore. Some limited onshore activities will occur particularly at the beginning of the drilling and installation stage while wells are being drilled and SURF infrastructure is being installed. These facilities would not be owned or operated by EEPGL. If the ownersoperators of such facilities find it necessary to expand the existing sites onto adjacent land or in separate new areas potential land use impacts associated with these expansions would be addressed by the ownersoperators of such facilities and would be out of the scope of this EIA.

May 2017 341 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 777 summarizes the potential impacts on land use from Project activities. Table 777 Project Activities and Potential Impacts Land Use Stage All Project stages Receptors Current owners and/or users of land in Georgetown Project Activity Use of land for Project materials storage Key Potential Impacts Conversion of land from other uses

7.3.8.3 Magnitude of Impact Land Use

The assessment of the Projects magnitude of impacts on land use is based on consideration of geographic extent frequency duration and scale. The scale of potential impacts on land use is defined in Table 778. Table 778 Definitions for Scale Ratings for Potential Impacts on Land Use Criterion Definition Scale Negligible No change in land use type or ownership type. Small Land use change occurs for one or multiple parcels but consists of change to a land use type similar to the current use e.g. change from

one type of agricultural activity to another or from industrial to commercial. No changes occur in ownership type governmentowned Amerindianowned or privately owned. Medium Land use changes occur for multiple land parcels or tracts and may consist of profound changes e.g. clearing of forest or other vegetation loss of residential units. Changes to ownership type governmentowned Amerindianowned or privately owned do not occur. Large Land use changes occur for large areas of land and may consist of profound changes e.g. clearing of forest or other vegetation loss of residential units. Changes may occur to ownership type. The Project may require the use of offsite onshore storage facilities for Project materials e.g. pipe joints. At this time potential storage facility locations are not known but it is expected that any such facility will be located as near to the shorebases as possible to minimize hauling time. Given that the storage facilities will likely be located in an industrial area rather than natural or agricultural in character it is not expected that major changes in land use types or any change in land ownership type would occur. The magnitude of impact is therefore considered to be Small. May 2017 342 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.3.8.4 Sensitivity of Receptors Land Use Receptors for this impact would be the current owners of the land to be used for the storage facility as well as the users or beneficiaries of that land if any. The receptor sensitivity ratings for land use are defined in Table 779. Table 779 Definitions for Receptor Sensitivity Ratings for Land Use Impacts Criterion Definition Sensitivity Low Receptors do not currently reside on the land or make use of it for subsistence or primary livelihood activities or recreation. Medium Receptors do not currently reside on the land or make use of it for subsistence but may rely on it for income generation or recreation. High Receptors currently reside on the land and/or use it for subsistence or for their primary/sole means of livelihood. At this time it is not known whether the onshore storage facilities will be required or where such a facility would be located if it is required. However assuming that the property used for the storage facility will be on land currently used for industrial purposes it is not expected that this property would be relied upon for residential agricultural commercial or recreational use. As such receptors are expected to have a Low level of

sensitivity. 7.3.8.5 Impact Significance and Mitigation Measures Land Use Based on the magnitude of impact and receptor sensitivity ratings the significance of land use impacts for the drilling and installation stage is Negligible. No mitigations are required or planned since it is not yet known whether the offsite storage facilities will be required. If it is deemed a storage facility is required the owners/operators of the facilities will select the site in a manner that will avoid or minimize land use impacts. Table 780 below summarizes potential Project impacts on land use. The significance of impacts was assessed based on the impact assessment methodology described in Chapter 4 and summarized at the beginning of this chapter. Table 780 Summary of PreMitigation and Residual Impacts Land Use Stage Drilling and Installation Resource Receptor Impact Current owners or users of land at site of future storage facility Magnitude Sensitivity PreMitigation Significance Rating Proposed Mitigation Measures Residual Significance Rating Small Low Negligible None Negligible

May 2017 343 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.3.9 Ecosystem Services Chapter 7 Assessment of Potential Impacts Planned Project activities will not impact ecosystem services³⁵. Although the Project will have minor impacts on water quality benthic communities and marine wildlife in the immediate vicinity of the SURF components and in the mixing zones surrounding the FPSO and the tanker these impacts are not expected to have significant impacts on ecosystem services. They are not expected to impact the processes that regulate the physiochemical attributes of the North Brazil Shelf LME as a whole e.g. water quality currents oceanographic conditions bathymetry nor are they expected to cause significant impacts on fishery production offshore Guyana. There are no human communities located offshore of Guyana so the offshore environment does not provide any cultural services that could be impacted. The only Project-related impacts in nearshore marine waters would be an incremental increase in ship traffic in and out of Georgetown Harbour as ships transit between the shorebases and the PDA. As discussed previously an increase in ship traffic could have minor effects on marine life but none that would be significant at the ecosystem level. Therefore the Project would have no impacts on ecosystem services provided by the nearshore marine ecosystem. The Project will not involve any

direct disturbance of any coastal habitats and the Projects air emissions water discharges and sound generation all of which will occur approximately 190 km 120 mi offshore will not impact these habitats. Project use of the Guyana shorebases and onshore support facilities will have no impact on ecosystem services. The Projects only potential impact on ecosystem services would be as a result of an unplanned event which is discussed in Section 7.4.

7.3.10 Indigenous Peoples Planned

Project activities will not impact indigenous peoples typically referred to as Amerindians in Guyana. The Project will not involve any direct disturbance of any indigenous communities or coastal habitats upon which they rely and the Projects air emissions water discharges and sound generation all of which will occur approximately 190 km 120 mi offshore will not impact their communities or associated habitats. Project use of the Guyana shorebases and onshore support facilities will have no impact on indigenous peoples. These facilities are well removed from any traditional indigenous communities. The Projects only potential impact on indigenous peoples would be as a result of an unplanned event which is discussed in Section 7.4.

35 Ecosystem services are typically defined as

the benefits that people obtain from the natural environment including natural resources that underpin basic human health and survival needs support economic activities and provide cultural fulfilment.

May 2017 344 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts 7.4 Unplanned Events 7.4.1 Introduction An unplanned event is defined as an event that is not planned to occur as part of the Project e.g. accidents but that has the potential to occur. Since such events are not planned they are evaluated in a different manner from planned events specifically by evaluating the consequence of a realistic scenario for an unplanned event and taking into consideration the likelihood that the event will occur. Three levels of likelihood are used unlikely possible and likely as defined in Table 781.

Table 781 Levels of Likelihood for Unplanned Event Impact Assessment	Likelihood	Unlikely	Possible	Likely	Definition
Considered a rare event and there is a small likelihood that an event could occur;					
The event has a reasonable chance to occur at some time during normal operating conditions; and					
The event is expected to occur during the life of the facility.					

is used As described in Chapter 4 a risk

matrix using the likelihood and consequences severity of the event the potential significance of unplanned events. The consequences severity of the unplanned event is measured in terms of the importance vulnerability sensitivity of the resource receptor and the magnitude of the impact. to evaluate Figure 77 Unplanned Events Risk Matrix For the purposes of the Project the following unplanned events are considered as having the potential to occur during the Project life should a combination of standard and Project specific safety controls fail concurrently Hydrocarbon spill Marine vessel collision Onshore vehicular accident These potential unplanned events are described in more detail below. There are other minor unplanned events e.g. dropped objects small spills on deck that do not enter the ocean that have a realistic probability of occurrence but which would not significantly impact any resource receptors considered in this EIA. These other unplanned events would occur on the drill ship installation vessels supply vessels or the FPSO and their impacts would tend to be limited to Project employees and contractors e.g. a variety of accidents that could result in worker injury but no measurable impact on natural resources or the public. These events are May 2017 345 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts addressed primarily through EEPGL and its contractors health and safety policies and procedures which are beyond the scope of this EIA. The specific shorebases and onshore support facilities e.g. warehouses laydown yards to be utilized in Guyana have not yet been identified by EEPGL. Accordingly ERM has performed the impact assessment for unplanned events on the basis that the Project will utilize existing shorebases located in Georgetown. Should any new or expanded shorebases or onshore support facilities be utilized the construction expansion and any required dredging as well as the associated permitting of such facilities would be the responsibility of the owner operator and such work scope would not be included in the scope of this EIA. 7.4.1.1 Hydrocarbon Spill Producing processing storing and offloading oil are core Project activities. There are multiple layers of control in place with respect to these activities; however if multiple controls fail there is the potential for an oil spill to occur. EEPGL categorizes oil spills into three tiers Tier I Spill is small the source of spill is under control and response would be managed by EEPGL and its

contractors using local resources; Tier II Spill is moderate the source can be quickly brought under control local response equipment immediately available and broader response would be managed in a coordinator manner using regional resources as needed; and Tier III Spill is large the source of the spill is not under control and response would be managed in a coordinated manner with regional and internationally sourced resources. Hydrocarbons that could potentially be released include crude oil marine diesel fuel oil lubricating oil and nonaqueous drilling fluid NADF. EEPGL and ERM have identified nine possible spill scenarios categorized below in Table 782 by tier. These scenarios consider spills at the Guyana shorebases Georgetown area basis into the Demerara River or other estuarine waters e.g. from supply vessels and into the Atlantic Ocean e.g. from drill ship supply vessels tankers and the FPSO.

May 2017 346 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 782 Possible Hydrocarbon Spill Scenarios by Tier

Tier	Location	Possible Scenario	Potential Impact
1 I	Shorebase	Onshore spill of less than 10 bbl Contained onshore; no shoreline impact. e.g. partial loss of diesel storage tank	2
1 I	Drill ship or FPSO offshore	Offshore spill of less than 50 bbl e.g. leak or release due to human error or failure of equipment Contained on deck of vessel or enters offshore Atlantic Ocean; no shoreline impact likely.	3
1 I	Supply vessel offshore	Offshore spill of less than 50 bbl e.g. accidental discharge of untreated bilge water Hydrocarbons enter water creating sheen on the water surface; no shoreline impact likely.	4
2 II	Shorebase	On water spill of less than 100 bbl e.g. shore to vessel bunkering spill Diesel enters Demerara River estuary; possible minor shoreline impact.	5
2 II	Drill ship well offshore	Offshore release of 2200 bbl of NADF due to loss of riser after emergency disconnect due to Dynamic Positioning DP station keeping failure On water release of 500 bbl of diesel e.g. shore to vessel bunkering NADF enters water near the seafloor; no shoreline impact likely. Diesel enters Demerara River estuary; possible shoreline impact.	6

May 2017 347 Potential Response Strategies OnshoreNear Shore Response Waste Management Decontamination Demobilization Surveillance and Monitoring Assisted Natural Dispersion Offshore Containment and Recovery Wildlife Response Waste Management

Decontamination Demobilization Surveillance and Monitoring Assisted Natural Dispersion Offshore Containment and Recovery Wildlife Response Waste Management Decontamination Demobilization OnshoreNear Shore Response Surveillance and Monitoring Assisted Natural Dispersion Waste Management Decontamination Demobilization Surveillance and Monitoring Assisted Natural Dispersion OnshoreNear Shore Response Surveillance and Monitoring Assisted Natural Dispersion EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Tier Location Possible Scenario Potential Impact 7 II Drill shipwell offshore Well control release of less than 250 bbl e.g. well becomes unbalanced during the drilling process and begins flowing at a low release rate prior to containment Hydrocarbons enter Atlantic Ocean; no shoreline impact likely. Potential Response Strategies Waste Management Decontamination Demobilization Surveillance and Monitoring Assisted Natural Dispersion Offshore Containment and Recovery Dispersant Application Wildlife Response Waste Management Decontamination Demobilization See above 8 II FPSO offloading tanker offshore III Drill ship well offshore 9 Offshore release of 2500 bbl of oil e.g. failure of offloading hose during offloading from FPSO to tanker Offshore release of oil from well control event 30 day duration at 20000 bpd Oil enters Atlantic Ocean; no shoreline impact likely. Oil enters Atlantic Ocean; possible shoreline impact. See above Hydrocarbon releases under Scenarios 1 through 4 would all be small and under control quickly and would be managed with locally available spill control equipment. A temporary visible sheen on the water surface may occur water quality would be temporarily impaired in a small area a very sensitive receptor e.g. plankton and possibly some shorebirds may be locally affected but there is not considered to be potential for any longterm or ecosystem level impacts on ecologically important or protected species. These spills are therefore not considered further in this EIA. A hydrocarbon release under Scenario 5 would involve a spill of approximately 2200 bbl of NADF into the ocean near the seafloor. Under this scenario the spill would be somewhat controlled because the volume is limited to the capacity of the drilling riser. There is the potential for temporary impacts on several resourcesreceptors such as water quality and marine fish and wildlife but these

impacts would be generally short term and limited in area with rapid resource receptor recovery expected. A hydrocarbon release under Scenario 6 would involve a spill of approximately 500 bbl of diesel into the Demerara River. Under this scenario the spill would be quickly controlled and contained because of the relatively small volumes and the ready access to spill control equipment. There is the potential for impacts on several resource receptors such as water quality and coastal fish and wildlife but these impacts would occur in a more developed urban harbor setting be generally short term limited in area and readily mitigated with rapid resource receptor recovery expected. May 2017 348 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Hydrocarbon releases under Scenarios 7 minor well control release during drilling 8 release during offloading from FPSO to tanker and 9 major well control incident would all involve an oil spill in the PDA either at a well or at the FPSO. Although the potential spill volumes vary i.e. from 250 bbl total to 20000 BOPD for a duration of 30 days and the location of the spill differ i.e. at seafloor or ocean surface the resource receptors at risk are similar although the magnitude of the risk increases from Scenario 7 to Scenario 9. Oil spill modeling and coastal sensitivity mapping have been conducted to identify and characterize the resource receptors with the potential to be exposed to oil. An overview of this modeling and mapping for Scenarios 8 and 9 is provided in Sections 7.4.1.4 and 7.4.1.5. The potential risks associated with the smaller volume offshore oil spills are encompassed within the modeling. It should be noted however that an oil spill and release of NADF are considered highly unlikely primarily because of controls EEPGL and its contractors put in place to prevent a spill from occurring. Section 2.11 Embedded Controls provides a description of the embedded controls related to spill prevention. Despite the unlikely probability of an oil spill the impacts assessment addresses potential impacts associated with Scenario 6 which are referred to as Coastal Oil Spill as well as Scenarios 7 8 and 9 which are collectively referred to as Marine Oil Spills. Scenario 5 is referred to as a NADF Release and impacts on relevant receptors are assessed as a separate category of release. 7.4.1.2 Factors Impacting Severity of Hydrocarbon Spills Several factors impact the severity

of hydrocarbon spills and the options for and effectiveness of a range of spill response measures. These factors include the hydrocarbon properties volume and location of the spill metocean conditions and seasonal factors impacting the presence of wildlife Dicks 1998. Hydrocarbon products vary widely in their physical and chemical properties as well as their potential impacts on marine organisms Figure 78. Heavy oils have the potential to cause more significant and longer term impacts as they may persist along shorelines and cause smothering of intertidal plants and coral reef habitats. In contrast light oils tend to be more toxic but dissipate much more quickly through evaporation and dispersion so they are generally less impactful overall and their potential toxic impacts are likely to be localized and short lived ITOPF Undated; ITOPF No. 2 Undated; Dicks 1998. The oil produced from the Liza field is a light crude oil with a specific gravity less than water. If spilled this oil would rise quickly to the water surface other than small fragmented droplets that become entrained in the water column due to mixing energy. As a result the potential for persistent slicks shoreline impacts and smothering is reduced relative to heavy hydrocarbon products. The Project will use lowtoxicity NADF which is denser than the light crude in the Liza field and contains specific weighting materials used during the drilling process. As such the NADF would tend to remain near the seafloor if released from the bottom of the riser during an emergency disconnect scenario. May 2017 349 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 78 Typical Impacts on Marine Organisms across a Range of Oil Classes Source ITOPF Technical Information Paper 13 undated The well control event considered for the purpose of this EIA would occur in the ocean approximately 190 km approximately 120 miles offshore from Guyana. The open waters of the ocean and associated pelagic and seabed communities are typically more resilient to spills than are shoreline environments Dicks 1998. Climate and weather can also impact the behavior of an oil spill. For example oils become more viscous i.e. flow less readily at lower sea surface and air temperatures. In this case the surface waters in the AOI are warm typically ranging from 24 to 30C which results in the oil remaining fluid and increasing spill response options. 7.4.1.3 Weathering Processes As soon

as hydrocarbons are introduced to the ocean advection and spreading begin immediately and result in a rapid increase in the exposure area of the product to subsequent weathering processes Figure 79. These processes include evaporation dissolution vertical dispersion emulsification and sedimentation. All of these processes are influenced by the specific composition of the introduced hydrocarbon. In addition some components are degraded by photochemical oxidation induced by sunlight. Figure 79 Weathering Processes Acting on Spilled Oil Source ITOPF 2013 The products of these processes may include hydrocarbon fractions and reaction products introduced to the atmosphere slicks and tar lumps on the surface of the ocean dissolved and particulate hydrocarbon materials in the water column and similar components in the May 2017 350 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts sediments. While physical and chemical processes are occurring biological processes including degradation of oil by microorganisms to carbon dioxide or organic components in intermediate oxidation stages uptake by larger organisms and subsequent metabolism storage or discharge also act on the different fractions of the original oil. Although not all of the same processes e.g. photochemical oxidation evaporation occur at the depths that a NADF Release could occur the NADF would be exposed to biological degradation. Biological degradation proceeds slower under anoxic conditions than under welloxygenated conditions so biological degradation tends to occur most rapidly when the NADF is thinly distributed over a wide area of seafloor rather than in thicker clumps over a small area.

7.4.1.4 Oil Spill Modeling Overview

Oil spill models have been in use for over 30 years to support the development of Oil Spill Response Plans OSRP. Trajectory and fate models simulate oil transport and predict the changes the oil undergoes as it interacts with water air and land oil fate. The models simulate spill events using the best available characterization of the wind and hydrodynamic marine currents forces that drive oil transport. The models quantify the potential consequences from a spill which can then be used to guide response planning and prioritize response asset deployment. There are typically two modes under which the models can be used 1 the stochastic statistical mode that examines many potential releases from the same point

utilizing the full range of historical data for wind and currents; and 2 the deterministic mode that examines a single potential release utilizing specific historic wind and hydrodynamic datum from the range of potential data or utilizing forecast data for an ongoing or future event. Extreme weather events are considered qualitatively in the oil spill modeling. The PDA is not in a seismically active area. The Project is designed to withstand other potential extreme events e.g. hurricanes unusual temperatures high winds strong currents. In fact these extreme events have little to no effect on the wells which are located approximately 1500 to 1900 m below the ocean surface. Weather forecasts provide advance notice of these events and would enable EEPGL to take appropriate precautions with the FPSO. A typical approach to using oil spill models in OSRP is to first apply the stochastic model to determine the most likely trajectory for the spill scenarios of interest. The stochastic approach captures variability in the trajectory by simulating hundreds of individual spills and generating a map that is a composite of all of the trajectories and provides a probability footprint showing the most likely path for a given spill scenario. Spill scenarios are typically modeled in stochastic mode to provide composite footprints to estimate probability and timing for each season or wind regimes in the region. Each stochastic scenario results in a probability map of the extent and mass of sea surface oiling the extent of shoreline oiling and the minimum time of oil arrival in each location contaminated by the oil. Examples of stochastic maps are shown in Section 7.4.1.5 Oil Spill Modeling Results. Calculation of the probabilities is based on oil present in excess of a specified thickness threshold. The thresholds are specific to the purpose of the modeling or the type of impact

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Chapter 7 Assessment of Potential Impacts being considered including ecological and socioeconomic. They are used in the determination of oiling probability to determine if oil is present in a quantity exceeding the threshold. For example a surface slick thickness threshold can be based on the minimum thickness that can be mechanically recovered or on the minimum thickness that is thought to cause ecological or socioeconomic impacts. When applied in this way a trajectory and fate model can quantify the likelihood of specific spill consequences which is supportive of OSRP

planning and environmental impact analysis. When considering oil contamination thresholds surface oil thickness is typically expressed in units of mass per unit area e.g. grams per square meter [gm²].

Table 783 lists approximate thickness and mass per unit area ranges for surface oil of varying appearance.

Minimum	Maximum	Appearance
0.05	0.2	1
10	1000	0.2
0.8	4	100
Colorless and silver sheen		
Rainbow sheen		
Dull brown sheen		
Dark brown sheen	10000	Black oil

Oil spill deterministic models predict where spilled oil from a single release will go and how quickly it travels and arrives at given locations. The trajectory of the spill is determined by the specific modeled wind and current and the properties of the discharged oil. The model determines the spill pathway by calculating the movement of the oil for individual short increments of time over the spills duration which cumulatively results in the spill trajectory. Knowing the distance traveled by the oil over a period of time also provides a prediction of the time of travel for the spill. Consequences from the spill are determined by running the model within a geospatial framework so that interactions between the oil and elements of the environment habitats and species can be considered. Given an adequate definition of currents winds and the environment a deterministic model can provide comprehensive predictions of the trajectory fate and effects of the oil. Oil spill trajectory and fate models provide a quantifiable and consistent means to quantify spill consequences. A trajectory and fate model can also simulate spill response activities such as mechanical recovery dispersant application and insitu burning. Model simulations run with and without spill mitigation measures calculate the effectiveness of different response strategies and equipment which can be used to help validate and improve spill response plans and contribute to a Net Environmental Benefit Analysis NEBA process. The NEBA process examines the benefit of using various spill response technologies against the effect of the oil spill itself prior to deploying the preferred technologies in a spill event. Once individual spill events have been identified based on the desired criterion a deterministic map showing the trajectory and fate of the spill is generated along with a graphical

May 2017 352 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts representation of the oil quantities

predicted to reach the different parts of the environment. This breakdown of the oil quantities by environmental compartment referred to as an oil mass balance provides a time history of the entire spilled oil mass over the period of the model simulation. The trajectory maps and oil mass balance graphs can be generated for a range of spill scenarios and included in an OSRP. Examples of these and other deterministic maps and oil mass balance graphs are shown in Section 7.4.1.5 Oil Spill Modeling Results. When applied to OSRP activities an oil spill model is used to simulate scenarios selected to be representative of anticipated spill events. These typically include operational spills smaller volume releases to the water surface and larger volume spills related to production or drilling operations originating either at the sea surface or from the seabed. In both cases the oil spill model is applied to determine the most likely pathway for a spill from each scenario and to quantify the oil fate. The trajectory and fate model provides input to the OSRP process by determining spill pathways and quantifying potential spill consequences. Determining the consequences from a spill typically has two components determining the likelihood that a spill will contaminate a given part of the environment and; what will be its ecological and socioeconomic consequences.

7.4.1.5 Oil Spill Modeling Results

Oil spill modeling results for oil spill Scenarios 8 and 9 are summarized in this section. Additional modeling results are included in the OSRP. Scenario 8 includes the modeling of a 2500 bbl leak associated with FPSO offloading to a conventional tanker. Scenario 9 includes the modeling of a 20000 BOPD well control event of a 30day spill duration which included an extension of an additional 15 days after oil discharge ceased. The model was run two ways the initial model runs showed potential impacts in the absence of spill response measures which represent a worstcase for each scenario. Then the deterministic model was run again factoring in response measures which would be expected to significantly reduce the severity and extent of a spill and its impacts. Subsequent sections of this document describe how EEPGL and its contractors will respond to mitigate environmental impacts in the unlikely event of an event similar to or less severe than the modeled scenario. Spills originating at the seafloor were simulated using the OILMAP DEEP model to predict the discharge plume geometry droplet size distribution discharged into the

water column and the fate of the oil plume. The SIMAP model system was used to predict the probability of the extent of oil contamination on the sea surface and the shoreline taking into account the weathering profile of the oil that would result in a proportion of the product evaporation or dispersing into the water column. Spills were simulated taking into consideration the quantity of product released the type of product and its characteristics e.g. density historical seasonal wind and current patterns and water depth among other factors. May 2017 353 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Modeling has been performed for the summer season June through November as well as the winter season December through May. The results of modeling for the winter season are presented in the figures below as they provide more conservative results for the purposes of the EIA based on higher current speeds and more northerly winds. Figure 710 Stochastic Map for Scenario 8 Unmitigated 2500Barrel Release of Crude Oil December through May May 2017 354 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts The top panel of Figure 710 is a stochastic map which based on hundreds of simulations shows the probability of surface oiling above a minimum thickness of 1.0 gm² in the winter season from a 2500 barrel spill that originates at the FPSO location. This stochastic map indicates there is a zero percent probability that oil at that thickness would make contact with the Guyanese coast. The bottom panel of Figure 710 is a stochastic map based on hundreds of simulations which shows the minimum amount of time for surface oiling above a minimum thickness of 1.0 gm² to occur from a 2500 barrel spill that originates at the FPSO location in the winter season. Figure 711 is a deterministic map that predicts where a simulation of a 2500 bbl spill from the FPSO location would go under a set of wind and current conditions typical of the winter season. This deterministic map indicates that oil would not make contact with the Guyanese coast. The gray area shows the swept area which is the path the oil spill is projected to follow. The black area shows the fate of the surface oil. The red area shows the fate of the oil that makes shoreline contact. Figure 712 shows the same deterministic model run as Figure 711 but with mitigation measures applied. No coastline would be

impacted and the potential area of impact by such a release to the marine environment has been dramatically reduced. Figure 711 Deterministic Map for Scenario 8 Unmitigated 2500Barrel Release of Crude Oil December through May Depicting Weathering and Fate May 2017 355 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 712 Deterministic Map for Scenario 8 Mitigated 2500Barrel Release of Crude Oil December through May Depicting Weathering and Fate Figure 713 is an oil mass balance graph that is associated with the deterministic map in Figure 711 which shows where a simulation of a 2500 bbl spill from the FPSO location would go in the winter season. Figure 713 provides a graphical representation of the oil quantities predicted to reach different parts of the environment over time. May 2017 356 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts The green line represents the volume of spilled oil which would be on the ocean surface over time. The red line represents the volume of spilled oil which would make coastal contact in this case outside of Guyana over time. The blue line represents the volume of spilled oil which would remain in the water column over time. The dotted orange line represents the volume of spilled oil which would decay over time. The dotted gray line represents the volume of spilled oil which would be released to the atmosphere over time which represents the vast majority of the spill volume approximately 50 percent. For perspective a Scenario 8 oil spill has the potential to occur during the production operations stage at least 20 years. Figure 713 Oil Mass Balance Graph for Scenario 8 Unmitigated 2500Barrel Release of Crude Oil December through May Depicting Weathering and Fate The top panel of Figure 714 is a stochastic map which based on hundreds of simulations shows the probability of surface oiling above a minimum thickness of 1.0 gm² in the winter season from a 20000 bpd spill that originates at a well location in the PDA and lasts for 30days. This stochastic map indicates there would be a 5 to 10 percent probability that oil at that thickness would make contact with the northwestmost area of the Guyanese coast. The value of 1.0 gm² is commonly used as a threshold in oil spill modeling as it represents the mass of oil where biological impacts can occur based on research and experience

McCay 2016. The bottom panel of Figure 714 is a stochastic map which based on hundreds of simulations shows the minimum amount of time for surface oiling above a minimum thickness of 1.0 gm² to occur from a 20000 bpd spill that originates at a well location in the PDA and lasts for 30days in the winter season. Minimum time for reaching the northwestmost area of the Guyanese coast would be approximately 5 to 10 days although some of the oil may arrive in the 10 to 15 day time period.

May 2017 357 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 714 Stochastic Map for Scenario 9 Unmitigated 20000BarrelperDay Release of Crude Oil for 30 days December through May

May 2017 358 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 715 is a deterministic map which predicts the fate of a simulation of a 20000 bpd spill that originates at a well location in the PDA and lasts for 30days in the winter season. This deterministic map indicates that oil would not make contact with the Guyanese coast. The gray area shows the swept area which is the path the oil spill is projected to follow. The black area shows the fate of the surface oil. The red area shows the fate of the oil that makes shoreline contact. Figure 716 shows the same deterministic model run as Figure 715 when mitigation measures have been applied the release has been stopped containment has been restored in 21 days and a capping stack is in place. No coastlines would be impacted and the potential area of impact by such a release to the marine environment has been significantly reduced.

Figure 715 Deterministic Map for Scenario 9 Unmitigated 20000BarrelperDay Release of Crude Oil for 30 days December through May Depicting Weathering and Fate

May 2017 359 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 716 Deterministic Map for Scenario 9 Mitigated 20000BarrelperDay Release of Crude Oil for 21 days December through May Depicting Weathering and Fate

Figure 717 is an oil mass balance graph that is associated with the deterministic map in Figure 715 which shows where a simulation of a 20000 bpd spill that originates at a well location in the PDA and lasts for 30 days in the winter season. This panel provides a graphical representation

of the oil quantities predicted to reach different parts of the environment over time. The green line represents the volume of spilled oil which would be on the ocean surface over time. The red line represents the volume of spilled oil which would make coastal contact in this case outside of Guyana over time. The blue line represents the volume of spilled oil which would remain in the water column over time. The dotted orange line represents the volume of spilled oil which has decayed over time. The dotted gray line represents the volume of spilled oil which would be released to the atmosphere over time which represents the vast majority of the spill volume approximately 50 percent. For perspective the Scenario 9 oil spill has the potential to occur during the drilling stage approximately up to four years. May 2017 360 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Figure 717 Oil Mass Balance Graph for Scenario 9 Unmitigated 20000BarrelperDay Release of Crude Oil for 30 days December through May Depicting Weathering and Fate 7.4.1.6 Coastal Sensitivity Mapping Coastal sensitivity mapping was conducted for the entire coastal area identified in the oil spill modeling as being potentially exposed to hydrocarbons as a result of a Tier III Marine Oil Spill Scenario 9. The mapping included the following resources and receptors Environmental protected areas wetlands mangroves beach types seagrass beds coral reefs and other sensitive habitats; and Socioeconomic coastal and/or indigenous peoples communities e.g. location and socioeconomic characteristics coastdependent commercial and artisanal activities e.g. fishing foraging other industrial activities and infrastructure e.g. water intake facilities. This information enables EEPGL to prioritize the mobilization of emergency response resources manpower and equipment to those areas most sensitive to a spill. These maps are included in the OSRP. 7.4.1.7 Oil Spill Prevention Control and Emergency Response Measures Regarding spill prevention controls associated with Scenario 9 well control release EEPGLs well control philosophy is focused on spill prevention using safety and risk management systems management of change procedures global standards and trained experienced personnel. EEPGL has a mature OIMS that emphasizes attention to safety well control and environmental protection. Measures to avoid any loss of well control include proper May 2017

Assessment of Potential Impacts preparation for wells well design well control equipment inspection and testing automatic detecting of any excess pressure entering the well during drilling the use of physical barriers including automatic BOPs personnel training and proficiency drills for well control and the use of drilling fluids to control pressures within the well. See Chapter 2 for additional information. A summary list of the spill prevention mitigation measures and embedded controls found in the EIA and supporting plans can also be found in Appendix F of the OSRP. Regarding spill prevention controls associated with Scenario 8 FPSO offloading spill the major spill prevention controls associated with FPSO offloading include FPSO and tanker collision avoidance controls described in Section 7.1.4.8; use of a certified engineered floating hose system; floating hose damage protection controls; use of emergency disconnect controls on the floating hose system; use of load monitoring systems in FPSO control room; and use of leak detection controls including infrared leak detection flood lighting for night operations and volumetric checks during offloading. See Section 2.11 Embedded Controls for additional information. Spill controls associated with other Scenarios are also included in Section 2.11. In addition to the established spill prevention controls EEPGL also has developed a detailed Oil Spill Response Plan OSRP which is included in the Projects ESMP to ensure an effective response to an oil spill if one were to occur. The OSRP builds on the coastal sensitivity mapping and oil spill modeling described herein. The OSRP describes the response measures which are dependent on the magnitude and complexity of the spill. The OSRP clearly delineates the responsibilities of each entity that would take part in a response and describes how EEPGL and its contractors would mobilize local oil spill response resources which would be complemented by the regional and international resources provided by its oil spill response contractors. The OSRP describes the EEPGL process for notifying the government of Guyana with respect to mobilizing its resources. The lead agency for oil spill response in Guyana is MARAD which falls under the Ministry of Public Works and Communication. Maritime responsibilities are handled by several departments and ministries though the Coast Guard under the auspices of

MARAD which enforces all maritime regulations and is the primary response organization in any marine pollution incident in navigable waters. In addition the Guyana Defense Force and the Fire Service also assume an operational role for pollution response. Due to the precautionary measures utilized by EEPGL to prevent and control an oil spill as described above and in Chapter 2 the likelihood of a Tier II or III oil spill occurring is expected to be Unlikely.

7.4.1.8 Vessel Collision Two

scenarios for vessel collisions which can be enabling incidents for oil spills have been considered based on the nature of Project operations. Collision between the FPSO and an offloading tanker during offloading of crude oil for export the offloading tanker must approach at a controlled safe speed within about 120 m 390 ft of the FPSO. To minimize the risk of collision during the approach to the FPSO and

May 2017 362 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts during offloading EEPGL will utilize a Mooring Master onboard the offloading tanker. The Mooring Master will guide the offloading tanker to the FPSO for offloading remain on board during offloading and then guide the offloading tanker away from the FPSO upon completion of offloading. Up to three assistance tugs will assist in positioning the offloading tanker during the approach to the FPSO to maintain a safe separation from the FPSO. During offloading these tugs along with a hawser taut line connecting the FPSO and tanker will help ensure the offloading tanker maintains a safe distance from the FPSO at all times see Figure 218. Offloading will only occur when weather and sea conditions allow for safe operations. If the environmental conditions prior to the commencement of offloading are not suitable the tanker will standby at a safe distance away until conditions are within acceptable limits. If unexpected adverse weather e.g. a squall occurs during offloading operations the offloading operation will be stopped and the tanker disconnected and moved away from the FPSO until conditions are again within approved safe limits. Considering these precautions the potential for a collision between the FPSO and the offloading tanker is considered Unlikely. In the unlikely event that a collision would occur during the tanker approach to or departure from the FPSO the risk of a hull breach is greatly reduced by the design of the vessels i.e. double hull and the fact that the

FPSO would be stationary and the offloading tanker would be travelling at a very slow maneuvering speed assisted by tugs therefore there is not expected to be sufficient collision energy to breach the hulls. Collision near shore between a Project supply vessel and another nonProject vessel or structure there are a variety of vessels that will supply and support drilling installation and production operations activities. These vessels will operate from Guyana and Trinidad shorebases. There is the potential for collisions between these vessels and other vessels/structures in the Georgetown Harbour/Demerara River or the grounding of a vessel. Such an incident may result from navigation error or a temporary loss of power that affected the ability of a vessel to steer. The potential environmental impacts from such a collision might result from a spill of fuel oil or lubricating oils from the vessels involved in the incident. Damage to structures may result in the requirement for repairs and in extreme cases temporary closure of the structure which have occurred before in Guyana e.g. damage to and temporary closure of the Demerara Harbour Bridge. Note the Georgetown shorebases are downstream of the Demerara Harbour Bridge which reduces the probability of collision with this structure. A number of controls will be implemented to prevent these types of vessel incidents from occurring. EEPGL has comprehensive contractor selection guidelines to ensure contractors are qualified and have robust safety health and environmental management systems. EEPGL will provide active oversight over its contractors to verify they are complying with its requirements. Contractors are required to perform regular inspections of their vessels which address marine safety and maintenance considerations which should reduce the risk of loss of power incident scenario. In addition vessels operating within the Georgetown Harbour or other coastal areas will be adhering to speed restrictions and navigation aids. Therefore the risk of vessel accidents May 2017

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Assessment of Potential Impacts causing any significant damage to vessels or structures or significant injury is considered unlikely. Other vessel collisions e.g. collisions between drill ship installation vessels or the FPSO and other vessels are not considered reasonably foreseeable scenarios given the following safety measures that will be put in place MARAD will issue notices to

mariners concerning safety at sea and the location of the drill ship installation vessels and FPSO. EEPGL will also communicate major Project vessel movements to commercial cargo commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and where possible communicate Project activities to those individuals to aid them in avoiding Project vessels through the stakeholder engagement process. Marine safety exclusion zones with a 500 m 1640 ft radius will be established around the drill ship during drilling operations and around drill centers during well workovers in accordance with industry standards and practices. No unauthorized vessels will be allowed to enter these marine safety exclusion zones. Similar marine safety exclusion zones will be established for the major installation vessels. A marine safety exclusion zone of 2 nautical miles will be established around the FPSO. No unauthorized vessels will be allowed to enter this marine safety exclusion zone. EEPGL will utilize a Simultaneous Operations procedure to safely manage Project marine vessels which are performing work in the same vicinity of each other which will include considerations to avoid vessel collisions. Marine vessels will have industry proven stationkeeping systems e.g. FPSO mooring system dynamic position systems on drill ship support vessels to maintain station in the offshore environment.

7.4.1.9 Onshore Vehicular Accident The Project will result in an increase in onshore vehicular traffic generated primarily by additional activity around the Georgetown bases that support the Project. As a result of this increased traffic there will be an increased risk of vehicular accidents that could cause property damage and/or injury to third parties. The likelihood of a vehicular accident causing a major injury or fatality is considered possible given the relatively low Project-related traffic volumes and the generally low vehicular speeds in Georgetown. EEPGL will implement a Road Safety Management Procedure as described in Section 7.4.4.2 to minimize this risk.

7.4.1.10 Summary of Unplanned Events Interactions with Resources/Receptors Table 784 indicates which resources/receptors would potentially be impacted by a NADF Release Scenario 5 oil spills i.e. Coastal Oil Spill [Scenario 6] and Marine Oil Spill [Scenarios 7, 8 and 9] and by vehicular or vessel accidents. The remainder of Section 7.4 evaluates the significance of these unplanned events on each of these

resourcesreceptors. For simplicity May 2017 364 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts although NADF is technically a hydrocarbon and not an oil releases of both NADF and oil are generically referred to as oil spills in the remainder of this section. Table 784 ResourcesReceptors Potentially Impacted by Unplanned Events ResourceReceptor Oil Spill Marine Coastal NADF Vehicular or Vessel Acen Physical Resources Air Quality and Climate Sound airborne Marine Geology and Sediments Marine Water Quality Biological Resources Protected Areas and Special Status Species Coastal Habitats Coastal Wildlife and Shorebirds Seabirds Marine Mammals Marine Turtles Marine Fish Marine Benthos Ecological Balance and Ecosystems Socioeconomic Resources Economics Conditions Employment and Livelihoods Community Health and Wellbeing Marine Use and Transportation Social Infrastructure and Services Cultural Heritage Land Use Ecosystem Services Indigenous Peoples

	Oil Spill	Marine Coastal	NADF	Vehicular or Vessel	Acen	Physical Resources	Air Quality and Climate	Sound airborne	Marine Geology and Sediments	Marine Water Quality	Biological Resources	Protected Areas and Special Status	Species	Coastal Habitats	Coastal Wildlife and Shorebirds	Seabirds	Marine Mammals	Marine Turtles	Marine Fish	Marine Benthos	Ecological Balance and Ecosystems	Socioeconomic Resources	Economics	Conditions	Employment and Livelihoods	Community Health and Wellbeing	Marine Use and Transportation	Social Infrastructure and Services	Cultural Heritage	Land Use	Ecosystem Services	Indigenous Peoples	
7.4.2 Physical Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X X X X X X X As shown in Table 784 the only unplanned event with the potential to significantly impact physical resources is a Marine Oil Spill event in the Project AOI. Accordingly discussions of potential impacts in this section relate to that unplanned event only. May 2017 365 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.4.2.1 Air Quality and Climate Chapter 7 Assessment of Potential Impacts Crude oil is a mixture of hydrocarbons made up of light medium and heavy constituents. In the event of an oil spill the lighter hydrocarbons including benzene xylene and toluene tend to quickly evaporate into the air. Accordingly concentrations of these constituents typically drop rapidly during the first 24 hours of a spill. Elevated hydrocarbon concentrations in air are primarily found in the immediate vicinity of a spill and some distance downwind depending on wind speeds. These constituents would primarily impact oil spill response workers so air monitoring equipment would be deployed to monitor levels of air pollutants and appropriate PPE would be provided as necessary to those oil spill response workers who are exposed. For an offshore spill the potential for any harmful concentrations of air contaminants to reach the Guyana coastline is considered very low even for a large Marine Oil Spill considering

prevailing winds away from the mainland and the distance to shore approximately 190 km [120 miles]. Further any air quality impacts would be temporary. Similarly in the event of a spill reaching shorelines air contamination would be generally localized to the area where the oil came ashore. Therefore the consequence to air quality of an oil spill is considered Low. In combination with a likelihood rating of Unlikely for a large Marine Oil Spill the overall risk to air quality from an oil spill is Minor. With respect to climate impacts there would be an indirect impact associated with additional fossil fuel combustion by response vessels and equipment and with some potential for release of methane to the atmosphere resulting in increased GHG emissions as compared to planned activities. However the scale and duration of these additional GHG emissions would be limited leading to a consequence rating of Low. In combination with a likelihood rating of Unlikely for an oil spill the overall risk to climate from an oil spill is Minor. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure for the drill ship lighter oil fractions would likely rise into the mid water column and dissipate laterally as they rise while the NADF would remain at or near the seafloor and would not reach the atmosphere. Therefore a NADF Release would have no impact on air quality or climate.

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence
Marine Oil Spill	Air Quality	Unlikely	Low	Risk Rating	Minor
Climate	Unlikely	Low	Minor	May 2017	366
Proposed Mitigation Measure	Implement OSRP air quality monitoring during response provision of PPE to response workers	None	Residual Risk Rating	Minor	Minor

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An oil spill would not impact marine geology but in the event of sedimentation where hydrocarbons adhere to other material and settle or shoreline stranding of the spill hydrocarbons may be mixed within marine or intertidal sediments. This would primarily be expected in the vicinity of the well release offshore and in the nearshore wave zone. One study determined that less than 1 percent of the oil from a major loss of well control event in the U.S. Gulf of Mexico was found in sediments and this was principally within an 8 km 5mile radius of the release

point U.S. National Research Council 1985. The heavier oil fractions that may sink to the seafloor would continue to be subjected to weathering processes. Research has indicated that the overall impact of a Marine Oil Spill on the seafloor is Low especially when lighter oils are involved ITOFF Undated. Therefore the consequence of an oil spill on the seabed and marine sediments is considered Low. In combination with a likelihood rating of Unlikely for a large Marine Oil Spill the overall risk to marine geology and sediments from an oil spill is Minor. In the event of an emergency disconnect of the drilling riser and release of NADF near the seafloor cuttings would also be released. Neither the NADF nor the cuttings would have any effect on the underlying marine geology of the PDA. The NADF would remain suspended in the water column and have no effect on sediments but the cuttings would accumulate on the seafloor. Cuttings deposits would tend to be deeper and coarser in the immediate vicinity of the wellhead and decrease in thickness and grain size with increasing distance from the well. The strength of the bottom currents in the PDA would likely erode any significant deposits near the wellhead over time dispersing all but the coarsest cuttings down current. The only lasting effect of such an event would likely be a change in the grain size distribution of marine sediment within the deposition field; although this effect would diminish over time as benthic infauna and natural sediment deposition would bury the deposited cuttings. The NADF to be used by EEPGL contains IOGP Group III NABF with low to negligible aromatic reducing the potential that changes in marine sediments as a result of discharge of the NADF will lead to toxicological impacts on benthic infauna. Given the shortterm nature of such an event the lowtoxicity NADF and that the total volume of material that would be discharged would be limited to the volume of the riser the consequence of a release of NADF on the seabed and marine sediments is considered Low. In combination with a likelihood rating of Unlikely for such an event the overall risk to marine sediments from a release of NADF is Minor. Table 786 Risk Rating for Oil Spill Impacts on Marine Geology and Sediments

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed Mitigation Measures	None	Residual Risk Rating	Minor	Minor
Minor	None	Minor	Marine Oil Spill	NADF Release	Marine Sediments	Marine Sediments	Unlikely				

Unlikely Low Low May 2017 367 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 7.4.2.3 Marine Water Quality Chapter 7 Assessment of Potential Impacts

As described in Section 7.4.1 marine oil spills are subject to a range of weathering processes that will result in the hydrocarbon partitioning in different parts of the marine environment and include the loss of some of the spill by way of evaporation and photooxidation. Microbial and photochemical degradation processes will gradually remove remaining contamination from the marine environment. The proportion of the spill that becomes entrained in the water column through wave energy will be subject to rapid high levels of three-dimensional dilution along with biodegradation. Some oil constituents especially aromatics are also soluble in water. Together the entrained and dissolved fractions will increase hydrocarbon concentrations in the water column and result in localized reductions in water quality. Monitoring of oil spills has shown that concentrations of oil and its constituents in the water column rapidly decline after a spill and are usually confined to an area near the source ITOPF Undated. The oil that would be released from a spill in the PDA would be what is known as a light crude. Lighter crude oils generally have higher biological availability and are generally associated with higher toxicity impacts versus heavier crudes. This impact however is offset by the relatively rapid dissipation of light oils through evaporation and dispersion which means light oils may be less impacting to the environment overall relative to heavier oils as long as sensitive resources are sufficiently distant from the immediate source of the spill. The mixing energy resulting from a loss of well control event may result in higher levels of entrained and dissolved hydrocarbons than a surface spill as the slick will be fragmented into smaller droplets by reservoir pressure. Accordingly a Marine Oil Spill is considered to have a High severity rating with respect to impacts on water quality taking into consideration the higher toxicity of the light oil fractions and the magnitude and extent of the spill scenario balanced against the limited geographic extent and duration of the toxicity impacts as a result of relatively rapid loss of lighter fractions. In combination with a likelihood rating of Unlikely for a large Marine Oil Spill the overall risk to marine water quality from an oil spill is Moderate. Even with implementation of the OSRP the residual risk rating remains

Moderate. As discussed in Section 7.4.2.3 NADF would be exposed to biological degradation after being released from the drilling riser. This process can result in localized decreases in dissolved oxygen concentrations although this is more likely to be observed in the pore water between the cuttings grains deposited on the seafloor than in the water column due to the dissolution of NADF in the water column caused by the strong marine currents in the region. Organic enrichment of sediments speeds the biodegradation process which tends to accelerate oxygen depletion and NADF cuttings tend to contain higher concentrations of biodegradable matter than WBDF. Conditions favoring eutrophication and hypoxia in the nearsurface pore water within the deposition zone may exist temporarily following a release of NADF but the high current velocities in the area would tend to prevent formation of large piles of cuttings where these conditions would persist. Eutrophication and resulting hypoxia at the seafloor or within the pore water could be sufficient to cause localized changes in the marine biota but these changes would likely be short term. Although the NADF used by EEPGL will contain IOGP May 2017 368 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Group III NABF it will have low to negligible aromatic reducing the potential that changes in marine water quality as a result of discharge of the NADF will lead to toxicological impacts. Therefore a NADF Release is considered to have a Medium severity rating with respect to impacts on water quality. In combination with a likelihood rating of Unlikely the overall risk to marine water quality from a NADF Release is Minor. Table 787 Risk Rating for Oil Spill Impacts on Water Quality

Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	NADF Release	Water Quality	Water Quality	Unlikely	High
Marine Oil Spill	NADF Release	Water Quality	Water Quality	Unlikely	Moderate
Marine Oil Spill	NADF Release	Water Quality	Water Quality	Unlikely	Medium
Marine Oil Spill	NADF Release	Water Quality	Water Quality	Unlikely	Minor

Proposed Mitigation Measures Implement OSRP None Residual Risk Rating Moderate Minor

7.4.3 Biological Resources

The only unplanned events with the potential to impact biological resources would be a Marine Oil Spill a Coastal Oil Spill or a NADF spill collectively referred to as oil spills. Oil spills can impact marine biological resources both as a result of physical smothering and toxic impacts. The severity of the impact typically depends on the location of the spill the quantity and type of hydrocarbon

spilled the environmental conditions e.g. wind currents and the sensitivity of the impacted receptors and their habitats ultimately exposed to the oil ITOPF undated. Due to rapid dilution of hydrocarbons in the water column the most significant impacts on biological resources are generally impacts on seabirds and other species that encounter surface slicks. Impacts may also occur in shallow subtidal or intertidal areas that are exposed to higher concentrations where hydrocarbons are entrained by breaking waves or where species are foraging on sand mudflats or wetlands.

7.4.3.1 Protected Areas and Special Status Species

Potential impacts from a Marine Oil Spill or a Coastal Oil Spill on protected areas and special status species are discussed in this subsection.

Protected Areas

The Shell Beach Protected Area SBPA provides habitat for numerous coastal wildlife and shorebird species including several species of critically endangered marine turtles. The SBPA would be highly sensitive to a large Marine Oil Spill if it were to reach the shoreline. However as discussed in Section 6.1.4.1 Guyanas oceanic waters are influenced by the Guiana Current and the North Brazil Current and oil spill modeling indicates that oil spilled from the modeled loss of well control event would have a 5 to 10 percent probability would reach the Guyana shoreline without considering the effects of emergency spill response. Nevertheless May 2017 369 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts SBPA has been included in the coastal sensitivity mapping and in the event of an oil spill resources and equipment would be mobilized to protect Shell Beach as necessary. Based on the sensitivity of the SBPA the consequence of an oil spill reaching the SBPA would be High. The low probability 5 to 10 percent of oil from a large Marine Oil Spill actually reaching the Guyana shoreline supports a likelihood rating of Unlikely. Therefore the overall risk to the SBPA from a large Marine Oil Spill is considered Moderate. With the effective implementation of the OSRP the residual postmitigation risk is considered Minor. A Coastal Oil Spill e.g. Scenario 6 from Table 782 would not be expected to impact SBPA because it would be limited to near Project shorebases and onshore support facilities which would be distant from SBPA. A NADF spill would not be expected to impact the SBPA because of the limited volume spilled and the depth and distance to shore at which the

spill would occur. Special Status Species Special Status Species include critically endangered endangered threatened and vulnerable species that are found in the Project AOI. The Critically Endangered species in the AOI are all coastal fish species that would only be exposed to oil if it reached coastal waters. If oil were to reach the coast in sufficient quantities to cause lethal or sublethal impacts on fish the loss of even a few individuals in this category could cause significant impacts at the population level. Based on this rationale the consequence or severity of an oil spill on Critically Endangered species is considered High. A large Marine Oil Spill or a Coastal Oil Spill are the only spill scenarios that could result in such quantities of oil reaching coastal waters and these events are considered Unlikely. Therefore the overall risk of a large Marine Oil Spill or a Coastal Oil Spill to Critically Endangered species is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by further reducing the probability of oil reaching the Guyana coast line. There are a few terrestrial special status species such as the Agami heron and Semipalmated sandpiper that could encounter weathered oil along the coast or ingest fish that had been exposed to or ingested oil themselves. This would be most likely to occur under a large Marine Oil Spill or Coastal Oil Spill in which oil could approach or reach the Guyana coast. Such an event could cause significant impacts at the population level depending on the size of the spill and the proportion of available forage and habitat affected. Therefore the consequence or severity of an oil spill on Critically Endangered species is considered High. The likelihood rating of such an event occurring is considered Unlikely for the same reasons cited above for Critically Endangered species. Therefore the overall risk of a large Marine Oil Spill or a Coastal Oil Spill to terrestrial special status species is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by further reducing the probability of oil reaching the Guyana coast line. The Endangered and Vulnerable species are primarily open water fish that would occur in the PDA. Fish have no need to surface and can therefore avoid floating oil and the depths present.

May 2017 370 EEPGL
Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts offshore of Guyana would provide sufficient opportunity to do avoid slicks and

sheens. Fish would have the potential to encounter emulsified oil rising through the water column from a loss of well control at the wellhead but most of the Endangered and Vulnerable species are pelagic species that would be expected to rapidly vacate areas with harmful concentrations of oil in the water column so exposure times would be brief. Losses of a small numbers of individuals of Endangered or Vulnerable species could have significant population level effects but would have less of an impact than losses of equivalent numbers of Critically Endangered species. Based on this rationale the consequence or severity of a large Marine Oil Spill on Endangered or Vulnerable species is considered Medium. The severity of a spill events impacts on green sea turtles and black capped petrels would be higher than on the fishes that comprise most of the Endangered and Vulnerable categories and impacts of unplanned events on sea birds and sea turtles are assessed in other sections with the higher sensitivities of these two species to oil spills are not sufficient to elevate the consequence rating for impacts on the remaining species in the Endangered and Vulnerable categories. Therefore the overall risk of a large Marine Oil Spill to Endangered and Vulnerable species is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by further reducing the probability of oil reaching the Guyana coast line. The Near Threatened category includes a mix of offshore and coastal species but most species are primarily found offshore. These species are considered less atrisk than Endangered or Vulnerable species so the consequence or severity of a large Marine Oil Spill or Coastal Oil Spill on these species is considered Medium. Most species in the Endangered and Vulnerable categories occur offshore so the likelihood of an oil spill impacting these species is rated as Unlikely based on the same rationale presented above for Endangered or Vulnerable species. Therefore the overall risk of a large Marine Oil Spill or Coastal Oil Spill to Endangered and Vulnerable species is considered Minor. Effective implementation of the OSRP would further reduce the geographic extent of a spill. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure for the drill ship lighter oil fractions would likely rise into the mid water column and dissipate laterally as they rise while the NADF would remain at or near the seafloor. A few of the deepwateradapted special

status fishes e.g. hollownose grenadier and frilled shark may occur occasionally in the shallowest portion of the PDA but the PDA is too deep to be within the preferred habitat of any special status species. Therefore a NADF Release would not be expected to have a population level impact on special status species.

May 2017 371 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 788 Risk Rating for Oil Spill Impacts on Protected Areas and Special Status Species

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Unlikely	High	Moderate	Proposed Mitigation Measures	Implement OSRP	Residual Risk Rating	Minor	Unlikely	High	Moderate	Unlikely	High	Moderate	Implement OSRP	Implement OSRP	Minor	Minor	Unlikely	Medium	Minor	Implement OSRP
Minor Marine Oil Spill	Marine Oil Spill or Coastal Oil Spill	Protected Areas	SBPA	Special Status Species	Critically Endangered Species	Endangered Fish and Black Capped Petrel	Vulnerable	Near Threatened Species	7.4.3.2 Coastal Habitats	As indicated in Table 784 the unplanned events with the potential for any measureable impacts on coastal habitats would be from a large Marine Oil Spill or Coastal Oil Spill. In Guyana the coastal habitats most at risk from an oil spill would be mangroves and other wetland habitats e.g. mudflats. Other habitats that are known to be sensitive to oil spills are coral reefs and seagrass beds but which are not present in Guyana. Mangroves of which the largest remaining stands in Guyana occur in the SBPA are important providers of a number of ecological services upon which fish wildlife and humans rely. Mangroves provide valuable habitat for crabs and important nursery areas for fish and shrimp and provide coastal protection from wave action. Mangroves are typically found along the margins of shorelines at the saltwater interface Due to this physical location mangroves are vulnerable to exposure during oil spills. Mangroves are considered to be sensitive to heavy contamination by oil for several reasons ITOPF undated Mangroves rely on oxygen supplied through small pores lenticels on their aerial roots. Smothering of the aerial roots by heavy hydrocarbons can block this important oxygen pathway; The toxic component of oil can interfere with mangroves systems for maintaining salt balance impacting their ability to tolerate salt water;	May 2017 372 EEPGL Environmental Impact Assessment Liza Phase 1																

Development Project Chapter 7 Assessment of Potential Impacts Oil can become trapped in mangrove sediments where it may remain in a relatively unweathered state and be gradually remobilized over a long period causing repeated pulses of exposure; and If impacted mangrove habitats are typically slow to recover from oil exposure often taking 10 years or longer especially where the shoreline protection services of the mangroves has been compromised. For these reasons the consequence or severity of a large Marine Oil Spill on mangroves is considered High. However oil spill modeling of a loss of well control event indicates a 5 to 10 percent chance of oil reaching the Guyana shoreline supporting a likelihood rating of Unlikely. Therefore the overall risk of a Marine Oil Spill on coastal habitats is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by further reducing the probability of oil reaching the Guyana coast line. There is also the potential for a Coastal Oil Spill in the Demerara River or near shorebases located elsewhere in Guyana see Section 7.5 for discussion of shorebases in Trinidad. Scenario 6 Table 782 assumes a spill of 500 bbl of diesel oil which may occur during bunkering. Under this scenario the spill would be quickly controlled and contained because of the relatively small volumes and the ready access to spill control equipment. Although mangrove forests are not extensive near the mouth of the Demerara or the Essequibo rivers fringe mangroves do exist and would be susceptible to exposure to an oil spill. Other coastal habitats that are particularly susceptible to oil spills e.g. coral reefs seagrass beds are not found in these coastal areas of Guyana. These impacts would generally be temporary limited in area and readily mitigated with rapid habitat recovery expected. Nevertheless considering the sensitivity of mangroves to oil spills the consequence or severity of a Coastal Oil Spill on mangroves is considered High and the occurrence of this event is considered Unlikely. Therefore the overall risk of a Coastal Oil Spill to coastal habitats is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by further reducing the spread of oil in coastal waters. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure on the drill ship the NADF would not be expected to reach the coast. Therefore a NADF Release would have no impact on coastal habitats. Table 789

Risk Rating for Oil Spill Impacts on Coastal Habitats

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	Coastal	Oil Spill	Coastal Habitats	Coastal Habitats	Unlikely	High
Moderate	Unlikely	High	Moderate	Proposed	Mitigation Measures	Implement OSRP
Implement OSRP	Residual	Risk Rating	Minor	Minor	May 2017	373

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7.4.3.3 Coastal Wildlife and Shorebirds

As indicated in Table 784 the unplanned events with the potential for any measureable impacts on coastal wildlife and shorebirds would be a large Marine Oil Spill or a Coastal Oil Spill. As described in Section 6.2.3 the Guyana coastal habitats support a rich and diverse collection of species including shorebirds. Many of these species are dependent on mangroves and other wetland habitats which are particularly sensitive to oil spills. In addition there is the potential for some oil that reaches the Guyana shoreline to move upstream into the tidal portions of rivers and other estuarine areas as a result of tidal action where it could impact furbearing species like the neotropical and giant river otter. Oil can impact the physical structure of feathers and fur causing a loss of waterproofing and thermoregulation. In addition animals can inhale hydrocarbons or ingest oil when they groom themselves or feed which can damage their lungs cause ulcers and result in liver and kidney damage. For these reasons the consequences or severity of a large Marine Oil Spill on coastal wildlife and seabirds is considered High. However oil spill modeling of a loss of well control event indicates a 5 to 10 percent chance of oil reaching the Guyana shoreline supporting a likelihood rating of Unlikely. Therefore the overall risk of a large oil spill on coastal wildlife and shorebirds is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by reducing the probability of oil reaching the Guyana coast line. A Coastal Oil Spill e.g. Scenario 6 from Table 782 would more directly impact estuarine wildlife than the small portion of a larger Marine Oil Spill that reaches the coastal portion of Guyana. The giant river otter however is not found in estuarine waters and emergency response measures should be able to prevent any hydrocarbons from a spill like this from migrating upstream into fresh water habitats where this species may be found. There could be

impacts to the neotropical otter which can be found in estuarine areas shorebirds and other wildlife from oiling but because of the more limited magnitude of the spill and its location in a more controllable setting i.e. riverine vs open ocean the impacts would be limited to those individuals in the limited impacted area and these impacts would be expected to be temporary with no impacts at the population level for any species. Nevertheless considering the sensitivity of some of these coastal species the consequence or severity of a Coastal Oil Spill on coastal wildlife and shorebirds is considered High and the occurrence of this event is considered Unlikely. Therefore the overall risk of a Coastal Oil Spill on coastal habitats is considered Moderate. Effective implementation of the OSRP would further reduce this risk to Minor by further reducing the spread of oil in coastal waters. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure on the drill ship the NADF would not be expected to reach the coast. Therefore a NADF Release would have no impact on coastal wildlife or shorebirds. May 2017 374 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 790 Risk Rating for Oil Spill Impacts on Coastal Wildlife and Shorebirds

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
High	Moderate	Implement OSRP	Minor	Marine Oil Spill	Coastal Oil Spill	Coastal Wildlife and Shorebirds
High	Moderate	Implement OSRP	Minor	Marine Oil Spill	Coastal Oil Spill	Coastal Wildlife and Shorebirds

7.4.3.4 Seabirds As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on seabirds would be a Marine Oil Spill. During most oil spills seabirds are harmed and killed in greater numbers than other kinds of creatures NOAA 2016b. An oil spill could pose a risk to seabirds through direct and indirect mechanisms including the following Loss of insulating and water repelling properties from oiling of plumage leading to increased mortality; Loss or impairment of flight and buoyancy from oiling of plumage which can render birds unable to feed at sea which can quickly lead to dehydration and starvation; Toxic impacts from the ingestion of hydrocarbons during preening ingestion of contaminated prey inhalation of fumes or absorption of hydrocarbons through skin or eggs leading

to increased mortality; Habitat degradation at sea and at island or shoreline breeding sites; and Mortality of food resources. Since most oils float at least initially following a release seabird species that spend significant time resting or foraging on the waters surface are most at risk from direct exposure. Diving birds and waterfowl are considered to have the highest risk of oiling. No marine Important Bird Areas IBAs e.g. seabird breeding colonies and surrounding foraging areas nonbreeding concentrations feeding areas for pelagic species have been identified in Guyana. For colonial nesting species if a spill occurs during the breeding period and oil reaches a breeding colony or impacts individuals that introduce oil to the colony the impacts on seabirds would be more severe compared with those during the nonbreeding season. This is because colonial seabird species typically nest close together on islands or shorelines and forage at higher density in proximity to the nesting sites making larger numbers of birds and their eggs susceptible to oiling. Reproducing requires a lot of energy and a birds demand for food resources can double or triple during the breeding season. If an oil spill causes

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mortality or contamination of the birds food resources it can inhibit the birds ability to successfully mate and produce eggs Henkel et al. 2012. Eggs and very young birds are particularly sensitive to oil exposure which typically causes embryonic mortality in eggs or death from exposure in chicks Finch et al. 2011. Some seabirds lay only one egg at a time so they have an already low reproductive rate which makes these species more susceptible to adverse impacts from spills that occur in the breeding season because they could lose an entire recruitment year NOAA 2016. Given their susceptibility and sensitivity the consequence of a Marine Oil Spill on seabirds is considered High. This is offset to some extent by the Unlikely likelihood of a Marine Oil Spill. Therefore the overall risk of an oil spill on seabirds is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by limiting the geographic extent of the oil spill and the number of individual birds impacted. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure on the drill ship the NADF would not be expected to

reach the surface of the ocean where seabirds are active. Therefore a NADF Release would have no impact on seabirds. Table 791 Risk Rating for Oil Spill Impacts on Seabirds

Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed	Residual	Risk Rating
Minor	Mitigation Measures	Implement	OSRP	Marine Oil Spill	Seabirds	Unlikely	High	Moderate

7.4.3.5 Marine Mammals As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on marine mammals would be a Marine Oil Spill. In the unlikely event of an oil spill marine mammals i.e. whales dolphins manatees may be exposed when they surface to breathe or breach in the area of a fresh slick. Exposure to oil may harm their respiratory tissue and eyes and increase their susceptibility to infections. Baleen whales may be more susceptible because of the potential for oil to foul their baleen plates if the whales filter feed in the vicinity of the oil spill. Although not the most common whales in the Project AOI three species of baleen whales have been documented in the area Sei Minke and Brydes whales. Marine mammals may also be impacted by indirect impacts associated with oil spills including increased exposure to sound and risk of injury from ship strikes by response vessels. Despite these risks serious health impacts or deaths in marine mammals due to oil spills are rare. This is attributed to their smooth hairless skin to which oil does not readily adhere and their ability to take evasive action and avoid areas impacted by spills. Depending on time of year however marine mammals could be directly exposed to oil and suffer a range of health consequences.

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For these reasons and especially considering the presence and susceptibility of baleen whales the consequence of a Marine Oil Spill on marine mammals is considered High. This is offset to some extent by the Unlikely likelihood of an oil spill. Therefore the overall risk of an oil spill on marine mammals is considered Moderate. Effective implementation of the OSRP would reduce the geographic extent of the spill but considering the susceptibility of baleen whales to oil spills their presence in the Project AOI and their endangered/threatened status the risk remains Moderate. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure for the drill ship lighter oil

fractions would likely rise into the mid water column and dissipate laterally as they rise while the NADF would remain at or near the seafloor. This is deeper than most marine mammals occur and it would be too deep to affect the preferred forage species of any marine mammal species known occur in the AOI. Therefore a NADF Release would have no impact on marine mammals. Table 792 Risk Ratings for Oil Spill Impacts on Marine Mammals

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed	Residual	Risk Rating	Mitigation
Measures Implement	OSRP Marine Oil Spill	Marine Mammals	7.4.3.6	Marine Turtles	Unlikely	High	Moderate			

As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on marine turtles would be a Marine Oil Spill. In the unlikely event of an oil spill several aspects of sea turtle biology place them at particular risk across all of their life stages. Marine turtles nest on sandy beaches. If such beaches were to become oiled the laid eggs may be contaminated either because there is oil in the nest or the adult turtles pick up oil as they cross the beach. The eggs are susceptible to oil through absorption which can inhibit their development. Newly hatched turtles can become oiled after emerging from their nests and crossing an oiled beach on their way to the water. Oiling of juvenile and adult turtles in the water can adversely impact their eyes mucous membranes skin blood digestive and immune systems and salt glands. Several aspects of sea turtle behavior also compound their biological susceptibility to oil. These behaviors include Lack of avoidance behavior marine turtles are not known to consistently take evasive action away from oil spills; Indiscriminate feeding marine turtles have a habit of ingesting floating objects including the ingestion of oilfouled food and floating tar balls they mistake for food; and Large prediving inhalations if turtles surface to breathe in a fresh slick the oil can impact their eyes and damage their airways and/or lungs especially with their large prediving breaths which can introduce airborne toxins deep into their respiratory system.

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There are five species of marine turtles found in Guyana waters four of which are known to nest at Shell Beach. The populations of all of these species are under threat and they are classified as Vulnerable to Critically Endangered

by the IUCN. The consequence of a Marine Oil Spill on marine turtles is considered High taking into consideration their susceptibility to oil contamination their presence and important nesting site in the Project AOI and their threatened status. As explained previously a large Marine Oil Spill from a well control event is considered Unlikely with oil spill modeling indicating a 5 to 10 percent chance that oil would reach the Guyana shoreline and Shell Beach. Therefore considering both consequence and likelihood the overall risk to marine turtles from an oil spill is Moderate. Effective implementation of the OSRP would reduce the overall risk by reducing the probability of oil reaching the Guyana coast line. However given the Critically Endangered and Endangered IUCN classifications for several of these turtle species the residual postmitigation risk rating remains Moderate. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure for the drill ship lighter oil fractions would likely rise into the mid water column and dissipate laterally as they rise while the NADF would remain at or near the seafloor. No marine turtles are known to dive to the depths that occur in the PDA and it would be too deep to affect the preferred forage species of any marine turtle species known occur in the AOI. Therefore a NADF Release would have no impact on marine turtles.

Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed	Residual	Risk Rating
Moderate	Mitigation Measures Implement OSRP	Marine Oil Spill	Marine Turtles	7.4.3.7	Marine Fish	Unlikely	High	Moderate

As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on marine fish would be a Marine Oil Spill. Impacts to fish are related to both water column concentrations of and the duration of exposure to dissolved hydrocarbons primarily polynuclear aromatic hydrocarbons or PAH. Contamination in the water column changes rapidly in space and time such that exposures are typically brief i.e. typically measures in hours. Exposure to microscopic oil droplets may also impact aquatic biota either mechanically especially filter feeders or as a conduit for exposure to semisoluble hydrocarbons which might be taken up in the gills or digestive tract via dissolution from the microdroplets. Fish are generally only slightly impacted by oil spills because of their limited exposure to surface slicks and the dispersed oil being

rapidly diluted to very low concentrations in open water environments. Fish may also actively avoid oil as they can detect hydrocarbons in the water. May 2017 378 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts water. Juvenile life stages of marine fish tend to be more susceptible to impacts from oil spill than adults for several reasons including Most marine fishes spend at least their initial larval stages in the plankton which renders them unable to move away from oil at the surface; Oil tends to concentrate at the water surface at least initially following a release; and In addition to acute ingestion and dermal contact related impacts early life stages are also exposed to developmental related impacts which may include deformities in heart jaw and eye tissues that may manifest later in life Press 2015. Despite the susceptibility of juvenile stages of fish to relatively low concentrations of oil in the upper water column high mortality of planktonic life stages of fish would be expected to have minor impacts on the longterm populations of most openocean species. Very high natural mortality rates for larval life stages exceeding 99 percent for most marine fishes MBC 2011 suggest that most ichthyoplankton that could be killed during an oil spill event would die naturally from other causes in the absence of a spill. Therefore localized high losses of these juvenile life stages rarely equate to any measurable loss of adult life stages in the population. Although adult fish tend to be resilient to the impacts of oil spills in the open ocean fish at all life stages can be substantially impacted in some circumstances especially when oil spills into shallow or confined waters. In exceptional circumstances depletion of a year class for a particular species has been recorded in industry but mass fish mortalities as a result of an oil spill are rare. Mortalities that have occurred have been associated with very high localized concentrations of dispersed oil in the water column in storm conditions with the release of substantial quantities of light oils into breaking surf along a shoreline or with spills in rivers ITOPF Undated. If a spill were to reach these areas and penetrate the shallow creeks and lagoons within the mangroves mortality of adult and subadult life stages could be much higher. The consequence of an oil spill impacting marine fish is therefore considered Moderate. The likelihood of oil reaching the coast where fish would be most vulnerable to adverse impacts would be

highest under a large Marine Oil Spill scenario. But even if such an event occurred during the season when winds and currents were most favorable for oil to reach the coast the probability of oil actually reaching the Guyanese coast would remain between 5 to 10 percent supporting a likelihood rating of Unlikely. This means that the impacts of most oil spills on marine fish would be mostly confined to early life stages of pelagic fish and would have limited impacts at the population or species level. Considering the consequence and likelihood ratings the risk to marine fish from a Marine Oil Spill is rated as Minor. Effective implementation of the OSRP would further reduce the risk by limiting the geographic extent of the oil spill. In the event of a Tier II or Tier III marine oil spill implementation of the OSRP may include use of dispersants Scenarios 7 8 and 9 in Table 782. EEPGL is seeking preapproval from the EPA for the potential use of the three primary i.e. most broadly approved and studied dispersants Corexit 9500 Finasol OSR 52 and Dasic Slickgone NS. These dispersants have been found to have low toxicity are effective across a broad range of oil types and environmental conditions and are readily available globally. For reference in a 2010 study conducted by the May 2017 379 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts US EPA Corexit 9500A was found to be practically nontoxic³⁶ to *Menidia* spp. which is commonly used as a biological model representing fish in general during standard acute toxicity tests USEPA 2010. Although it is impossible to predict the exact quantity of dispersant that would be required under every foreseeable oil spill scenario based on previous industry experience the three scenarios identified in the OSRP for which application of dispersants would be recommended could require the application of an estimated total of between 2 m³ and 159 m³ of dispersant depending on how the dispersant is applied the volume of oil spilled the relative speed with which other mitigation measures could be applied and their effectiveness and sea conditions at the time of the spill as well as other factors. The same factors that will cause rapid dilution of oil in the open ocean e.g.; marine currents wind and wave action will also act to rapidly dilute a dispersant/oil mixture. Since dilution in the marine environment occurs rapidly especially in areas with strong current activity such as the PDA the

potential for acute impacts from dispersed oil is limited in duration and space and chronic exposure is not expected to be a significant factor in the overall risks posed to marine biota during a spill event. Undispersed oil generally has similar toxicity as most dispersant/oil mixtures so the responsible use of dispersants generally does not represent an additional risk to marine biota. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure for the drill ship lighter oil fractions would likely rise into the mid water column and dissipate laterally as they rise while the NADF would remain at or near the seafloor. In the event of a release of NADF caused by an emergency riser disconnect due to DP station keeping failure on the drill ship the NADF would remain at or near the seafloor. Such an event would expose deepwater adapted fishes within the PDA to NADF but a NADF release would be expected to only temporarily affect a small area around the release point. Therefore the risk to marine fish from a NADF Release is rated as Minor. Table 794 Risk Rating for Oil Spill Impacts on Marine Fish Unplanned Event Resource Receptor Likelihood Severity Consequence Risk Rating Proposed Mitigation Measures Implement OSRP None Residual Risk Rating Minor Minor Marine Oil Spill NADF Release Marine Fish Unlikely Moderate Minor Marine Fish Unlikely Low Minor

7.4.3.8 Marine Benthos As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on marine benthos would be a Marine Oil Spill. 36 The US EPA classifies substances with LC50 values concentration that will kill 50 of the test animals with a single exposure of 100 ppm as practically nontoxic. May 2017 380

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Benthic resources would be in close proximity to spilled oil from a loss of well control event. The impact of oil contamination on deepsea benthic biological resources however is poorly understood by academia and industry. As discussed previously most of the spilled oil would be expected to rapidly surface but some oil may bind with sediments and settle to the bottom with the potential to expose benthic organisms to toxic constituents. Results from a study initiated after the Deepwater Horizon oil spill found that areas within about 3 km 1.8 miles of the wellhead had low taxa richness and high nematode/harpacticoid/copepod ratios indicative of

contamination Montagna et al. 2013. It should be noted that these impacts are considered to have resulted from attempts to kill the well by injection of drilling fluids into the open wellhead rather than the loss of well control. Polychaete worms the most common benthic species in the PDA display varied responses to oil pollution. After an initial dieoff some polychaete species may increase in abundance and rapidly colonize damaged habitat while other species may experience reduced populations Xerces Society 2014. In a 2010 study conducted by the US EPA Corexit 9500A was found to be slightly toxic³⁷ to Mysid shrimp which are commonly used as a biological model representing crustaceans and other benthos in general during standard acute toxicity tests USEPA 2010. As described above oil spill scenarios 7 8 and 9 as identified in Table 782 and in the OSRP could require the application of an estimated total of between 2 m³ and 159 m³ of dispersant but if subsea application of dispersant were to be used the upper end of that range would decrease by a factor of five to a total of approximately 32 m³. This means that although subsea application would place the dispersant closer to the seafloor where benthos are located the incremental increase in relative toxicity to benthos as compared to fish would be largely balanced by the much smaller amount of dispersant that would be required in such an application. Considering the depth of water relatively low species diversity and likely limited geographic extent of impact the consequence of a Marine Oil Spill on marine benthos is considered Low. Combined with the Unlikely event of a large Marine Oil Spill the overall risk to marine benthos from an oil spill is considered Minor. There is little in the way of mitigation that would minimize the impacts of an oil spill on marine benthos in proximity to the well; rather EEPGLs proposed embedded controls to prevent a spill from occurring represent the most effective approach to minimizing this risk. Marine benthos would be the most sensitive of all the marine biological resources/receptors to an unplanned release of NADF from an emergency riser disconnect and loss of DP on the drill ship due to their close proximity to the release point the tendency of the NADF and cuttings plume to remain at or near the seafloor and their limited capacity to move away from the impacted area compared to other marine biota. A review of impacts of NADF and cutting deposition on marine benthos documented burial changes in sediment texture and

hypoxia in sediments as the three primary mechanisms of impact on marine biota from a release such as 37 The US EPA classifies substances with LC50 values concentration that will kill 50 of the test animals with a single exposure of 10100 ppm as slightly nontoxic. May 2017 381 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Scenario 5 IOGP 2016. The smaller and less mobile organisms including burrowing species worms and sessile lifeforms such as sponges bryozoans gorgonians and most mollusks are usually affected to greater degree by such events while the larger and more mobile species e.g. large crustaceans cephalopods are affected to a lesser degree and can move away from impacted areas. As described in Sections 7.4.2.2 and 7.4.2.3 marine currents in the AOI would mitigate the potential for burial and formation of hypoxic zones within the sediment. When such events occur recovery through natural recruitment from adjacent undisturbed areas is typically well underway within a year of the impact having occurred but the potential does exist for short term impacts on marine benthos in the event of a release and such an event would likely cause at least a temporary decrease in both the abundance and diversity of marine benthos within the deposition zone. While the NADF to be used by EEPGL contains IOGP Group III NABF with low to negligible aromatic reducing the potential that changes in marine sediments as a result of discharge of the NADF will lead to toxicological impacts on marine benthos a NADF Release is considered to have a Medium severity rating with respect to impacts on marine benthos. In combination with a likelihood rating of Unlikely the overall risk to marine water quality from a NADF Release is Minor. Table 795 Risk Rating for Oil Spill Impacts on Marine Benthos

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed Mitigation Measures	None	Residual Risk Rating
Minor	Unlikely	Medium	Minor	None	Minor	Marine Oil Spill	NADF Release	Marine Benthos	Marine Sediments

7.4.3.9 Ecological Balance and Ecosystems As described in Section 7.2.9.2 maintaining ecological balance in the North Brazil Shelf LME is essential to maintaining nutrient cycling gene flow and biodiversity. As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on ecological balance and ecosystems would be a large

Marine Oil Spill. Impacts on the Marine Nutrient Cycle Nitrogen phosphorous and silicon all enter the marine food web through metabolism by phytoplankton Nihoul and Chen 2008 so the impact on the food web from an oil spill would be determined by the impact of the spill on phytoplankton. The available literature suggests that toxicological impacts of oil on phytoplankton vary widely according to nutrient of the water temperature type of oil and exposure. A persistent heavy surface slick has the potential to reduce gas exchange and light transmission at the waters surface which generally reduces photosynthetic activity and primary productivity in the impacted area Ozhan et al. 2014. Reduced cellular activity in the phytoplankton would reduce the uptake of nutrients nitrogen phosphorous and silicates into the base of the aquatic food web. However these May 2017 382

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Assessment of Potential Impacts impacts would be short lived localized and the proportion of the phytoplankton populations impacted would be limited. As the oil weathers the slick would begin to break apart and light transmission would be restored and plankton not impacted would be carried into the Project AOI from unaffected areas to the east by the Guiana Current. Hydrocarbons in the water column would be rapidly diluted to levels below those expected to cause toxicity to planktonic species. The phytoplankton community would be expected to recover quickly due to the influx of unaffected plankton and phytoplanktons short generation times relative to other marine taxa.

Impacts on Gene Flow As described in Section 7.2.9.2 obstacles to efficient gene flow occur when physiochemical barriers to migration breeding or dispersalcolonization occur. A large Marine Oil Spill would represent a potential short term physiochemical barrier to migration through the Project AOI although the significance of this barrier impact would vary across species and seasons. Impacts on gene flow in marine fish would be negligible because there are no known sensitive spawning aggregations or habitat that would support such aggregations in the vicinity of the Project AOI and because fish traveling through the Project AOI en route to more distant aggregation sites would be expected to take an alternate route to avoid an area impacted by a spill. Marine mammals would also be expected to avoid the impacted area although in the initial stages of a spill they could be

impacted to a greater degree than the fish if they inhaled vapors or oil at the surface prior to vacating the area. Sea turtle and birds would more sensitive to impacts on gene flow because they do congregate to breed in portions of the Project AOI see Sections 7.4.3.4 and 7.4.3.6. Impacts on Biodiversity A large Marine Oil Spill has the potential to cause a shortterm decline in biodiversity. Some species may exhibit avoidance behavior and sensitive species that remain in the area may experience localized population declines or a declines in vigor. Small spill events would have little if any longterm impact on biodiversity across the North Brazil LME because these events would impact relatively localized areas and although there can be minor local decreases in biodiversity associated with even a small spill recovery would be expected to occur relatively rapidly. The same factors would impact biodiversity in the event of a more extensive oil spill but declines in biodiversity within the Project AOI may occur over a larger area and impact a larger number of ecosystem types so recovery may occur more slowly. For taxonomic groups that could experience significant reproductive and/or gene flow impacts depending on the timing duration and extent of the spill such as sea turtles declines in biodiversity could be regional and span multiple generations. Trophic Impacts A large Marine Oil Spill from a well control event could have ecosystemlevel trophic level impacts if hydrocarbons persisted in the food web and had toxic impacts on organisms or if May 2017 383 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts underlying changes in abundance or distribution of prey caused shifts in feeding behavior or effectiveness in upper trophic levels. Although the assimilation of hydrocarbons into living tissues is well established at multiple trophic levels Teal and Howarth 1984; Neff 2002; Chanton et al. 2012; GOMRI 2015 there has been no conclusive documentation of biomagnification of hydrocarbons up the food chain following a major oil spill. Research on fish following oil spills has documented residence of PAHs in fatty tissues but also indicates that fish and other higher vertebrates are able to dispose of the hydrocarbons rapidly through metabolic means such as the Cytochrome P 450 process Neff 2002. Most marine taxa would be able to avoid oil spills and would be able to recover relatively quickly from impacts should they occur. Several studies have

documented postspill shifts in feeding behavior in birds and fish but studies of spillrelated impacts on other marine taxa are generally lacking. Most studies cite shortterm adjustments in feeding strategies by birds or fish following a spill but many cite the need for longerterm study to document the role of spills in these shifts or an inability to identify hydrocarbon contamination as a driving factor due to confounding environmental impacts or both GOMRI 2015; Piatt and Anderson; 1996. Studies that successfully control for such factors and purport to document a causal relationship between oil spills and trophic shifts typically document a shift back to prespill conditions within a few years Moreno et al. 2013; GOMRI 2015. For these reasons the consequence of impacts from a large Marine Oil Spill on ecological balance and ecosystems is rated Medium. Combined with the Unlikely event of a large Marine Oil Spill occurring the overall risk to ecological balance and ecosystems from an oil spill is considered Minor. Additionally at the onset of an oil release a wildlife response program would be established to help minimize these impacts. Release of NADF near the seafloor as described under Scenario 5 would enrich the nutrient of the marine sediment down current of the wellhead due to the presence of biodegradable organic material in the fluid and the eutrophic condition that could result would cause temporary shifts in the food chain as the makeup of the marine benthos changed. It is unlikely that these changes in the benthic community would cause substantial changes in upper trophic levels however so a NADF Release is considered to have a Low severity rating with respect to impacts on ecological balance and ecosystems. In combination with a likelihood rating of Unlikely the overall risk to ecological balance and ecosystems from a NADF Release is Minor.

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Proposed Mitigation Measures	Wildlife	Oil Response Program	None	Residual	Risk Rating	Minor
Minor	Minor	Marine Oil Spill	NADF Release	Ecological Balance and Ecosystems	Ecological Balance and Ecosystems	Unlikely
Medium	Minor	Unlikely	Low	Minor	May 2017	384

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7.4.4 Socioeconomic Resources

The only unplanned events with the potential to impact

socioeconomic resources would be a large Marine Oil Spill or a Coastal Oil Spill. A NADF spill would not be expected to impact socioeconomic resources with the possible exception of submerged cultural heritage because of the limited volume of the potential spill and the water depth and distance to shore at which the spill would occur.

7.4.4.1 Economic Conditions Employment and Livelihoods

As indicated in Table 784 the unplanned events with the potential for any measureable impacts on economic conditions or employment and livelihoods in the Project AOI would be a large Marine Oil Spill or a Coastal Oil Spill which through decreased fishery and agricultural yields could potentially impact the fishery and agriculture sectors that currently account for a large part of the country's GDP. The economy in Regions 1 2 and 3 are highly dependent on fishing and agriculture for employment income generation and subsistence. Although the economy in Region 4 is relatively diversified populations in the rural areas also rely on agriculture and fishing with the largest number of fishermen in the country located in Region 4. These economies would be sensitive to any impact on fisheries and crop production that could result from an oil spill. These potential impacts are discussed below. Fisheries could be impacted by a large Marine Oil Spill especially if the oil reaches nearcoastal waters where most artisanal and commercial fishing occurs. Although considered unlikely based on the results of modeling and the sensitivity of fish species to spills as discussed above these fisheries may be impacted by any reduction in fish populations or closure of active fishing areas to allow for cleanup or to avoid potential public health impacts or potential tainting of commercial products. Impacts on mangrove habitats could impact fishery nursery grounds and impact future year class populations. Adult fish however are relatively resilient to oil spills because they are mobile and can quickly relocate away from an oil spill see Section 7.4.3.7. Further oil spill modeling for a well control event indicates 5 to 10 percent probability of oil reaching nearcoastal waters in the unlikely event an oil spill occurs. There would be several days advance notice before any oil would reach the Guyana coast so fisherfolk would be able to move their boats to unaffected areas. Therefore while the consequence of a large Marine Oil Spill impacting commercial fisheries could be considered High given that a large Marine Oil Spill reaching the Guyana coast is

considered Unlikely the risk to commercial fishing is considered Moderate. The coastal sensitivity mapping that supports the OSRP includes mangroves as a sensitive coastal resource and in the unlikely event of an oil spill; EEPGL will deploy emergency response equipment to protect these sensitive resources as appropriate. Effective implementation of the OSRP would reduce this risk to Minor by reducing the probability of oil reaching the Guyana coast. Additionally a claims process would be established at the onset of a large Marine Oil Spill May 2017 385 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts

inent to compensate fisherfolk for loss of harvest due to regional fisheries closures that were attributed to the oil spill. In the event that a spill reaches the shore there would be the potential to impact agriculture. Rice farming which makes up the majority of agricultural activity in the coastal area of Region 2 would not be impacted by potential oiling of the coastline since rice fields are irrigated from inland water conservancies. Nontraditional crops such as fruits vegetables and coconuts particularly along the Pomeroon River have the potential to be impacted by contaminated seawater entering the drainage system through sluice gates but this is considered highly unlikely as the movement of oil upstream would be limited by tidal action farmers would have ample notice to close sluice gates and spill responders would have time to install absorbent booms or other spill control equipment to prevent oil from reaching farmers crops or drainage inlets. Therefore the consequence of an oil spill that reaches the Guyana coast on economic conditions in coastal communities is considered Medium and considering the Unlikely likelihood of an oil spill that reaches the Guyana shoreline the overall risk to agricultural activities in coastal communities is considered Minor. Effective implementation of the OSRP and a claims process would further reduce this risk by reducing the probability of oil reaching the Guyana coast line and compensating for economic losses. In the event of a smaller Coastal Oil Spill the spill would be quickly controlled and contained because of the smaller volumes and the ready access to spill control equipment. There is the potential for a spill in these coastal areas because of its proximity to fishing grounds to impact fisherfolk. These impacts however would be Minor because of the limited affected area short

duration of the impact and the relatively rapid expected environmental recovery. Although the response time would be less for a small oil spill relative to a larger oil spill response efforts should be able to prevent oil from reaching agricultural areas because of the limited geographic areas impacted.

Table 797 Risk Rating for Oil Spill Impacts on Economic Conditions Employment and Livelihoods

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	Coastal Oil Spill	Coastal Communities	Fishing	Coastal Communities	Agriculture	
Coastal Fishing	and Agricultural Communities	Unlikely	High	Moderate	Unlikely	Medium Minor
Unlikely	Medium Minor	Residual	Risk Rating	Minor	Minor	Minor

Proposed Mitigation Measures

Implement OSRP and claims process

Implement OSRP and claims process

Implement OSRP and claims process

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As indicated in Table 784 unplanned events with the potential for any measureable impacts on community health and wellbeing include a large Marine Oil Spill Coastal Oil Spill and vehicle accidents. Guyana is one of the poorest countries in South America and this is particularly in rural populations. Although Guyana as a nation is considered self-sufficient for food disparities in food supply and family incomes create challenges in maintaining food security and proper nutrition in some communities with the result that malnutrition and anemia are among the leading causes of death in Guyanese children. Rural communities on the Guyanese coast are dependent on fishing and agriculture for subsistence and livelihoods. Fish catches and traditional crops such as vegetables and fruits are often sold locally at markets or roadside stands. In indigenous communities in Regions 1 and 2 crabbing shrimping and hunting of coastal game such as caiman and shorebirds are also practiced for subsistence. Adverse impacts on these resources as a result of an oil spill could have direct health impacts through entry of harmful substances into the food chain or through malnutrition if local food supplies become unavailable. Impacts on these sectors could also have impacts via the social determinants of health; if livelihoods are impacted increased household poverty can impact economic security quality of life access to education and other

healthpromoting and healthprotective resources. Increased economic hardship can also lead to or exacerbate familial problems and mental health impacts. Given their dependence on the coastal environment for subsistence and income their high rate of poverty and the current health challenges faced by the coastal population in Guyana the health consequences of an oil spill impacting food availability in coastal communities is considered High. Oil spill modeling indicates that the probability of the oil from a well control event actually reaching the Guyana coast with the potential for contaminating crops or coastal game is 5 to 10 percent supporting a likelihood rating of Unlikely. Accordingly the overall risk to community health and wellbeing from a large Marine Oil Spill is considered Moderate. Effective implementation of the OSRP would reduce this risk to Minor by reducing the probability that oil would reach the Guyana coast. A Coastal Oil Spill e.g. Scenario 6 from Table 782 could also have similar Minor effects on community health and wellbeing as a large Marine Oil Spill. The geographic area affected however would be more limited which would create more potential for subsistence fisherfolk to access alternative areas for fishing. With regard to the impact of onshore traffic agents on community health increased vehicular trips would be expected to increase the risk of vehicular agents the severity of which may be greater when industrial trucks are involved. However the Projectrelated increase in traffic is expected to be a minor incremental addition to the existing traffic. The relatively low traffic speeds in Georgetown due to existing congestion may reduce the likelihood of serious injuries although the presence of bicyclists and pedestrians increases that risk. Overall vehicular agents are considered Possible and the consequence could range from Low to High May 2017 387 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts depending on the extent of damage or the severity of injury. This leads to a risk rating for vehicular agents of Minor to Major. Consistent with international best practice EEPGL will develop and implement a Road Safety Management Procedure covering drivers and equipment dedicated to the Project to mitigate these risks. The Plan will include at a minimum the following components Definition of typical primary travel routes; Definition of required driver training including but not

limited to defensive driving loading/unloading procedures and safe transport of passengers if applicable; Designation and enforcement of speed limits through speed governors GPS or other monitoring systems; Avoidance of deliveries during typical peak traffic hours as well as scheduled openings of the Demerara Harbour Bridge to the extent reasonably practicable; Monitoring and management of driver fatigue; Definition of vehicle inspection and maintenance protocols that include all applicable safety equipment; Community safety program for impacted schools and neighborhoods to improve traffic safety and Community outreach to communicate information relating to major delivery events or periods. With the implementation of these measures the risk rating for vehicular accidents could be reduced to Minor to Moderate. Accidents involving Project vessels in Georgetown Harbor or near shorebases could lead to consequences ranging from cosmetic damage to injury or loss of life. Vessels operating in these areas however will be adhering to speed restrictions and navigation aids which should reduce the potential for significant injury or loss of life so the potential severity of these accidents is considered Low. Project contractors will utilize their own safety health and environmental programs and EEPGL will provide active oversight of its contractors to minimize safety health and environmental risks. Therefore the overall risk to Community Health and Wellbeing is considered Minor.

Table 798 Risk Rating for Oil Spill and Vehicle/Vessel Impacts on Community Health and Wellbeing

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	Coastal	Oil Spill	Vehicular Accident	Community Health and Wellbeing	Community Health and Wellbeing	Unlikely High
Moderate	Unlikely	Medium	Minor	Possible	Low to High	Minor to Major

Proposed Mitigation Measures: Implement OSRP, Implement OSRP Road Safety Management Plan

Residual Risk Rating: Minor, Minor, Minor

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Unplanned Event: Resource, Receptor, Likelihood, Severity, Consequence, Risk Rating

Vessel Collision: Community Health and Wellbeing, Unlikely, Low, Minor

7.4.4.3 Marine Use and Transportation

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Proposed Mitigation Measures: None Required

Residual Risk Rating: Minor

As indicated in Table 784 the unplanned events with the

potential for measureable impacts on marine use and transportation would be a large Marine Oil Spill and a Coastal Oil Spill. As an oil spill would likely have some impact on marine use and transportation as additional marine vessels and resources would need to be mobilized to support spill response likely resulting in increased congestion in Georgetown Harbour and/or near shorebases and vessel movement may be restricted in some areas. The severity of these impacts could be higher if the spill occurred close to shore and impacted nearshore vessel traffic but oil spill modeling indicates that the probability of the oil from a well control event actually reaching the Guyana coast is 5 to 10 percent for a large oil spill scenario. Accordingly the severity of impacts on marine use and transportation from a spill is considered Low. Therefore considering that an oil spill is considered Unlikely the overall risk to marine use and transportation is considered Minor. Effective implementation of the OSRP would further reduce the risk by reducing the probability that oil would spread in coastal areas. In the event of a loss of DP on the drill ship the drill ship would move away from the exact drilling location as a result of ocean currents until DP power is restored and it could be brought back on station but the event would be short term and would not constitute a hazard to shipping so it would have no impact on marine use and transportation. Accidents involving Project vessels in Georgetown Harbor or coastal areas e.g. groundings or collisions could interfere with marine use and transportation. Vessels operating in these areas however will be adhering to speed restrictions and navigation aids which should reduce the likelihood and severity of such an event. Prompt emergency response in the event of such an accident and removal of any grounded or damaged vessel would limit the severity of the event so the overall risk for marine use and transportation is considered Minor.

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	Coastal Oil Spill	Vessel Collision	Marine Use and Transportation	Marine Use and Transportation	Marine Use and Transportation	Unlikely
Unlikely	Unlikely	Unlikely	Low	Low	Low	Minor
Minor	Minor	Residual Risk Rating	Minor	Minor	Minor	Proposed Mitigation Measure
Implement OSRP	Implement OSRP	Prompt removal of damaged vessel	May 2017	389	EEPGL	Environmental

7.4.4.4 Social Infrastructure and Services As indicated in Table 784 both unplanned events considered herein a Marine Oil Spill a Coastal Oil Spill and a vehicular accident have the potential to result in measureable impacts on social infrastructure and services. A large Marine Oil Spill could impact social infrastructure and services primarily as a result of supporting spill response and cleanup teams. These teams could overburden housing medical and other infrastructure and services in Guyana. These infrastructure and service demands would only be temporary for the duration of required cleanup likely on the order of a few weeks to months depending on the extent of the spill and whether any oil reaches the Guyana coast. If the spill remains offshore then most of these infrastructure and service demands would likely be concentrated in Georgetown where most response vessels would likely be based but also where infrastructure and services are concentrated. If oil were to reach the Guyana shoreline then landbased cleanup would be required potentially in Regions 1 2 and/or 3 where little infrastructure or service capacity exists. Oil spill modeling however indicates the probability of oil reaching the Guyana shoreline in the unlikely event of a large oil spill associated with a well control event is only 5 to 10 percent. The consequence of an oil spill on social infrastructure and services is therefore considered Medium given the anticipated temporary impact on services. Given that a large Marine Oil Spill is considered Unlikely the overall risk to social infrastructure and services is considered Minor. Effective implementation of the OSRP would further reduce this risk by reducing the probability that oil would reach the Guyana coast. A smaller Coastal Oil Spill would not require spill response measures and teams that would cause any meaningful impact to social infrastructure and services. Response to a release of NADF under Scenario 5 would involve a fraction of the crew and vessels that would be required to respond to a large Marine Oil Spill so it would not be expected to cause any impact on social infrastructure and services. With regard to impacts of vehicular accidents on social infrastructure and services accident rates from ground transportation associated with the Project e.g. workers commuting truck transport of materials are expected to be low and would represent a negligible fraction of the accidents occurring in Georgetown.

As a result the potential consequence level for isolated temporary impacts on road congestion and healthcare utilization resulting from vehicle accidents would be Low. The risk of vehicle accidents associated with the Project causing measurable impact on congestion or healthcare utilization is considered Minor. Consistent with international best practice EEPGL will develop and implement a Road Safety Management Procedure as summarized in Section 7.4.4.2 to further reduce this risk.

Table 7100 Risk Rating for Oil Spill and Vehicular Accident Risks to Social Infrastructure and Services

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating
Marine Oil Spill	Social Infrastructure	Unlikely	Medium	Minor	Proposed Mitigation Measures	Implement OSRP
Residual Risk Rating	Minor	May 2017	390	EEPGL	Environmental Impact Assessment	Liza Phase 1

Development Project Unplanned Event Resource Receptor Likelihood Severity Consequence Risk Rating Coastal Oil Spill Vehicular Accident and Services Social Infrastructure and Services Social Infrastructure and Services 7.4.4.5 Cultural Heritage Unlikely Medium Minor Possible Low Minor

Chapter 7 Assessment of Potential Impacts Proposed Mitigation Measures Residual Risk Rating Minor Minor Implement OSRP Road Safety Management Procedure As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on cultural heritage would be a large Marine Oil Spill or a Coastal Oil Spill. Desktop research identified two known ceramic pottery sites near the coastline. Based on the ubiquity of past human occupations and thus archaeological sites especially along coastlines it is likely that there are many more unidentified archaeological resources along Guyanas coastline. It should be noted however that Marine Oil Spills from well control events that reach the coast 510 percent probably of contacting the coast generally only impact the intertidal zone unless the spill coincides with a significant storm surge. While archaeological sites are common along coastlines sites in the intertidal zone tend to lack stratigraphic integrity due to the dynamic interface between the ocean and the land especially along beaches. Some oil would be expected to settle to the seafloor and could damage submerged cultural heritage e.g. shipwrecks but this would be expected to be in proximity to the spill source. No shipwrecks or associated artifact scatters were identified within the PDA and therefore the risk to underwater cultural heritage is

considered Low. The same factors would apply to a release of NADF so the risk to underwater cultural heritage posed by Scenario 5 is also considered Low. As a result the consequence of a large Marine Oil Spill or release of NADF on coastal archaeological sites and submerged cultural heritage is considered to be Low. NADF is not expected to reach the coast under any conditions and considering the Unlikely likelihood of an oil spill that reaches the Guyana shoreline the overall risk to coastal cultural heritage from an oil spill or NADF Release is considered Minor. The consequence of a Coastal Oil Spill on archaeological sites would be similar to that for a large Marine Oil Spill. Effective implementation of the OSRP would further reduce the risk of a large oil spill by reducing the probability and limiting the geographic extent of oil reaching the Guyana coast.

Table 7101 Summary of Oil Spill Risk to Cultural Heritage

Unplanned Event	Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed	Residual	Risk Rating
Marine Oil Spill	Coastal Oil	Cultural Heritage	Cultural	Unlikely	Low	Unlikely	Low	Minor	Minor

May 2017 391 Mitigation Measures Implement OSRP Implement Minor Minor

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Spill NADF Release Heritage Cultural Heritage

7.4.4.6 Land Use Unlikely Low Minor

Chapter 7 Assessment of Potential Impacts OSRP None Minor

As indicated in Table 784 none of the identified unplanned events are expected to have any impact on land use.

7.4.4.7 Ecosystem Services

As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on ecosystem services would be a large Marine Oil Spill. Guyana is a country that is rich in natural resources and these are still relied upon by a large proportion of the population for livelihoods and subsistence. Fisheries and agriculture are still among the top contributors to the countrys GDP and these activities occur primarily in the coastal areas. The Region 2 and 3 economies derive a large share of their income from farming with rice being predominant in Region 2 and sugarcane in Region 3. Populations in these regions also grow many nontraditional crops for local sale and consumption. In Region 1 agriculture occurs at a relatively small scale but a number of other natural resourcebased activities take place particularly by indigenous communities. Along the coast and at the river mouths these include fishing crabbing hunting and trapping. Some

communities also hunt shorebirds and sea turtles as well as collect sea turtle eggs from the Shell Beach area. While the Region 4 economy is more diversified relative to the other coastal regions there is still a large fishing sector and considerable agricultural activity in the rural parts of the region. In addition to provisioning services the marine and coastal ecosystems in Guyana render a range of other important services that offer protection and are necessary for the functioning and support of ecosystems and both human and nonhuman life. This includes the coastal flood protection offered by mangrove forests and wildlife habitat provided by mangrove forests mud banks and coastal swamps. In the unlikely event of an oil spill from a well control event reaching the coast important habitats such as mangrove forests mud flats swamps and beaches could be impacted. These provide a range of ecosystem services to coastal populations in Regions 1 and 2. If oiling is severe enough to cause the loss of some mangrove forests this would weaken a critical component of the countrys sea defense system and expose the coastal population to increased coastal flooding hazard especially in Region 1 where agricultural areas are not protected from flooding by the same system of irrigation and drainage canals as in Regions 2 to 6. In terms of cultural services the coast is important for religious and traditional ceremonies for ethnic groups in Guyana. Many members of the Hindu community conduct funeral ceremonies on the seashore with disposal of ashes in the ocean. Throughout the year and during holy festivals Hindus also perform cleansing ceremonies on the seashore. African cultural organizations perform traditional emancipation ceremonies at a specific seawall location in the Georgetown area.

May 2017 392 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts Table 7102 provides a summary of the potential ecosystem services impacts that could be experienced by various receptor groups as a result of a large Marine Oil Spill from a well control event. A Coastal Oil Spill would affect a limited geographic area and would not be considered to pose any significant risk to ecosystem services other than in the localized area of the spill. Table 7102 Potential Ecosystem Services Receptors and Impacts from a Large Marine Oil Spill Receptors Coastal population in Regions 1 2 3 and 4 Key Potential Impacts Impacts on agriculture nontraditional crops e.g.; coconut

palm hearts and fisheries Impacts on shoreline protection provided by mangroves Hindu population in Regions 1 2 3 and 4 Disruption of religious ceremonies funeral and cleansing ceremonies AfroGuyanese population in Region 4 Disruption of traditional ceremonies emancipation ceremonies Coastal indigenous communities in Regions 1 and 2 Impacts on agriculture fishing crabbing hunting trapping nontimber forest product harvesting Impacts on shoreline protection provided by mangroves Considering the reliance of much of the population of Regions 1 2 3 and to a lesser extent Region 4 on ecosystem services e.g. for food housing materials medicinal plants income producing products the extent these services would be impacted by an oil spill if it were to reach shore and the lack of alternatives to replace the lost sources of sustenance and income the consequence of a large Marine Oil Spill from a well control event reaching the coast is rated as High. As explained previously such an oil spill is considered unlikely and even if one were to occur the probability of oil reaching the Guyana coastline is only 5 to 10 percent according to the oil spill modeling supporting a likelihood rating of Unlikely. Therefore the overall risk of an oil spill to ecosystem services is considered Moderate. The Project will establish an OSRP that will be followed in the event of a spill of any size. Additionally a claims process would be established at the onset of a large Marine Oil Spill inent to compensate for loss of sustenance and income. Effective implementation of the OSRP and a claims process would further reduce this risk to Minor by reducing the probability of oil reaching the Guyana coast line and compensating for economic losses. Table 7103 Risk Rating for Oil Spill Impacts on Ecosystem Services Unplanned Event

Resource	Receptor	Likelihood	Severity	Consequence	Risk Rating	Proposed	Residual	Risk Rating
Minor	Mitigation Measures	Implement OSRP and Marine Oil Spill	Ecosystem Services	Unlikely	High			
Moderate	May 2017	393	EEPGL	Environmental Impact Assessment	Liza Phase 1 Development			
Project	Chapter 7	Assessment of Potential Impacts	Coastal Oil Spill	Ecosystem Services	Unlikely			
Medium	Minor	claims process	Implement OSRP and claims process	Minor	7.4.4.8	Indigenous Peoples		

As indicated in Table 784 the only unplanned event with the potential for any measureable impacts on indigenous peoples would be a large Marine Oil Spill. Indigenous peoples are often

among the most marginalized segments of the population in their respective societies. The majority of Guyana's indigenous people live in remote portions of the country and many continue to operate outside of the formal economy depending on a subsistence way of life. Those living on the coast including along the coastal road of Regions 2, 3 and 4 tend to be culturally integrated with the Afro and Indo-Guyanese population but indigenous groups typically have a lower overall standard of living than the general population. As discussed in Section 7.3.9 indigenous populations in the more remote coastal areas of Regions 1 and 2 make use of a range of coastal resources for subsistence and livelihoods. Communities that are directly adjacent to the coast include Three Brothers Almond Beach, Fathers Beach and Unity Grant. Indigenous villages located 5 to 10 km (3 to 6 mi) inland from the coast in Regions 1 and 2 are Santa Rosa, Waramuri, Manawurin, Assakata and Wakapau. These communities engage in a number of natural resource-based activities including agriculture, fishing, crabbing, shrimping, hunting, palm harvesting and natural medicine harvesting on the coast. In the SBPA, fishing and crabbing activity is particularly active at the westernmost end of Shell Beach at the mouth of the Waini River although these activities also occur to a lesser extent at the eastern end of Shell Beach by the community of Fathers Beach. The percent of indigenous people in Regions 3 and 4 is less than the national average. Indigenous communities in remote areas of Regions 1 and 2 rely on the coastal habitats for subsistence and livelihoods and have less availability of alternative food particularly in Region 1. In the event of an oil spill reaching the coast, provisioning resources could be adversely impacted. In the event that mangrove forests and swamps along the coast are oiled, species such as fish, crabs and caiman which are depended upon for protein are likely to be impacted. For these reasons the consequence of a Marine Oil Spill on coastal Indigenous Peoples communities could be High. As explained previously, a large Marine Oil Spill from a well control event is considered unlikely and even if one was to occur, oil spill modeling indicates a 5 to 10 percent chance oil would reach the Guyana shoreline supporting a likelihood rating of Unlikely. Therefore, considering both consequence and likelihood, the overall risk to Indigenous Peoples of a large Marine Oil Spill is Moderate. The area potentially impacted by a Coastal Oil Spill would be

limited to areas near Project shorebases which are not expected to occur in the more remote areas supporting larger May 2017 394 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts indigenous populations. The Project will establish an OSRP that will be followed in the event of a spill of any size. Additionally a claims process would be established at the onset of a large Marine Oil Spill inent to compensate for loss of sustenance and income. Effective implementation of the OSRP and a claims process would reduce this overall risk to Minor by reducing the probability of oil reaching the Guyana coast line and compensating for economic losses. Table 7104 Risk Rating for Oil Spill Impacts on Indigenous Peoples Unplanned Event Resource Receptor Likelihood Severity Consequence Risk Level Marine Oil Spill Indigenous Peoples Unlikely High Moderate Residual Risk Level Minor Proposed Mitigation Measures Oil Spill Response Plan 7.4.5 Transboundary Impacts The planned Project is not predicted to have any measureable transboundary impacts i.e. impacts outside the Guyana Exclusive Economic Zone [EEZ]. All impacts from planned activities will occur within the Guyana EEZ. However there is the potential for transboundary impacts to result from unplanned events such as oil spills that may occur. As the oil spill modeling indicates transboundary impacts may occur under Scenarios 8 2500 bbl offloading spill and 9 20000 bpd release from a well control event over 30 days as defined in Table 782. The unmitigated model results indicate that there is the potential for oil to reach at least portions of Venezuela Trinidad and Tobago Grenada St. Vincent and the Grenadines and St. Lucia see Figure 714 although this would be much less likely in a realworld scenario in which mitigation measures would be applied. The unmitigated models predict that surface oil would travel towards the northwest in all scenarios during both the summer June to November and winter December to May seasons. Differences in seasonal wind speed and direction result in a range of shoreline length oiled. Stronger easterly winds would result in the potential for more significant shoreline oiling particularly in Venezuela and Trinidad and Tobago while lower wind speeds allow the surface plume to be transported to the north of Trinidad and Tobago and into a portion the Caribbean Sea. Impacts on resources and receptors in these other countries would be

similar to those discussed in Sections 7.4.2 to 7.4.4 for Guyana. Although the likelihood of a spill remains unlikely there would be the potential to impact water quality; sediments; protected areas; marine fish turtles mammals and seabirds; coastal fish and wildlife; coastal communities and indigenous peoples who rely on coastal resources for their livelihoods or sustenance. There are however some resources e.g. coral reefs found in these other potentially affected countries that are not found in Guyana. The coastal mapping that was conducted as described in Section 7.4.1 included the coastal regions of the countries that could be impacted by a large Marine Oil Spill event and May 2017 395 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts include these other potentially affected resources; therefore this information is available to support the OSRP. A general overview of potential effects on these countries is provided below.

Potential Effects on Trinidad and Tobago

The probability of shoreline oiling tends to be highest on the coast of Trinidad and Tobago because of the predominant current flow through the Stabroek Block and into the Caribbean Sea. The unmitigated oil spill modeling indicates that the probability of oil from a large Marine Oil Spill i.e. Scenario 9 from Table 782 reaching the Trinidad and Tobago coastline ranges up to approximately 90 percent with the time of first arrival ranging from 5 to 15 days for a spill occurring during both the winter and summer seasons respectively. The mitigated scenarios show oil travelling in generally the same direction. However effective application of multiple response strategies prevents oil from reaching any coastline including Trinidad and Tobago as indicated in Figure 716. The coastal sensitivity mapping indicates that Trinidad and Tobago have several marine resources that could be impacted by an oil spill. While Trinidad lacks coral reefs Tobago has several reefs. Most are on the west side of the island and would therefore be sheltered from oil carried west toward the island but a few are located on the northern and southern ends of the island including the islands largest reef Buccoo Reef located at Tobagos southern end that could be exposed to oiling in the unlikely event that oil reached the island. Trinidads seagrass communities are mostly located along the northwest coast near Chaguaramas and should be sheltered from an oil spill. Tobagos seagrass communities are

mostly clustered near the southern end of the island and would be more exposed to oiling if a spill reached Tobagos shoreline. Four species of sea turtles hawksbill leatherback green and olive ridley nest on Trinidad and all of these except olive ridley nest on Tobago. Significant numbers of both islands nesting beaches would be exposed to oiling by a slick approaching from the east however slightly more than half of Tobagos nesting beaches would be protected along the west coast. Nearly all of Trinidads nesting beaches are located along the northern and eastern coasts and would be at risk of oiling if a spill reached Trinidad. The most sensitive coastal species to an oil spill reaching Trinidad and Tobago is probably the West Indian manatee. Its known habitat in the country is exclusively located on east coast of Trinidad in an area that would have up to a 90 percent probability of being oiled in the event of an unmitigated large Marine Oil Spill from a well control event. Several marine Important Bird Areas IBAs e.g. seabird breeding colonies and surrounding foraging areas nonbreeding concentrations feeding areas for pelagic species of global or regional importance to seabirds have been designated in Trinidad and Tobago. Numerous fishing areas are located east of Trinidad and could be impacted by a large unmitigated Marine Oil Spill. The largest and most concentrated coastalnearshore fishing activities in this part of Trinidads EEZ are located along the southeastern coast from Cocos Bay in the north to Guayaguayare Bay in the south. These areas extend from the coast to May 2017 396 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 7 Assessment of Potential Impacts approximately 20 km 12 mi offshore. Further north in the vicinity of Salybia Sena and Saline Bays fishing is concentrated slightly further offshore approximately 15 to 30 km 9 to 18 mi from the coast. All of these areas would have a high probability of being impacted by a large unmitigated Marine Oil Spill from a well control event. Potential Effects on Venezuela The probability of shoreline oiling is high for the coast of Venezuela because of the predominant westerly current flow through the Stabroek block. The Gulf of Paria in Venezuela is located west of Trinidad and would be mostly protected from the impacts of a spill approaching from the east however southern portions of the gulf could be impacted by a large unmitigated Marine Oil Spill if it penetrated west of Trinidad. In such a scenario

the probability of oiling would vary widely. The southern and eastern portions of the gulf would have a high probability of being oiled up to 70 percent depending on location and season while areas slightly north and west would have a much lower probability of being oiled. The Orinoco River Delta would have a 5 to 10 percent probability of being oiled during the summer season but that probability would increase to approximately 40 percent if a large unmitigated Marine Oil Spill were to occur in the winter. The unmitigated oil spill modeling indicates that the time of first arrival would be about 15 to 25 days for a spill occurring during the summer season and approximately 5 to 10 days during the winter season. The most important areas in Venezuela that could be impacted by a large unmitigated Marine Oil Spill would be the Gulf of Paria and the Orinoco River Delta. The Orinoco River Delta is located south of Trinidad in eastern Venezuela. The Orinoco River Delta and the Gulf of Paria support numerous biological resources of regional and global significance including extensive mangroves diverse shorebird and estuarine fish communities threatened and endangered sea turtles and marine mammals and artisanal and commercial fisheries Miloslavich et al. 2011. Several marine IBAs of global or regional importance to seabirds have been designated in Venezuela.

Potential Effects on Other Islands The probability of shoreline oiling from an unmitigated spill is less for the other potentially affected countries i.e. Grenada St. Vincent and the Grenadines and St. Lucia and would be less than for Trinidad and Tobago and Venezuela ranging from 5 to 40 percent with the time of first arrival ranging from 10 to 15 days depending on the island and the time of year. The benefit of the longer time for first arrival of oil is that more time is available to implement the OSRP and provide measures to protect sensitive habitats. These islands are important tourist destinations and support valuable coral reefs seagrass beds and other habitats and species sensitive to oil.

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It should be noted that the oil spill modeling did not take into consideration any emergency response actions. Implementation of the OSRP would help minimize transboundary impacts just as it would minimize impacts within the Guyana EEZ. EEPGL will work with representatives for the respective countries

to be prepared for the unlikely event of a spill by Establishing operations and communication protocols between different command posts. Creating a transboundary workgroup to manage waste from a product release including identifying wastehandling locations in the impacted region and managing commercial and legal issues. Identifying places of refuge in the impacted region where vessels experiencing mechanical issues could go for repairs and assistance. Determining how EEPGL and the impacted regional stakeholders can work together to allow equipment and personnel to move to assist in a spill response outside the Guyana EEZ. Assigning or accepting financial liability and establishing a claims process during a response to a transboundary event. Informing local communities regarding response planning.

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8.0 CUMULATIVE IMPACT ASSESSMENT

Cumulative impacts arise as a result of Projectrelated impacts on a resourcereceptor interacting with impacts on that same resourcereceptor from other nonProject activities. Cumulative impacts can potentially result from individually insubstantial but collectively substantial actions undertaken over time or from the collective effect of modest impacts stemming from different sources acting on a receptor at the same time. Cumulative impact assessment considers interaction between potential impacts from the Project and impacts of other nonProject activities relevant existing activities or sufficiently approvedplanned activities that are considered reasonably foreseeable. The cumulative impact assessment for this EIA included the following two major tasks

- Determining the scope of the cumulative impact analysis including identification of
 - Potentially eligible resourcesreceptors;
 - Other relevant existingplanned activities that are part of or caused by the Project;
 - Relevant resourcesreceptors i.e. those that might be affected by the nonProject activities; and
 - Appropriate geographic extent and time frame of analysis
- Conducting the cumulative impacts analysis on relevant resourcesreceptors. The specific shorebases and onshore support facilities e.g. warehouses laydown yards to be utilized in Guyana have not yet been

identified by EEPGL. Accordingly ERM has performed the impact assessment on the basis that the Project will utilize existing shorebases located in Georgetown. Should any new or expanded shorebases or onshore support facilities be utilized the construction expansion and any required dredging as well as the associated permitting of such facilities would be the responsibility of the owneroperator and such work scope is not included in the scope of this EIA.

8.1 Scope of the Cumulative Impact Analysis

8.1.1 Potentially Eligible Resources

Resourcesreceptors considered initially in the cumulative impacts analysis are those that would be impacted by the Project. If the residual impacts on a resourcereceptor of at least one phase of the Project was rated Minor or higher the resourcereceptor was identified as potentially eligible for the cumulative impact analysis. Unplanned events i.e. oil spills were not considered in this analysis as their likelihood is considered to be Unlikely. Positive impacts are also excluded from the analysis. Table 81 lists the resourcesreceptors identified as potentially eligible for the cumulative impacts assessment based on the Projects residual impact significance ratings presented in Chapter 7.

May 2017 400 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment Table 81 Eligibility of ResourcesReceptors for Cumulative Impact Analysis

Resource	Special Status Species	Marine Mammals	Marine Turtles	Marine Fish Community	Health and Wellbeing	Marine Use	Transportation	Social Infrastructure	Services	Air Quality	and Climate	Sound	Marine Geology	Sediments	Marine Water Quality	Protected Areas	Coastal Habitats	Coastal Wildlife	Shorebirds	Seabirds	Marine Benthos	Ecological Balance	Ecosystems	Economic Conditions	Employment	Livelihoods	Cultural Heritage	Land Use	Ecosystem Services	Indigenous Peoples			
Highest Residual Impact	Minor	Moderate	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Minor	Negligible	Nonea	Negligible	Minor	Nonea	Nonea	Nonea	Negligible	Negligible	Minor	Positive	Minor	Minor	Negligible	Nonea	Nonea	Potentially Eligible for Cumulative Impact Analysis	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

a None the planned Project activities are not expected to have any impact on the resourcereceptor.

8.1.2 Other nonProject Relevant Activities

Two other nonProject activities have been identified as relevant with respect to the potential for their impacts to interact

with Project impacts on a given resource receptor. First although no confirmed plans are in place there is a reasonable likelihood that oil and gas companies will conduct oil and gas exploration and development offshore of Guyana outside of the scope of the proposed Project. As an example depending on the experience gained from the proposed Project EEPGL may identify opportunities to expand the development of the Liza Field. Further EEPGL or other operators may pursue activities targeting resources outside of the Stabroek block. Future activities by EEPGL or other operators could include seismic surveys drilling of wells installation of subsea or surface production infrastructure and production operations. Although other operators may conduct their activities concurrently with the Project their activities would occur outside the Stabroek Block with exception of periodic transit. The closest that another operators activities could be expected to approach the Project would be approximately 20 km 12 mi which is well beyond the geographical range of the Projects impacts. There would therefore be no opportunity for cumulative effects between the Project May 2017 401 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment and activities in other blocks so interactions between the Project and other operators activities as well as potential EEPGL activities in other blocks are not considered further in this analysis. Second the Government of Guyana is currently considering replacement of the heavily used Demerara Harbour Bridge as a means of relieving congestion of both vehicular road and riverbased vessel traffic induced by opening or closing respectively of the retractor spans that allow large vessels to pass. In November 2015 the Ministry of Public Infrastructure sought Expressions of Interest EOIs to complete a feasibility study and design for a new bridge across the Demerara River. The EOIs were due by December 1 2015 Kaieteur News Online 2015 but it is currently unclear when or if the replacement project will proceed. The bridge is located several kilometers upriver from the shorebases that EEPGL currently may use to support the Project. If construction of a new bridge moves forward there is a chance it might occur contemporaneously with some stages of the proposed Project.

8.1.3 Relevant Resources identified

in Section 8.1.2 to be experienced by Table 82 presents the results of the analysis to determine

whether or not there is a reasonable potential for Project impacts and the impacts of at least one of the identified other relevant the potentially eligible activities resourcesreceptors listed above. If a reasonable potential for nonProject related impacts was identified the resourcereceptor was considered to be a relevant resourcereceptor and was therefore included in the cumulative impact analysis. Therefore the cumulative impact assessment effort focuses on impacts on resources that are potentially eligible because they will be affected by the Project and relevant because they would also be exposed to impacts of one or more nonProject activities. In this case eight eligible resourcesreceptors were determined to be relevant resourcesreceptors with respect to at least one of the cumulative impact sources. In the cases of Marine Water Quality and Ecological Balance and Ecosystems the effects of the Project would have to persist beyond the boundaries of the Stabroek Block in order for the Project to contribute to cumulative impacts on these resources which is unlikely given the relatively small footprints of the Project and its predicted impacts on water quality. Therefore these receptors were not considered relevant to the cumulative impact assessment because they would not be exposed to impacts from the Project and one or more nonProject activities.

Table 82 Identification of Relevant ResourcesReceptors for the Cumulative Impact Analysis

ResourceReceptor	Highest Residual Impact	Significance Rating	Potential Interaction between impacts of Project and Future Offshore OG Activity
Demerara Harbour Bridge Replacement	Special Status	Species	Marine Mammals
Marine Turtles	Minor	Minor	Minor
Yes	Yes	Yes	Yes
No	No	No	No
Included in Cumulative Impact Analysis as Relevant Resource Receptor	Yes	Yes	Yes
Yes	May 2017	402	EEPGL
Environmental Impact Assessment	Liza	Phase 1	Development Project
Chapter 8	Cumulative Impact Assessment	ResourceReceptor	Marine Fish Community
HealthWellbeing	Marine Use	Transportation	Social Infrastructure
Services	Employment and Livelihoods	Marine Water Quality	Ecological Balance and Ecosystems
Highest Residual Impact	Minor	Significance	Minor
Rating	Minor	Minor	Minor
Minor	Minor	Minor	Minor
8.1.4	Geographical Extent of Analysis	Potential Interaction between impacts of Project and	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	No	No	No
Included in Cumulative Impact	Yes	Analysis as	Yes
Relevant	Yes	Resource	Yes

Yes Receptor Yes No No The geographic extent of the cumulative impacts analysis was defined as the direct and indirect AOI for the Project see Chapter 4 excluding the area associated with a potential unplanned event i.e. oil spill.

8.1.5 Time Frame for Analysis

Potential impacts of the Project will have the possibility of interacting with other nonProject impacts throughout the Project life cycle i.e. extending approximately 20 years from the start of production operations. However there is naturally a limit to the knowledge of what other relevant activities may occur during this period. Considering the other relevant activities described above it was assumed that the Demerara Harbour Bridge replacement project would occur within the Project lifecycle and that other oil and gas exploration and development would extend through the end of anticipated Project production operations. Accordingly the time frame for the cumulative impact analysis was defined as the Project life cycle.

8.2 ResourceReceptorSpecific Cumulative Impact Assessment

This section contains a summary of the cumulative impacts that would potentially result from the impacts of the Project interacting with impacts of the other relevant activities on the relevant resourcesreceptors listed in Table 82.

8.2.1 Special Status Species

The Project was rated as having a Negligible significance for residual impacts on several species listed as Critically Endangered Endangered Vulnerable and Near Threatened. The Project was rated as having a Minor significance for residual impacts on several fish species. Similar to Chapter 7 the assessment of potential impacts on marine mammals Section 8.2.2 effectively covers the assessment of potential impacts to marine mammals and the assessment of potential impacts to marine turtles Section 8.2.3 effectively covers the assessment of potential impacts to special status marine turtles. This section is limited cumulative impacts on special status fish species.

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8.2.1.1 Cumulative Impacts from Future EEPGL Activities

While additional production activities within the Stabroek Block may occur in the future currently such activities are undefined e.g. timing location and development concept. Cumulative impacts of future production activities have therefore not been considered in this assessment but would be included as appropriate in future assessments. However future

exploration activities within the Stabroek block and in close proximity to the Liza field would likely include many of the same impacts on fish associated with the Project e.g. auditory impacts entrainment in water withdrawals permitted discharges. The Critically Endangered species are coastal and would not be affected by the Project. The Endangered species are mostly wide ranging marine pelagic species that could be exposed to effects of the Project as well as other EEPGL activities across the Stabroek Block but these activities would be focused on other areas of the Stabroek Block and the species would be expected to recover from temporary exposures to Project related impacts in the immediate vicinity of the Project before encountering similar impacts elsewhere. The Vulnerable and Near Threatened categories contain a mix of pelagic fish that would also be expected to recover from short term exposures at individual projects and resident species which would not move between projects and therefore would not be exposed to impacts from multiple projects. Provided that impacts from other EEPGL activities would not occur in the same place and time as Project related impacts there would be no significant cumulative effects on pelagic or resident fish and the significance of cumulative impacts on special status fish would not increase above Minor.

8.2.1.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement The Critically Endangered fishes in the Project Area are generally estuarine species and most of the remaining Endangered and Vulnerable species are exclusively marine. None of the special status fishes potentially affected by the Project would also be expected to be present in the vicinity of the Demerara Harbour Bridge project so no cumulative impacts on special status fishes would be expected as a result of the bridge replacement project. Based on the factors discussed above the significance rating for potential cumulative impacts on special status species was set equal to the individual Project significance rating Minor.

8.2.2 Marine Mammals The Project was rated as having a Minor significance for residual impacts on marine mammals resulting primarily from behavioral disturbance.

8.2.2.1 Cumulative Impacts from Future EEPGL Activities In terms of potential cumulative impacts between other EEPGL activities within the Stabroek Block and the Project there is potential for spatial overlap between the impacts of individual activities but the extent of this

potential overlap is currently unknown. While additional production activities within the Stabroek Block may occur in the future currently such activities are undefined e.g. timing location and development concept. Cumulative impacts of future production activities have therefore not been considered in this assessment but would be May 2017 404 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment included as appropriate in future assessments. However many of EEPGLs future activities within the Stabroek block and in close proximity to the Liza field would likely include many of the same impacts associated with the Project e.g. additional vessel traffic permitted discharges. The potential for oil and gas related impacts on marine mammals would logically rise in proportion to an increase in exploration activity but EEPGLs future exploration activities would likely be focused on areas outside of the Projects Direct AOI. EEPGLs future development activities could occur within the Projects Indirect AOI and could therefore have potential cumulative auditory impacts on marine mammals but only if they occurred simultaneously with the installation phase of the Project when auditory impacts will be most severe which is extremely unlikely. The greatest additional risk of ship strike would occur in near shore areas where vessels would congregate to enter and after exiting Georgetown Harbour; however this increased risk would represent a minimal increment to the existing risk posed by fishing and commercial vessels transiting to and from the port at Georgetown and other fishing vessels operating in coastal waters west of Georgetown. Provided that the areas within which marine mammals could be affected by future exploration activities e.g.; mixing zones surrounding future exploration vessels auditory disturbanceinjury thresholds do not cooccur at the same place and time as Project related impacts there would be no increase in the significance of cumulative impacts on marine mammals. The significance of cumulative impacts on marine mammals would not increase above Minor.

8.2.2.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement

A few marine mammals could be present in the vicinity of the Demerara Harbour Bridge project including boto Guyana dolphin tuxuci and West Indian manatee. All of these species are known to enter estuarine settings so they could encounter activities at the Georgetown shorebases that the

Project will be utilizing as well as the Demerara Harbour Bridge. Pile driving and other sources of impulsive noise from bridge construction activity are likely to have a much greater effect on the underwater soundscape and hence the potential for auditory injury than the occasional a few times a day transit of Project vessels which would represent a minor increment to existing river traffic. Considering the typical patterns of bridge construction activity and the low speeds at which Project vessels would be travelling within the harbor there is no expectation of an interaction between the activities leading to increased probability of vessel strikes. Based on the factors discussed above the significance rating for potential cumulative impacts on marine mammals was set equal to the individual Project significance rating Minor.

8.2.3 Marine Turtles

Many of the same factors that determine cumulative potential impacts on marine mammals are relevant to marine turtles. The Project would have Minor significance for residual impacts on marine turtles primarily as a result of potential injury from vessel strikes.

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8.2.3.1 Cumulative Impacts from Future EEPGL Activities

Just as there is potential for spatial overlap between the impacts of individual future EEPGL activities on marine mammals the impacts of future EEPGL activities on marine turtles could also overlap with impacts from the Project but their sensitivity to some Project impacts differs from that of mammals. Like marine mammals turtles would not be expected to congregate around Project vessels. Marine turtles are less susceptible to auditory impacts than marine mammals but spend much of their time at the sea surface and are generally slower than marine mammals so the most likely potential for cumulative impacts between the Project and future offshore oil and gas exploration would likely be vessel strikes. Although vessel strikes are generally rare the potential for oil and gas related vessel strikes of turtles would logically rise in proportion to the amount of oil and gas exploration activity offshore. However collective oil and gasrelated shipping would be expected to represent a small incremental increase in risk compared to the existing risk posed by fishing and commercial vessels transiting to and from the port at Georgetown and other fishing vessels operating in coastal waters west of Georgetown. The

significance of cumulative impacts on marine turtles would not be expected to increase above Minor.

8.2.3.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement The marine turtle species considered in this EIA are not found within the Demerara River. As a result the Demerara Harbour Bridge project would not be expected to contribute to potential cumulative impacts on marine turtles. Based on the factors discussed above the significance rating for potential cumulative impacts on marine mammals was set equal to the individual Project significance rating Minor.

8.2.4 Marine Fish The Project was rated as having a Minor significance for potential residual impacts on bottomoriented fish species as a result of altered bottom habitats e.g. from cuttings discharge during drilling and from disturbancecoverage by installation of SURF infrastructure and on pelagic fish species as a result of altered water quality and potential for entrainment in water intakes during production operations as well as of potential auditory impacts from VSP during drilling and from pile driving during installation. These impacts would be most significant during drilling and installation when most of the habitatdisturbing activities and vessel traffic would occur.

8.2.4.1 Cumulative Impacts from Future EEPGL Activities With respect to bottomoriented and resident species impacts related to disturbance of bottom habitats will be temporary in nature and fish would be expected to return to the vicinity of subsea infrastructure once seafloor disturbance activities are complete. Further these effects would be limited to the immediate locality of Project drilling operations and SURF infrastructure and would not overlap with impacts of additional exploration activities which May 2017 406 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment would be focused on other areas of the Stabroek Block. Impacts on pelagic species from future operations within the Stabroek Block would also be expected to be limited to the immediate vicinity of the vessels engaged in those activities and those activities would be focused on other areas of the block so interaction between the impacts of Project and those of other activities is not expected. Provided that impacts on fish associated with future exploration activities e.g.; mixing zones surrounding future exploration vessels auditory disturbanceinjury thresholds do not overlap spatially and temporally with Project related impacts

there would be no interaction between them and therefore no increase in the significance of cumulative impacts on marine fish. The significance of cumulative impacts on fish would not increase above Minor. 8.2.4.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement

The marine fish species that would be present offshore in the PDA are generally not found within the Demerara River and to the extent that they may enter the Demerara River as vagrants or use the mangroves in the harbor as nursery habitat the harbor bridge would have insignificant impacts on adults and would not be expected to affect existing mangroves to a significant degree. As a result the Demerara Harbour Bridge project would not be expected to contribute to potential cumulative impacts on marine fish. Based on the factors discussed above the significance rating for potential cumulative impacts on marine mammals was set equal to the individual Project significance rating Minor. 8.2.5 Community Health and Wellbeing The Project was rated as having a Minor significance

on community health and wellbeing due to potential residual impacts on medical and health service accessibility during all Project stages. 8.2.5.1 Cumulative Impacts from Future EEPGL Activities In the event of a serious medical emergency for either offshore or onshore personnel the Project may rely on some local Guyanese health resources. However such events are expected to be rare. Further the Project will have the capability to provide medical services offshore and onshore and has protocols to acquire medical support outside of Guyana when required. Therefore it is expected that the Project impacts on emergency medical services would be rare and of very limited duration.

EEPGL would scale its own onshore medical capacity and on its vessels to the size of its workforce so additional EEPGL projects would exert very little to no additional demand on local Guyanese health resources. Therefore the significance of cumulative impacts from other EEPGL activities on medical and health services would not increase above Minor. 8.2.5.2 Cumulative Impacts from the

Demerara Harbour Bridge Replacement While the Demerara Harbour Bridge project will be shortterm in duration relative to the Project its location near Georgetown means that most medical emergencies would likely be May 2017 407 EEPGL Environmental Impact Assessment Liza Phase

1 Development Project Chapter 8 Cumulative Impact Assessment handled at medical facilities in

Georgetown. As such cumulative impacts on medical and health services from the bridge replacement project and the Project as well as any potential future offshore oil and gas activity are possible. However cumulative impacts on health service accessibility are still considered to be Minor due to the shortterm construction period for the bridge project the likely availability of project sitebased medical facilities for minor medical issues in the case of potential future offshore oil and gas projects the low frequency of occurrence of severe injuries the limited numbers of personnel involved and the limited duration of patient stays. As a result the Demerara Harbour Bridge project would not be expected to contribute to significant cumulative impacts on the accessibility of health services. Based on the factors discussed above the significance rating for potential cumulative impacts on community health and wellbeing was set equal to the individual Project significance rating Minor.

8.2.6 Marine Use and Transportation The Project was rated as having a Minor significance for potential residual impacts on commercial fishing vessels due to loss of access to fishing areas and subsistence fishing vessels due to potential difficulties notifying these vessels of increased vessel traffic during drilling installation and production operations.

8.2.6.1 Cumulative Impacts from Future EEPGL Activities EEPGL has exclusive rights to oil and gasrelated activity in the Stabroek Block and will manage its own future operations to avoid conflicts with other vessels and ensure maritime safety in cooperation with MARAD. Therefore cumulative impacts on marine use and transportation as a result of future EEPGL activities are considered to be Minor.

8.2.6.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement The Demerara Harbour Bridge project would involve construction vessels which would add to the vessel traffic on the Demerara River. Bridge construction activities and thus most of the bridge construction vessel traffic however would be focused near the bridge site. The site for the new bridge is not yet determined nor has the shorebases to be used by the Project been selected. However the shorebases being considered are seaward of the existing bridge location which would limit Project vessel interaction with the new bridge construction area. Projectrelated vessel traffic along the river is expected to be modest limited to a few vessels per day and are not expected to appreciably affect the volume of

vessel traffic on the river. Thus cumulative impacts on marine use and transportation from the bridge replacement project are considered to be Minor. Based on the factors discussed above the significance rating for potential cumulative impacts on marine use and transportation was set equal to the individual Project significance rating Minor.

May 2017 408 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment 8.2.7 Social Infrastructure and Services Residual impacts on housing and utilities during the drilling and installation stage of the Project were rated as Minor in significance as this stage will require the largest number of Project workers up to approximately 1500 at peak of which approximately 150 would be based onshore and would likely have the most potential for induced population influx to the Georgetown area by job seekers. Operations stage impacts were rated as Negligible and are therefore out of scope for the cumulative impact assessment.

8.2.7.1 Cumulative Impacts from Future EEPGL Activities At this time the number nature and timing of additional offshore activities that EEPGL may undertake during the Project life cycle and thus the number of workers at any given time cannot be predicted. However increases in the offshore workforce would likely occur gradually or at different stages over a relatively long timeframe during which time housing markets and utility providers would be able to respond to increases in demand. Given the uncertainty regarding the extent of additional EEPGL activities during the life of the Project the significance of cumulative impacts on housing and utilities combined with other offshore oil and gas activity is considered to range from Minor to Moderate in significance depending on the scale of worker and jobseeker influx associated with potential future offshore projects.

8.2.7.2 Cumulative Impacts from the Demerara Harbour Bridge Replacement Construction of the Demerara Harbour Bridge may potentially attract workers and jobseekers from other areas of the country. The bridge replacement project would likely coincide with the Project's production operations stage when the Project's offshore workforce is estimated at about 100 to 140 workers and most of these workers would be based on the FPSO except when off rotation. Onshore workers for the Project during this period are estimated at about 100. The bridge replacement project is also expected to be of short duration relative to the

Project. Given the short duration of the Demerara Harbour Bridge replacement project relative to the Project and the likelihood that it would overlap primarily with the operations and productions phases of the Project when traffic is expected to be relatively low the cumulative impact on onshore transport generated from the bridge replacement project and the Liza Phase 1 Project is considered to be Minor.

8.2.8 Employment and Livelihoods

The Project was rated as having a Minor significance for potential residual impacts on commercial fishing vessels due to loss of access to fishing areas and subsistence fishing vessels due to potential difficulties notifying these vessels of increased vessel traffic during drilling installation and production operations. These potential for the Project and other potential future activities to interact and create cumulative impacts on fishing operations is assessed under Marine Use and Transportation in Section 8.2.6. The minor impacts on fishing livelihoods will be driven entirely by the May 2017 409 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 8 Cumulative Impact Assessment interactions discussed in Section 8.2.6 which set the significance rating for potential cumulative impacts on marine use and transportation as Minor. Based on this impact rating and the fact that impacts on fishing livelihoods will be driven by the same factors that affect Marine Use and Transportation the significance rating for potential cumulative impacts on employment and livelihoods was also set at Minor which is equal to the individual Project significance rating on this receptor.

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9.0 ENVIRONMENTAL AND SOCIOECONOMIC MANAGEMENT PLAN FRAMEWORK

9.1 Introduction

This chapter provides a framework for the Project Environmental and Socioeconomic Management Plan ESMP. The ESMP is the document that describes the measures EEPGL will implement to manage the Projects potential environmental and socioeconomic risks and reduce impacts to the environment and communities. The scope of this chapter includes the following

- Provide an overview of the policy framework underpinning the ESMP;
- Describe the ESMP structure;
- Describe general ESMP guiding principles;
- Describe the general of the Management Plans; and
- Describe how

changes to the ESMP will be managed. The individual Management Plans that comprise the ESMP have been prepared consistent with this framework. Management Plans are required to be completed prior to Environmental Authorisation of the Project and will be updated to include final conditions from the Environmental Authorisation.

9.2 Regulatory and Policy Framework

The Project is subject to various regulatory requirements as further described in Chapter 3 of the EIA as well as the conditions established by the Guyana EPA upon issuance of the environmental authorization for the Project and the conditions of the Petroleum Production Licence and approval of the Project Development Plan by the GGMC. Other Guyana government agencies including but not limited to the Fisheries Department of the Ministry of Agriculture MoA Guyana Revenue Authority GRA Civil Defense Commission CDC and Maritime Administration MARAD have regulatory authority over aspects of the Project. EEPGL is committed to ensuring compliance with the laws and regulations of Guyana while conducting business in a manner that is compatible with the environmental and socioeconomic needs of the communities in which it operates and in a manner that protects the safety security and health of its employees those involved with its operations its customers and the public. These commitments are documented in its Safety Security Health Environmental and Product Safety policies. These policies are put into practice through a disciplined management framework called the Operations Integrity Management System OIMS which is described in Section 3.4.

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9.3 ESMP Structure

Environmental and Socioeconomic Management Plan Framework

Chapter 9

The overall structure of the Project ESMP is depicted in Figure 91. The specific Project Management Plans are organized into five categories Environmental Management Plan EMP Socioeconomic Management Plan SMP Environmental and Socioeconomic ES Monitoring Plan Oil Spill Response Plan OSRP Preliminary End of Operations Decommissioning Plan³⁸ Each of these categories includes one or more specific management plans which are included in this document unless otherwise noted as shown in Figure 91.

³⁸ In alignment with the EPAs Initial Closure and Reclamation Plan

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Development Project Figure 91 ESMP Structure Chapter 9 Environmental and Socioeconomic Management Plan Framework ESMP Framework Environmental Management Plan Socioeconomic Management Plan Environmental and Socioeconomic Monitoring Plan OSRP Preliminary End of Operations Decommissioning Plan Air Quality Stakeholder Engagement Plan Oil Spill Modeling Water Quality Grievance Management Coastal Sensitivity Maps Waste Management Plan Transportation and Road Safety Response Procedures Marine Ecosystems Cultural Heritage and Chance Finds Wildlife Response Plan Due to the size and complexity of these documents these are standalone plans and are provided either as an Appendix to this ESMP or as a separate volume to the regulatory submittal for the Liza Phase 1 Project i.e. OSRP. May 2017 413 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts 9.4 General ESMP Guiding Principles The overall ESMP and each of the specific Management Plans it contains have been developed consistent with these guiding principles. Each Covers all Project stages i.e. there are not separate Management Plans for each Project stage although there is a Preliminary End of Operations Decommissioning Plan ; Contains a level of detail for each individual Management Plan that is fit for purpose and varies among the individual Management Plans; Represents a living document which may be revised or amended as the Project progresses in response to changing circumstances lessons learned or other appropriate reasons; and Reflects all regulatory commitments and obligations including those from the EIA supporting plans and environmental authorizations. 9.5 Management Plan The Management Plan Framework contains an introduction and scope as well as a summary of the applicable regulations standards and guidelines. As indicated above each Management Plan is fit for purpose and therefore varies to some extent in but contains specific Management Measures for each component that are based on the Embedded Controls provided in this EIA. The plans also include the following information for each controlmeasure The specific Project stage or component that will be responsible for implementing the Management Measure e.g. FPSO Support Vessels Shorebase etc. The specific stage or stages of the Project during which each measure will be implemented e.g.

Drilling Installation Production Operations Operational requirements; and Monitoring requirements

9.6 Management of Change During Project implementation changes may be required to address unanticipated conditions or situations. Managing change is an integral part of OIMS. Risk assessments audits inspections and/or observations may identify the need for amendments to the ESMP. In these cases the ESMP will be updated to reflect change. In addition the ESMP will be updated when applicable environmental laws regulations standards and or company processes systems and/or technologies change. The EPA will be notified of any significant planned changes to the ESMP and will be provided with an updated version of the document for their records and use. The ESMP is also envisioned to be a living and adaptive document that will be updated to reflect continuous learning and improvements and shared with the Government of Guyana. May 2017 414

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Conclusions and Summary of Impacts 10.0 CONCLUSIONS AND SUMMARY OF IMPACTS This section summarizes the predicted environmental and socioeconomic impacts of the Project resulting from planned activities and potential unplanned events specifically an oil spill as well the Projects contributions to cumulative impacts on important resources and receptors. 10.1 Planned Events The planned Project is predicted to have minor impacts on physical resources i.e. air quality marine sediments water quality no impacts on coastal biological resources minor impacts on marine biological resources little if any noticeable negative impact on communities and largely positive impacts on socioeconomics. These predictions are based on the fact that the bulk of the Project will occur approximately 190 km 120 miles offshore and the Project will capture and reinject recovered natural gas which is not used as fuel on the FPSO back into the Liza reservoir treat all significant wastewater streams prior to discharge to the sea have a very small physical footprint e.g. installation of infrastructure will only physically disturb about 0.3 km² of benthic habitat and use MMOs during VSP operations to minimize the potential for auditory damage and injury from ships strikes to marine mammals. The Project will generate benefits for the citizens of Guyana through revenue sharing with the Government of Guyana a minor increase in employment and select Project purchasing from

Guyanese businesses. 10.2 Unplanned Events Unplanned events such as a potential oil spill are considered unlikely to occur because of the extensive preventative measures employed by EEPGL; but nevertheless an oil spill is considered possible. The number of resources that would be impacted and the extent of the impact on those resources would depend on the volume and duration of the release as well as the time of year the release were to occur but impacts would tend to be most significant for a well control event during the drilling stage. EEPGL has conducted oil spill modeling to evaluate the range of likely spill trajectories and rates of travel. The location of the Project 190 km 120 miles offshore prevailing northwest currents the light nature of the Liza field crude oil and the regions warm waters would all help minimize the severity of a spill. Accounting for these factors the unmitigated modeling indicates only a 5 to 10 percent probability of oil reaching the Guyana coast without taking into consideration the effectiveness of any oil spill response and in the unlikely event that a spill were even to occur. Although the probability of an oil spill reaching the Guyana coast is very small a well control spill at a Liza well would likely impact marine resources found near the well such as sea turtles and certain marine mammals especially baleen whales that may transit or inhabit the area impacted by a spill. Air quality water quality seabirds and marine fish could also be impacted although likely to a lesser extent because the duration of acute impacts would not be long and the impacts are reversible. A spill could potentially impact Guyanese fishermen if commercial fish and shrimp were impacted. The magnitude of this impact would depend on the volume and duration of the release as well as the time of year the release were to occur e.g. whether a spill would coincide with the time of year [May to September] when these species are more common.

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Conclusions and Summary of Impacts common in the PDA. Effective implementation of the OSRP would reduce this risk by further reducing the ocean surface area impacted by a spill and thereby reducing the exposure of these species to oil.

10.3 Cumulative Impacts The Projects expected contribution to cumulative impacts would be limited by its distance offshore and by the small number of projects or activities either operating or currently planned to be operating offshore Guyana. There

is the potential for other future offshore Guyana oil and gas exploration and possibly development. If such nonProject activities were to occur the Project and nonProject activities together could cumulatively impact some resources such as Marine Mammals via vessel strikes or sound Marine Turtles vessel strikes Marine Fish degraded water quality and cooling and ballast water entrainment Community Health and Wellbeing increased demand for limited medical treatment capacity Marine Use and marine congestion especially near Georgetown harbor and Social Transportation Infrastructure and Services increased demand for limited housing utilities and services. Many of the above potential impacts that require offshore interaction between the Project and others have a limited chance of occurring given the size of the Stabroek block. All of these potential cumulative impacts were considered to be of Negligible to Minor significance.

10.4 Degree of Irreversible Damage

The planned Project would not cause irreversible damage to any onshore areas of Guyana. There would be a very minor approximately 0.3 km² permanent loss of benthic habitat as a result of the installation of wells flowlines and other subsea equipment which may be proposed to be left in place upon decommissioning. However this equipment can ultimately provide the substrate for recolonization of the impacted areas. Even in the unlikely event of an oil spill little irreversible damage would be expected although it could take a decade or more for all resources to fully recover depending on the on the volume and duration of the release as well as the time of year the release were to occur.

10.5 Project Benefits

The Project will generate benefits for the citizens of Guyana in several ways Through revenue sharing with the Government of Guyana although the details of this revenue sharing is confidential. The type and extent of benefits associated with revenue sharing will depend on how decision makers in government decide to prioritize and allocate funding for future programs which is unknown and outside the scope of the EIA; By procuring select Project goods and services from Guyanese businesses to the extent reasonably practicable; and By hiring Guyanese nationals where reasonably practicable although the potential magnitude of hiring will be limited.

May 2017 416 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts In addition to direct revenue sharing

expenditures and employment the Project would also likely generate induced economic benefits as other nonProject related businesses benefiting from direct Project purchases or worker spending will reinvest locally or expand spending in the area thereby also generating more local valueadded tax. These beneficial multiplier impacts will occur throughout the Project life. 10.6 Summary Table 101 provides a summary of the predicted residual taking into consideration proposed mitigation measures impact significance ratings for impacts to each of the resources receptors that may result from each of the Project stages i.e. well drillingSURFFPSO installation Production Operations and Decommissioning unplanned event i.e. oil spill and cumulative impacts. May 2017 417 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts Table 101 Summary of Residual Impact Ratings Resource Air Quality and Climate Sound39 Marine GeologySediments Negligible Marine Water Quality Minor Drilling and Installation Negligible None Production Operations Negligible None None Minor Decommissioning Oil Spill Cumulative Negligible None None Minor Impacts Negligible None Negligible Minor Minor Minor Moderate Minor Protected Areas None None None Minor None Special Status Species Critically Endangered and Terrestrial Species Negligible Negligible Negligible Minor Minor VulnerableNear Threatened Species sharks bony fish Minor Negligible Negligible Moderate Minor Minor Negligible Endangered Fish and Black Capped Petrel None Coastal Habitats Coastal WildlifeShorebirds None Seabirds Marine Mammals Marine Turtles Marine Fish Marine Benthos Ecological Balance Ecosystems Economic Conditions EmploymentLivelihoods Community Health Wellbeing Marine UseTransportation Commercial cargo Commercial fishing Subsistence fishing Positive Positive Minor Negligible Minor Minor Minor Minor Minor Minor Negligible Negligible Minor Minor None None Negligible Negligible Negligible Negligible Negligible None None Negligible Negligible Negligible Negligible None None Negligible Minor Minor Minor Moderate Minor Moderate Minor Minor Minor Negligible Minor Positive Positive Positive Positive Minor Minor Negligible Negligible Minor Minor Minor Minor Negligible Minor Minor Negligible Minor Minor Minor Minor Minor Minor Minor Minor Negligible Minor Negligible Negligible Negligible

Social Infrastructure Services Cultural Heritage Land Use Ecosystem Services Indigenous Peoples

Based on oil spill modeling of an unmitigated well control event in the PDA that indicates oil reaching Guyana shoreline is highly unlikely 5to 10 percent probability. Excludes listed sea turtles which are

covered in the Marine Turtles resource category. Negligible Negligible None None Negligible

Negligible None None Negligible Negligible None None Minor None Minor Minor Negligible

Negligible None None Negligible Minor Minor 39 Soundrelated impacts on Marine Mammals are

factored into the Marine Mammal impact assessment. May 2017 418 EEPGL Environmental Impact

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11.0 RECOMMENDATIONS ERM recommends the following measures be considered by EPA

GGMC and the EAB as conditions of any approval of the Project Embedded Controls incorporate all

of the proposed embedded controls see Table 111. Mitigation Measures adopt the recommended

mitigation measures see Table 112. Management Plans implement the proposed Environmental and

Socioeconomic Management Plan to manage and mitigate the impacts identified in the EIA. The

ESMP includes the following Management Plans o Environmental and Socioeconomic Management

Plan Framework o Environmental Management Plan including Air Quality Management Water

Quality Management Waste Management Plan Marine Ecosystems Management o Socioeconomic

Management Plan including Stakeholder Engagement Plan Grievance Management Transportation

and Road Safety Management Cultural Heritage Management and Chance Finds o Environmental

and Socioeconomic Monitoring Plan o Preliminary End of Operations Decommissioning Plan o Oil

Spill Response Plan including Oil Spill Modeling Coastal Sensitivity Mapping results of the Net

Environmental Benefit Analysis Emergency Preparedness and Response Procedures and the

Wildlife Response Plan Oil Spill Preparedness EEPGL has proactively embedded many controls into

the Project design to prevent a spill from occurring and we agree that a spill is unlikely. But given the

sensitivity of many of the resources that could be impacted by a spill e.g. Shell Beach Protected

Area marine mammals critically endangered and endangered sea turtles Amerindian communities

reliant on ecosystem services for sustenance and their livelihood we believe it is critical that EEPGL

commit to regular oil spill response drills simulations and exercises document the availability of appropriate response equipment on board the FPSO and demonstrate that offsite equipment could be mobilized for a timely response. With the adoption of such controls mitigation measures and management plans and requirements for emergency response preparedness the Liza Phase 1 Development Project is expected to pose only minor risks to the environmental and socioeconomic resources of Guyana while potentially offering significant economic benefits to the residents of Guyana.

May 2017 419 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts ResourcesReceptors Benefitted Marine sediments water quality mammals turtles fish and benthos Marine sediments water quality mammals turtles fish and benthos Marine mammals marine turtles Air quality marine sediments marine water quality protected areas sensitive species coastal habitats coastal wildlife and shorebirds marine mammals turtles fish benthos ecology and ecosystems

Table 111 List of Proposed Embedded Controls Embedded Control Measures Drilling and SURFFPSO Installation and Commissioning

Utilize WBDF to the extent reasonably practicable and in other cases use lowtoxicity IOGP Group III NABF. When NADF is used utilize a solids control and cuttings dryer system to treat drill cuttings prior to discharge such that end of well maximum weighted mass ratio averaged over all well sections drilled using nonaqueous fluids shall not exceed 6.9 percent wet weight base fluid retained on cuttings. For VSP activities commence such operations during daylight hours after a suitable prewatch by Marine Mammal Observers MMOs is performed and begin with soft start procedures in accordance with JNCC guidelines which incrementally increase source sound levels in order to allow marine mammals and turtles time to move away from the activity before full sound source energy is utilized. With respect to prevention of spills of hydrocarbons and chemicals during the drilling stage

- o Change liquid hydrocarbon transfer hoses periodically
- o Utilize drybreak connections on liquid hydrocarbon bulk transfer hoses
- o Utilize a liquid hydrocarbon checklist before every bulk transfer
- o Perform required inspections and testing of all equipment prior to deploymentinstallation;
- o Utilize certified Blowout Prevention BOP equipment;
- o Regularly test certified BOP equipment and

other spill prevention equipment; o Utilize overbalanced drilling fluids to control wells while drilling; o Perform operational training certification including well control training for drill ship supervisors and engineers; o Regularly audit field operations on the drill ships FPSO and shorebases to ensure application of designed safeguards; and o Controls for mitigating a failure of the DP dynamic positioning system on the drill ships and maintain station keeping which include Use of a Class 3 DP system which includes numerous redundancies; Rigorous personnel qualifications and training; Seatrials and acceptance criteria; Continuous DP proving trials; System Failure Mode and Effects Analysis; Continuous DP failure consequence analysis; and Establishment of wellspecific operations guidelines.

May 2017 420 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts Embedded Control Measures

ResourcesReceptors Benefitted During pile driving activities gradually increase the intensity of Marine mammals hammer energy to allow sensitive species to vacate the area before injury occurs i.e. soft starts. Maintain marine safety exclusion zones with a 500 m 1640 ft radius around drill ships and major installation vessels to prevent unauthorized vessels from entering potentially hazardous areas. Marine use and transportation safety Production Operations Reinject produced gas which is not utilized as fuel gas on the FPSO to avoid routine flaring. With respect to nonroutine flaring the following measures will be implemented o Monitor flare performance to maximize efficiency of flaring Air quality operation; o Ensure flare equipment is appropriately inspected and function tested prior to production operations; and o Ensure flare equipment is appropriately maintained and monitored during production operations. Treat produced water on the FPSO to limit oil and grease OG to 29 mg/L monthly average and 42 mg/L daily maximum. Design produced water and cooling water processes to avoid increases in ambient water temperature of more than 3C at 100m 328 ft from the FPSO when discharging. Perform onboard waste incineration for certain categories of waste. Utilize a Mooring Master from the FPSO located onboard the offloading tanker to support safe tanker approachdeparture and offloading operations. Utilize support tugs to aid tankers in maintaining station during approachdeparture from FPSO and during offloading operations. Utilize a hawser with

a quick release mechanism to moor the FPSO to the tanker at a safe separation distance during offloading operations. FPSO offloading to tankers will occur within an environmental operating limit that is established to ensure safe operations. In the event that adverse weather occurs during offloading operations that is beyond the environmental operating limit the tanker will cease the offloading operations and may disconnect and safely maneuver away from the FPSO as appropriate. Utilize a marine bonded doublecarcass floating hose system certified by Class or other certifying agency that complies with the recommendations of OCIMF Guide to Manufacturing and Purchasing Hoses for Offshore Moorings GMPHOM 2009 Edition or later. Utilize breakaway couplers on offloading hose that would stop the flow of oil from FPSO during an emergency disconnect scenario. Marine water quality mammals turtles fish and benthos seabirds ecology and ecosystems Marine water quality mammals turtles fish and benthos seabirds ecology and ecosystems Land use Marine use and transportation safety Marine use and transportation safety Marine use and transportation safety Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds May 2017 421 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts Embedded Control Measures Utilize a load monitoring system in the FPSO control room to support FPSO offloading. Utilize leak detection controls during FPSO offloading which include

- o Leak detection for breach of the floating hose that complies with the recommendations of OCIMF GMPHOM 2009 Edition or later;
- o Utilization of instrumentationprocedures to perform volumetric checks during offloading.

Provide trained medical personnel on board the FPSO and major installation vessels to minimize reliance on medical infrastructure and facilities in Guyana. Utilize marine safety exclusion zone of 2 nautical miles around the FPSO to prevent unauthorized vessels from entering potentially hazardous areas. Project vessels will conduct ballasting operations in accordance with IMO regulations. General Measures Maintain equipment marine vessels and helicopters in good working order and operate in

accordance with manufacturers specifications in order to reduce atmospheric emissions and sound levels to the extent reasonably practicable. Regularly inspect and service shorebase cranes and construction equipment in order to mitigate the potential for spills and to maintain air emissions at optimal levels. Shut down or throttle down sources of combustion equipment in intermittent use where reasonably practicable in order to reduce air emissions.

Resources/Receptors Benefitted

Marine sediments water quality mammals turtles fish benthos and seabirds Marine sediments water quality mammals turtles fish benthos and seabirds Community health and wellbeing Marine use and transportation safety Ecological Balance and Ecosystems Air quality water quality marine mammals marine turtles Air quality Air quality Utilize secondary containment for bulk fuel storage drilling fluids Water quality and hazardous materials where practical. Regularly check pipes storage tanks and other equipment Water quality associated with storage or transfer of hydrocarbons/chemicals for leaks. Perform regular audits of field operations on the drill ship FPSO and shorebase to ensure application of designed safeguards. Treat sewage to applicable standards under MARPOL 73/78. For those wastes that cannot be reused treated or discharged/disposed on the drill ship or FPSO they will be manifested and safely transferred to appropriate onshore facilities for management. Waste management contractors will be vetted prior to utilization. If deficiencies in contractors operations are noted an action plan to address the identified deficiencies will be established.

May 2017 422 Air quality water quality Marine sediments water quality mammals turtles fish benthos and seabirds Land use

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10 Conclusions and Summary of Impacts Embedded Control Measures Utilize oil/water separators to limit oil in water in bilge water to 15 parts per million ppm; per MARPOL. Provide standing instruction to Project dedicated vessel masters to avoid marine mammals and turtles while underway and reduce speed or deviate from course as needed to reduce probability of collisions. Provide standing instruction to Project dedicated vessel masters to avoid any identified rafting seabirds when transiting to and from PDA. Observe standard international and local navigation procedures in and around the Georgetown Harbour and Demerara River as well as best shipkeeping

and navigation practices while at sea. Project workers will be subject to health screening procedures to minimize risks of communicable diseases. Utilize an established SSHE program to which all Project workers and contractors will be required to mitigate against risk of injury/illness to workers. All workers/contractors will implement and will be required to adhere to its principles. Maintain an OSRP to ensure an effective response to an oil spill receive and training on including maintaining the equipment and other resources specified in the OSRP and conducting periodic training and drills. Where practicable direct lighting on FPSO and major vessels to required operational areas rather than at the sea surface or skyward.

Resources/Receptors Benefitted: Marine sediments, water quality, mammals, turtles, fish, benthos and seabirds. **Marine mammals:** marine turtles, Seabirds. **Marine use and transportation safety:** Community health and wellbeing, Occupational and community health safety and wellbeing. **All resources and receptors:** Seabirds and marine turtles. **Provide screening on FPSO and drill ships for seawater intakes to:** Marine fish, minimize the entrainment of aquatic life where practical.

Table 112: List of Proposed Mitigation Measures

Proposed Mitigation Measure	Report
direct GHG emissions from the facilities owned or controlled by the Project to the EPA on an annual basis in accordance with internationally recognized methodologies and good practice.	
Procure select goods and services locally to the extent reasonably practicable enhancement measure.	
Utilize Guyanese nationals where reasonably practicable enhancement measure.	
The Project will issue Notices to Mariners via MARAD, the Trawlers Association and fishing coops for movements of major marine vessels including the FPSO, drill ship and installation vessels to aid them in avoiding areas with concentrations of Project vessels and/or where marine safety exclusion zones are active.	

Resources/Receptors Benefitted: Climate, Economic Conditions, Employment and Livelihoods. **Economic Conditions:** Employment and Livelihoods. **Marine Use and Transportation:** May 2017.

423 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 10: Conclusions and Summary of Impacts. **Proposed Mitigation Measure:** Augment ongoing stakeholder engagement process to identify commercial cargo, commercial fishing and subsistence fishing vessel operators who might not ordinarily receive Notices to Mariners and where possible communicate

Project activities to those individuals to aid them in avoiding Project vessels. Promptly remove damaged vessels associated with any vessel incidents to minimize impacts on marine use transportation and safety. Proactively communicate the Project's limited staffing requirements as a measure to reduce the magnitude of potential population influx to Georgetown from jobseekers. Adopt and implement as needed a Chance Find Procedure that describes the requirements in the event of a potential chance find of heritage or cultural resources. Project workers will be required to adhere to a Worker Code of Conduct which will address shoreleave considerations. Develop and implement a Road Safety Management Procedure to mitigate increased risk of vehicular accidents associated with Project-related land transport activities. The procedure will include at a minimum the following components:

- o Definition of travel routes;
- o Definition of required driver training including defensive driving loading/unloading procedures and safe transport of passengers if applicable;
- o Designation and enforcement of speed limits through speed governors GPS or other monitoring systems;
- o Avoidance of deliveries during typical peak traffic hours as well as scheduled openings of the Demerara Harbour Bridge to the extent reasonably practicable;
- o Monitoring and management of driver fatigue;
- o Definition of vehicle inspection and maintenance protocols that include all applicable safety equipment; and
- o Community outreach to communicate information relating to major delivery events or periods.

Implement the OSRP in the unlikely event of an oil spill including:

- o Conduct air quality monitoring during emergency response;
- o Require use of appropriate PPE by response workers;
- o Implement a Wildlife Oil Response Program as needed; and
- o Implement a claims process for damage caused by an oil spill as needed.

Resources/Receptors Benefitted: Marine Use and Transportation, Marine Use and Transportation, Social Infrastructure and Services, Cultural Heritage, Community Health and Wellbeing, Community Health and Wellbeing.

All resources May 2017 424 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project 12.0 PROJECT TEAM Chapter 12 Project Team Table 121 identifies the primary members of ERM's team and their roles in preparing this EIA. It also lists their educational qualifications, highest degree and years of professional experience. Signatures and curriculum Vitae (CVs) for each of these team

members listed in Table 121 are included in Appendix A and B respectively. Table 121 Project Team

Name	Role	David Blaha	Project Director	Education	Highest Degree	MS Environmental Management																																																				
Jason Willey	Project Manager and Marine Fish Mammals and Turtles	MS Environmental Science and Policy	Greg Lockard	EIA Coordinator and Cumulative Effects	PhD Anthropology	Kamal Govender	ESMPs	Karin Nunan	Social Lead	Peyun Kok	Social Specialist	MS Environmental and Geographical Science	MS International Relations and Conflict Resolution	MES Urban and Regional Planning	Kristina Mitchell	Stakeholder Specialist	MA International Relations	Benjamin Siegel	Maritime Archaeology	MA Historical Maritime Archaeology	Years of Experience	35	15	21	13	20	7	15																														
10	Mark Garrison	Air Quality and dispersion modeling	Adeyinka Afon	Noise and Air Quality	MS Environmental Science	2	MSE Environmental Process Engineering	12	Michael Fichera	Water Quality	MS Environmental Engineering	23	Shwet Prakash	Water Quality	MS Civil Engineering	Matt Erbe	Geologist	MS Hydrogeology	Dusty Insley	Geologist	BS Geology	Jonathan Connelly	Environmental Specialist	BA Environmental Studies	13	18	10	10	May 2017	425	EEPGL																											
Environmental Impact Assessment		Liza	Phase 1 Development Project	Name	Role	Chapter 12																																																				
Project Team		Education	Highest Degree	Years of Experience	Melinda Todorov	Environmental Specialist	MS Aquatic Ecology	Julia Tims	Biodiversity	Benjamin Sussman	Transportation	Noam Raffel	GIS Analyst	Erin Rykken	Technical Editor	Subcontractors	Hance Thompson	Noella Arispe	Hema	David Guyana	Environmental and Regulatory Support	Ground Structures Engineering Consultants Inc	GSEC	Guyana Coastal Sensitivity Mapping	Venezuela	Independent Consultant	9	22	17	3	15	13	MS Natural Resources Management	Ecology	MCRP	City and Regional Planning	MS Geographic Information Sciences	MA English	MLS Library Science	BS Biology;	MS Environmental and Earth Resources Management	BS Architecture;	MS Planning and Development	41	Coastal Sensitivity Mapping	Trinidad and Tobago	Ecoengineering Consultants Limited	Trinidad	AS Environmental Management;	BS Environmental and Natural Resources Management	7	May 2017	426	EEPGL	Environmental Impact Assessment	Liza	Phase 1 Development Project	13.0

REFERENCES Introduction Chapter 13 References EPA Guyana Environmental Protection Agency.

2004. Volume 1 Environmental Impact Assessment Guidelines Rules and Procedures for Conducting and Reviewing EIAs. Version 5. 34 pgs. Administrative Framework OAS Organization of American States. 2013. National Constitution of Guyana. Retrieved from <http://www.oas.org/juridico/maenguyenguyinttextconst.pdf>

Kaiteur News. 2016. Policy finally completed to Guide Guyanas developing Oil and Gas Industry. June 9 2016. Retrieved from <http://www.kaiteurnewsonline.com/2016/06/09/policy-finally-completed-to-guide-guyanas-developing-oil-and-gas-industry>

Description of the Existing Environment Physical Resources Air Quality and Climate Change Hydromet. 2014. Climate Fact Sheet. Retrieved from <http://www.hydromet.gov.gy/climate.html>

NOAA National Oceanic and Atmospheric Administration. 2008. U.S. Department of Commerce National Oceanographic and Atmospheric Administration. Currents. Retrieved from <http://oceanservice.noaa.gov/education/kits/currents/05currents1.html>

Yale University. 2016. Global Metrics for the Environment. Environmental Performance Index 2016 Report. Retrieved from <http://epi.yale.edu/country/guyana>

Noise and Vibration Finneran J. J. 2015. Auditory weighting functions and TTSPTS exposure functions for cetaceans and marine carnivores. San Diego SSC Pacific.

Hildebrand J. A. 2009. Anthropogenic and natural sources of ambient noise in the ocean. Marine Ecology Progress Series 395 520. JASCO JASCO Applied Sciences. 2016. Underwater Sound Associated with Liza Phase 1 Project Activities. NOAA National Oceanic and Atmospheric Administration. 2013. Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals. December 23 2013. February 2017 427 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References

Southall B. L. A. E. Bowles W. T. Ellison J. J. Finneran R. L. Gentry C. R. Greene Jr. D. Kastak D. R. Ketten J. H. Miller. 2007. Marine mammal noise exposure criteria Initial scientific recommendations. Aquatic Mammals 334 411-521. Marine Geology and Sediments CGX CGX Resources Inc.. 2009. Strategic Environmental Assessment for Offshore Exploration Drilling Corentyne License Area Guyana. June 2009. Clark R. C. and M. Blumer. 1967. Distribution of n-paraffins in marine organisms and sediments. Limnol Oceanography 12 798-807. Macdonald D. D. R. S. Carr and F. D. Calder. 1996. Development and evaluation of

sediment quality guidelines for Florida coastal waters. *Ecotoxicology* 5:199-253. Eisma D. and H. van der Marel. 1971. Marine muds along the Guyana coast and their origin from the Amazon Basin. *Contrib. Mineral. Petrol.* 31:321-334. FUGRO EMU Limited. 2016. Environmental Baseline Survey Report. Liza Development Offshore Guyana. Prepared for Esso Exploration and Production Guyana Ltd. March 2016. NDS National Development Strategy. 1997. Guyanas National Development Strategy. Retrieved from <http://www.guyana.org/nds/nds.htm> North Sea Task Force. 1993. North Sea Subregion 8 Assessment Report. State Pollution Control Authority SFT 179. Strømme T. and G. Stersdal. 1989. Final Report Surveys of the Fish Resources in the Shelf Areas between Suriname and Colombia 1988. Bergen Institute of Marine Research. Retrieved from <ftp://ftp.fao.org/docrep/nonfaofnsx6078e.pdf> TDI Brooks TDI Brooks International Inc.. 2014. Geotechnical Report Guyana Liza Sorubim EBS Geotechnical Investigation Offshore Guyana South America. Thompson S. and G. Eglinton. 1978. The fractionation of a recent sediment for organic geochemical analysis. *Geochim. Cosmochim. Acta* 42:199-207. Wedepohl K. H. 1995. The Composition of the Continental Crust. *Geochimica et Cosmochimica Acta* 59:1217-1239. Workman W. G. 2000. Special Report Geophysics and Geology. Guyana Basin A new exploration focus. *World Oil* Online 2215. Retrieved from <http://www.worldoil.com/May2000/Guyanabasin/Anewexplorationfocus.html> Youngblood W. W. M. Blumer R. Guillard R. Fiore. 1971. Saturated and unsaturated hydrocarbons in marine benthic algae. *Mar. Biol.* 8:313-201. February 2017 428 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Oceanographic Conditions Marine Water Quality De Master D. J. and R. H. Pope. 1996. Nutrient dynamics in Amazon shelf waters results from AMASSEDs. *Cont. Shelf Res* 16:3263-289. FAO. 2005. Fishery Country Profile The Republic of Guyana. Retrieved from <http://www.fao.org/fieldsite/FCPenGUY/profile.htm>. FUGRO EMU Limited. 2016. Environmental Baseline Survey Report. Liza Development Offshore Guyana. Prepared for Esso Exploration and Production Guyana Ltd. March 2016. Gyory J. A. J. Mariano E. H. Ryan. 2013. The Guiana Current. Ocean Surface Currents. Retrieved from

<http://oceancurrents.rsmas.miami.edu/atlanticguiana.html>. Maxon Consulting Inc. and TDI Brooks International Inc. 2014. Environmental Baseline Study Guyana Stabroek Block. Morel F. M. M. A. J. Milligan M. A. Saito. 2006. Marine bioinorganic chemistry the role of trace metals in the oceanic cycles of major nutrients. In H.D. Holland and K.K. Turekian eds. The Oceans and Marine Geochemistry. Vol 6. Oxford Elsevier Pergamon. Moustafa Y. M. and R. E. Morsi. 2012. Biomarkers Chromatography and Its Applications. Retrieved from <http://www.intechopen.com/books/chromatography-and-its-applications-biomarkers> Nittrouer C. A. and D. J. De Master. 1987. Sedimentary processes on the Amazon continental shelf. New York Pergamon Press. Sherman K. and G. Hempel. 2009. The UNEP Large Marine Ecosystem Report A perspective on changing conditions in LMEs of the worlds regional seas. UNEP Regional Seas Report and Studies No. 182. 2nd printing. Nairobi Kenya United Nations Environment Programme. TDI Brooks International Inc. 2014. Geotechnical Report Guyana Liza Sorubim EBS Geotechnical Investigation Offshore Guyana South America. TDI Brooks International Inc. 2014. Geotechnical Report Guyana Liza Sorubim EBS Geotechnical Investigation Offshore Guyana South America. USEPA United States Environmental Protection Agency. 2016. National Recommended Water Quality Criteria Aquatic Life Criteria Table. Accessed August 8 2016. Retrieved from <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table> February 2017 429 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Biological Resources Beaches Mangroves Vegetation and Wetland Habitats Chapter 13 References Bovell Owen. 2011. Guyana Mangrove Nursery Manual. Guyana Mangrove Restoration Project. Retrieved from <http://www.gcca.eu/sites/default/files/catherine.paul.guyanamangrovenurserymanual2011.pdf> Charles Reuben Mark Bynoe Jennifer Wishart Martin Cheong. 2004. Shell Beach Protected Area Situation Analysis. GMTCS publication. EPA Guyana Environmental Protection Agency. Undated. Guyanas Protected Areas System. Accessed November 28 2016. Retrieved from <http://www.epaguyana.org/index.php/2014/02/10/202158/task/document/download/id/154> GMTCS Guyana Marine Turtle Conservation Society. 2011. Proposed Shell Beach Delineation Process Final Report.

University of Guyana. Pp.141. GNBSAAP Guyanas National Biodiversity Strategy and Action Plan. 2015. Environmental Protection Agency and the Ministry of National Resources and the Environment Guyana. Retrieved from <http://faolex.fao.org/docs/pdf/guy156992.pdf> IUCN and UNEPWCMC International Union for Conservation of Nature and United Nations Environment Programmes World Conservation Monitoring Centre. 2016. The World Database on Protected Areas WDPA Online. September 2016. Cambridge UK UNEPWCMC. Retrieved from www.protectedplanet.net IUCN International Union for Conservation of Nature. 2001. IUCN Red List Categories and Criteria Version 3.1. Second edition. IUCN Gland Switzerland and Cambridge UK . IUCN International Union for Conservation of Nature. The IUCN Red List of Threatened Species. Version 2016.2. Accessed November 29 2016. Retrieved from www.iucnredlist.org Kandaswamy Suresh V. 2014. Shell Beach Management Plan. Volume 1 and 2. Protected Areas Commission. Prince Waldyke et al. 2004. Report on the Rapid Biodiversity Assessment of the proposed Shell Beach Protected Area. GMTCS Publication. Pritchard P. 2001. Shell Beach as a Protected Area. Occasional Paper Georgetown. Prince Waldyke Michael Patterson Floraia Francis Romeo Defreitas David Rodrigues. 2014. Rapid Biodiversity Assessment of the Proposed Shell Beach Protected Area. August October 2014. In cooperation with the Guyana Environmental Protection Agency Fauna and Flora International FFI and the Guyana Marine Turtle Conservation Society GMTCS. February 2017 430 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Protected Areas Chapter 13 References Da Silva Phillip. 2014. Avifaunal Diversity in a Mangrove Reserve in Guyana South America. International Journal of Science Environment and Technology 31 2332. Guyana Mangrove Restoration Project GMRP. 2010. National Mangrove Management Action Plan 2010. Retrieved from <http://www.mangrovesgy.org/images/stories/Documents/Project20reports/NATIONAL20MANGROVE20MANAGEMENT20ACTION20PLAN202020102012.pdf> GNBSAAP Guyanas National Biodiversity Strategy and Action Plan. 2015. Environmental Protection Agency and the Ministry of National Resources and the Environment Guyana. Retrieved from <http://faolex.fao.org/docs/pdf/guy156992.pdf>

Ilieva. Undated. The socioeconomic importance of mangroves in Guyana. Ecosystem services evaluation. CaFoscari University of Venice Italy. Mann K. 1982. Ecology of coastal waters a system approach. Berkeley University of California. Mestre L. A. M. R. Krul V. S. Moraes. 2007. Mangrove bird community of Paranagu Bay Paran Brazil in Brazilian Archives of Biology and Technology 501 7583. Retrieved from <http://www.scielo.br/scielo.php> Prince Waldyke Michael Patterson Floraia Francis Romeo Defreitas David Rodriques. 2014. Rapid Biodiversity Assessment of the Proposed Shell Beach Protected Area. August October 2014. In cooperation with the Guyana Environmental Protection Agency Fauna and Flora International FFI and the Guyana Marine Turtle Conservation Society GMTCS. WWF World Wildlife Fund. 2016. Eastern South America Coastal French Guiana Suriname Guyana and southeastern Venezuela. Accessed September 23 2016. Retrieved from <http://www.worldwildlife.org/coreregions/snt1411> Seabirds Bayney Annalis and Philip Da Silva. 2005. The Effect of Birding on Local and Migrant waterfowl populations along the coast of Guyana. Centre for the Study of Biological Diversity. University of Guyana Faculty of Natural Sciences Turkeyen Campus. Georgetown Guyana. BirdLife International. 2016. Country profile Guyana. Retrieved from <http://www.birdlife.org/datazone/country/guyana> Birdlife International. 2016b. Marine IBA atlas. Accessed September 28 2016. Retrieved from <https://maps.birdlife.org/marine/IBAs/default.html> Braun M. J. D. W. Finch M. B. Robbins B. K. Schmidt. 2007. A Field Checklist of the Birds of Guyana 2nd Ed. Smithsonian Institution Washington D.C. February 2017 431 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Devenish C. D. F. Diaz R. P. Clay I. J. Davidson I. Y. Zabala. 2009. Important Bird Areas in the Americas. Priority Sites for Conservation. Quito Ecuador BirdLife International BirdLife Conservation Series No. 16. Ebird Caribbean. Retrieved from <http://ebird.org/ebird/caribbean/country/GY> Yrall GEPA Guyana Environmental Protection Agency Flora and Fauna International and the Guyana Marine Turtle Conservation Society. 2004. Rapid Biodiversity Assessment of the Proposed Shell Beach Protected Area. August October 2004. 53 pp. The citation for this should be changed to GEPA Guyana Environmental Protection Agency. 2015. Guyanas National Biodiversity Strategy and Action Plan.

May 2015. 101 pp. Retrieved from <http://faolex.fao.org/docs/pdf/guy156992.pdf> IUCN Red List of Threatened Species. 2016. Version 20162. Retrieved from <http://www.iucnredlist.org> Lentino M. and D. y Esclasans. 2009. Important birds Areas Venezuela. Pages 393 402 in C. Devenish D. F. Daz Fernndez R. P. Clay I. Davidson I. Ypez Zabala Eds. Important Bird Areas Americas Priority sites for biodiversity conservation. Quito Ecuador BirdLife International BirdLife Conservation Series No. 16. Mendonca Sean Michelle Kalamandeen Robin S. McCall. 2006. A Birds Eye View Coastal Birds of Shell Beach. Proceedings of International Conference on the Status of Biological Sciences in Caribbean and Latin American Societies. RPS. 2016. Marine Fauna Observer Report. Prepared by ExxonMobil. Schreiber E. 2001. Biology of Marine Birds. Edited by E. I. Schreiber and Johanna Burger. CRC Press. 740 pp. White G. 2008. Trinidad and Tobago. Pp 351 356. In Devenish C. D. F. Daz Fernndez R. P. Clay I. Davidson I. Ypez Zabala eds. Important Bird Areas Americas Priority sites for biodiversity conservation. Quito Ecuador BirdLife International BirdLife Conservation Series No. 16. Marine Turtles Bjorndal K. A. and J. B. C. Jackson. 2003. Roles of sea turtles in marine ecosystems Reconstructing the past. In Lutz P. J. A. Musick J. Wyneken eds. The Biology of Sea Turtles. Vol. 2. CRC Press; 2003. p. 259273. Bjorndal K. A. 1997. Foraging ecology and nutrition of sea turtles. In Lutz P. L. and Musick J. A. eds. The biology of sea turtles 1. CRC Press Boca Raton FL p 199231. CREE. 2014. Retrieved from <http://conservationforpeople.org/sea/turtles/guyana>. Eckert K. L. 1999. Designing a conservation program. In Eckert K. L. et al. eds. Research and management techniques for the conservation of sea turtles. IUCNSSC Marine Turtle Specialist Group Publication 4 pp. 68. February 2017 432 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Eckert K. L. 1999. Designing a conservation program. In Eckert K. L. et al. eds. Research and management techniques for the conservation of sea turtles. IUCNSSC Marine Turtle Specialist Group Publication 4 pp. 68. Jackson J. B. C. 2001. What was natural in the coastal oceans Proceedings of the National Academy of Sciences USA 98 54115418. National Marine Fisheries Service U.S Fish and Wildlife Service. 2007. Proceedings of the 14th annual symposium on sea turtle biology and conservation. March 15 1994. Hilton Head

South Carolina USA. National Marine Fisheries Service Southeast Fisheries Science Center. NOAA Technical Memorandum NMFSSEFSC351. Piniak W. D. and K. L. Eckert. 2011. Sea turtle nesting habitat in the Wider Caribbean Region. *Endang. Species Res.* 15 129141. Pritchard P. C. H. 1973. International migrations of South American sea turtles Cheloniidae and Dermochelidae. *Animal Behavior* 21 1827. Pritchard P. H. C. 1991. Sea Turtle Conservation and Research and in Guyana. Unpublished report. 63pp. Project Global. 2007. Global Bycatch Assessment of Long Lived Species. Country Profile Guyana. Blue Ocean Institute and WIDECAST. 17pp. Tambiah C. R. 1994. Saving sea turtles or killing them the case of US regulated TEDs in Guyana and Suriname pp. 149151. In *Proceedings of the 14th annual symposium on sea turtle biology and conservation*. March 15 1994. Hilton Head South Carolina USA. National Marine Fisheries Service Southeast Fisheries Science Center. NOAA Technical Memorandum NMFSSEFSC351. Troeng S. D. Chacon B. Dick. 2004. Possible decline leatherback turtle *Dermochelys coriacea* nesting in Caribbean Central America. *Oryx* 38 19. Troeng S. P. H. Dutton D. Evans. 2005. Migration of hawksbill turtles *Eretmochelys imbricata* from Tortuguero Costa Rica. *Ecography* 28 394402. Marine Turtles Charles Reuben Mark Bynoe Jennifer Wishart Martin Cheong. 2004. Shell Beach Protected Area Situation Analysis. GMTCS publication. Mannocci L. R. Monestiez J. Bolaos G. Doremus S. Jrmie S. Laran R. Rinaldi O. Van Canneyt V. Ridoux. 2013. Megavertebrate communities from two contrasting ecosystems in the western tropical Atlantic. *Journal of Marine Systems* 111 208222. Retrieved from <httpdx.doi.org10.1016j.jmarsys.2012.11.002> Minasian S. M. K. C. Balcomb L. Foster. 1984. *The Worlds Whales The Complete Illustrated Guide*. Smithsonian Books 224 pp. February 2017 433 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Marine Fish Chapter 13 References CRFM. Undated. Sargassum Seaweed Invasion What Why and What We Can Do Retrieved from <httpwww.crfm.netuwohxjxfimagesdocumentsSargassumPamphletFinal.pdf> MOA Guyana Ministry of Agriculture Fisheries Department. 2013. Marine Fisheries Management Plan 20132018. Nihoul J. C. J. and C. T. A. Chen. 2008. *Oceanography. Volume 1. Encyclopedia of Life Support Systems*. NOAA National Oceanic and Atmospheric Administration. 2016. Large Marine

Ecosystems of the World. XVI52 North Brazil Shelf LME 17. Retrieved from http://www.lme.noaa.gov/index.php?option=com_content&view=article&id=55:north_brazil_shelf_lme_17&catid=16&Itemid=114

Palandro 2016. Persistence of Sargassum in Guyana EEZ and Stabroek Lease Block. ExxonMobil Upstream Research Company. Ross. 2010. Sargassum A Complex Island Community at Sea. National Oceanographic and Atmospheric Administration. United States Department of Commerce. Retrieved from <http://oceanexplorer.noaa.gov/explorations/03edge/backgrounds/sargassum/sargassum.html>

Marine Benthic Habitat Davies C. E. D. Moss M. O. Hill. 2004. EUNIS Habitat Classification Revised 2004. Retrieved from <http://eunis.eea.europa.eu/references/1473>

EPA Environmental Protection Agency Guyana. 2010. Fourth National Report to the Convention on Biological Diversity. Retrieved from <http://www.cbd.int/doc/world/gu/gynr04/en.pdf>

Flach E. J. Vanaverbeke C. Heip. 1999. The meiofauna:macrofauna ratio across the continental slope of the Goban Spur northeast Atlantic. Journal of the Marine Biological Association of the United Kingdom 79 233-241. Retrieved from <http://pure.knaw.nl/portal/files/472420/Flachea2380.pdf>

Freiwald A. J. H. Foss A. Grehan T. Koslow J. M. Roberts. 2004. Coldwater Coral Reefs. UNEP WCMC Cambridge UK. Retrieved from <http://www.unepwcmc.org/biodiversity/series/22103.html>

FUGRO EMU Limited. 2016. Environmental Baseline Survey Report. Liza Development Offshore Guyana. Prepared for Esso Exploration and Production Guyana Ltd March 2016. Fugro Job No. 24153066EBS. 125 pgs. February 2017 434

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13

References Maxon Consulting Inc. and TDI Brooks International Inc. 2014. Environmental Baseline Study. Guyana Stabroek Block. Prepared for Esso Exploration and Production Guyana Ltd. July 2014. Ref. 14024. 106 pgs. NOAA. 2014. National Marine Fisheries Services. Marine Habitat Protection Program DeepSea Corals. Retrieved from <http://www.habitat.noaa.gov/protection/corals/deepseacorals.html>

Poore G. and M. Schotte. 2009. *Malacanthura truncata* Hansen 1916. In Boyko C.B N. L. Bruce K. L. Merrin Y. Ota G. C. B. Poore S. Taiti M. Schotte G. D. F. Wilson eds. 2008 onwards. World Marine Freshwater and Terrestrial

Isopod Crustaceans database. Accessed October 3 2016. Retrieved from World Register of Marine Species at <http://www.marinespecies.org/aphia.php?p=taxdetails&id=118479> Poore G. and M. Schotte M. 2015. *Leptanthura guianae* Kensley 1982. In Boyko C. B. N. L. Bruce K. L. Merrin Y. Ota G. C. B. Poore S. Taiti M. Schotte G. D. F. Wilson eds. 2008 onwards. World Marine Freshwater and Terrestrial Isopod Crustaceans database. Accessed October 3 2016. Retrieved from World Register of Marine Species at <http://www.marinespecies.org/aphia.php?p=taxdetails&id=255553> Rowe G. T. P. Polloni R. L. Haedrich. 1982. The deepsea macrobenthos on the continental margin of the northwest Atlantic Ocean. *DeepSea Research* 29A 257-278. Wei C. L. G. T. Rowe G. F. Hubbard A. H. Scheltema G. D. F. Wilson I. Petrescu J. M. Foster M. K. Wicksten M. Chen R. Davenport Y. Soliman Y. Wang. 2010. Bathymetric zonation of deepsea macrofauna in relation to export surface phytoplankton production. *Marine Ecology Progress Series* 399:1-14. Accessed November 2016. Retrieved from <http://www.intres.com/articles/feature/m399p001.pdf> Socioeconomic Resources Economic Activities Bureau of Statistics Guyana. 2012. 2012 Population Housing Census Compendium. Minority Rights Group International. 2008. World Directory of Minorities and Indigenous Peoples Guyana Indigenous Peoples. Protected Areas Commission. 2014. Shell Beach Protected Area Management Plan 2015-2019. Employment and Livelihoods CIA World Factbook. 2016. Education Expenditures. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/fields/2206.html> Bureau of Statistics Guyana. 2012. 2012 Population Housing Census Compendium. Minority Rights Group International. 2008. World Directory of Minorities and Indigenous Peoples Guyana Indigenous Peoples. February 2017 435 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References UNICEF United Nations Children's Fund. 2015. Guyana Multiple Indicator Cluster Survey 2014 Final Report. Community Health and Wellbeing and Living Conditions CCI Climate Change Initiative. 2012. Land Cover map for 1998-2012 epoch. Retrieved from <http://www.esa-landcover-cci.org/node/158> FAO Food and Agriculture Organization of the United Nations. 2015. AQUASTAT Regional Report Southern America Central America and the Caribbean

Guyana. Retrieved from <http://www.fao.org/nrwater/aquastat/countries/regions/guy/index.stm> IDB InterAmerican Development Bank. 2010. Guyana Property Rights Study Discussion Paper IDBDP141. Marine Use and Transportation Guyana Tourism Authority. 2016. Annual Tourism Data All Visitors by Main Markets and Monthly Visitors. FAO Food and Agriculture Association of the United Nations. 2015. AQUASTAT Regional report Guyana. Retrieved from <http://www.fao.org/nrwater/aquastat/countries/regions/guy/index.stm> GGMC Guyana Geology and Mines Commission. 2010. The Mineral Industry in Guyana. Guyana Bureau of Statistics. 2015. Trade Statistics System. Retrieved from <http://www.statisticsguyana.gov.gy/trade.html> Guyana Chronicle. 2016. Pomeroon to become Guyana's coconut capital. July 18 2016. Retrieved from <http://guyanachronicle.com/pomeroon-to-become-guyanas-coconut-capital> Ministry of Agriculture. 2016a. Agriculture fisheries and apiculture annual statistics. Ministry of Finance. 2015. MidYear Report 2015. Retrieved from <http://finance.gov.gy/documents/publications/category/midyearreports> Ministry of Finance. 2016. MidYear Report 2016. Retrieved from <http://finance.gov.gy/documents/publications/category/midyearreports> MOA Guyana Ministry of Agriculture. 2013. Fisheries Department. Marine Fisheries Management Plan 2013-2018. PAC Protected Areas Commission. 2014. Shell Beach Protected Area Management Plan 2015-2019. Private Sector Commission of Guyana. 2015. Annual Report 2015. February 2017 436 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Stabroek News. 2016. Pomeroon farmers cashing in on coconut water market. Retrieved from <http://www.stabroeknews.com/2016/business/0513-pomeroon-farmers-cashing-coconut-water-market> UNDP United Nations Development Programme. 2005. Guyana Socioeconomic Assessment of the Damages and Losses Caused by the January-February 2005 Flooding. Retrieved from <http://www.cepal.org/cgi/bi/getProd.aspx?ml=publicaciones/xml/026950/P26950.xml&sl=publicaciones/fichai.xls&base=publicaciones/stoppublicacionesi.xsl> World Bank. 2016. Retrieved from <http://www.worldbank.org/en/country/guyana/overview> Social Infrastructure and Services Guyana Bureau of Statistics. 2016. 2012 Census Compendium 3 Economic Activity. ECLAC Economic

Commission for Latin American and the Caribbean. 2011. An Assessment of the Economic Impact of Climate Change on the Agriculture Sector in Guyana. Retrieved from <http://repositorio.cepal.org/bitstream/handle/11362/38586/LCCARL323en.pdf;jsessionid=6A80E60D052D8EB7A38956A1033254D8sequence1>

Ministry of Agriculture. 2016b. News FAO Country Rep Lauds Guyanas Efforts to Stop Illegal Fishing. Retrieved from <http://agriculture.gov.gy/2016/04/15/faocountryreplaudeguyanaseffortstostopillegalifishing>

Ministry of Finance. 2015. MidYear Report 2015. Retrieved from <http://finance.gov.gy/documents/publications/category/midyearreports>

Protected Areas Commission. 2014. Shell Beach Protected Area Management Plan 2015-2019.

Minority Rights Group International. 2008. World Directory of Minorities and Indigenous Peoples Guyana Indigenous Peoples. Land Use

Ministry of Public Health. 2013a. Guyana Strategic Plan for the Integrated Prevention and Control of Chronic NCDs and their Risk Factors 2013-2020. Retrieved from <http://www.health.gov.gy/mophstrategies/NCD20Strategic20Plan2020132020.pdf>

Ministry of Public Health. 2013b. Health Vision 2020 A National Health Strategy for Guyana 2013-2020. Retrieved from <http://www.health.gov.gy/mophstrategies/Health20Vision20202020.pdf>

Ministry of Public Health. 2014. Communication Strategy for Malaria Control 2014-2016.

Ministry of Public Health. 2016. Regional Health Facilities. Retrieved from <http://www.health.gov.gy/moph>

February 2017 437

EEPG

Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References

PanAmerican Health Organization. 2005. Health Situation Report Floods in Guyana January-February 2005. Retrieved from http://www.paho.org/disasters/index.php?option=com_content&view=article&id=7143&Itemid=0

February 2005

UNAIDS. 2015. Guyana AIDS Response Progress Report. Retrieved from <http://www.unaids.org/sites/default/files/countrydocuments/GUYnarrativereport2015.pdf>

UNDP

United Nations Development Programme. 2005. Guyana Socioeconomic Assessment of the Damages and Losses Caused by the January-February 2005 Flooding. Retrieved from <http://www.cepal.org/cgi/bingetProd.aspx?mlpublicacionesxml026950P26950.xml&slpublicacionesfichai.x>

slbasepublicacionestoppublicacionesi.xsl UNICEF United Nations Childrens Fund. 2014. Guyana Multiple Indicator Cluster Survey 5. WHO World Health Organization. 2014. World Suie Report Preventing Suie A Global Imperative. Retrieved from <httpwww.who.intmediacentrenewsreleases2014suiereventionreporten> Cultural Heritage EEPGL. 2016. Stabroek Block Final Report on Survey of Suspected Subsea Cable and SGSCS Cable. Report to Guyana Geology Mines Commission. April 14. NGIA National GeospatialIntelligence Agency. 2014. Sailing Directions Enroute East Coast of South America. Publication 124 Fourteenth Edition. Accessed September 16 2016. Retrieved from <httpmsi.nga.milMSISiteContentStaticFilesNAVPUBSSDPub124Pub124bk.pdf> Ecosystem Services Guyana Bureau of Statistics. 2002. 2002 Population Housing Census Guyana National Report. FAO Food and Agriculture Organization of the United Nations. 2015. AQUASTAT RegionalReport Guyana. Retrieved from <httpwww.fao.orgnrwateraquastatcountriesregionsguyindex.stm> Guyana Ministry of Education. 2013. List of Schools by Region. Retrieved from <httpeducation.gov.gywebindex.phpdownloads> IDB InterAmerican Development Bank. 2010. Guyana Property Rights Study. Discussion Paper No. IDBDP141. February 2017 438 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References IDB InterAmerican Development Bank. 2016. The State of Social Housing in Six Caribbean Countries. Ministry of Finance. 2015. MidYear Report 2015. Retrieved from <httpfinance.gov.gydocumentspublicationscategorymidyearreports> OSAC Overseas Security Advisory Council. 2016. Guyana 2016 Crime and Safety Report. United States Department of State Bureau of Diplomatic Security. Retrieved from <httpswww.osac.govpagesContentReportDetails.aspx> PSC Private Sector Commission of Guyana. 2015. Annual Report 2015. Social Infrastructure and Services MA Millennium Ecosystem Assessment. 2005. Ecosystems and Human Wellbeing A Framework for Assessment. Ministry of Agriculture. 2016. Agriculture fisheries and apiculture annual statistics. WWF World Wildlife Fund. 2016. Eastern South America Coastal French Guiana Suriname Guyana and southeastern Venezuela. Accessed September 23 2016. Retrieved from

<http://www.worldwildlife.org/coreregions/nt1411> Assessment of Potential Impacts Physical Resources
 Air Quality and Climate Change WHO World Health Organization. 2000. WHO Air Quality Guidelines
 for Europe 2nd edition. WHO World Health Organization. 2005. WHO Air Quality Guidelines for
 Particulate Matter Ozone Nitrogen Dioxide and Sulfur Dioxide Global Update 2005. World
 Resources Institute and the World Business Council for Sustainable Development. 2004. The
 Greenhouse Gas Protocol A Corporate Accounting and Reporting Standard. Yale University. 2016.
 Global Metrics for the Environment. Environmental Performance Index 2016 Report. Retrieved from
<http://epi.yale.edu/country/guyana> Noise and Vibration Finneran J.J. 2015. Auditory weighting functions
 and TTSPTS exposure functions for cetaceans and marine carnivores. San Diego SSC Pacific.
 JASCO JASCO Applied Sciences. 2016. Underwater Sound Associated with Liza Phase 1 Project
 Activities. February 2017 439 EEPGL Environmental Impact Assessment Liza Phase 1
 Development Project Chapter 13 References Southall B.L. A.E. Bowles W.T. Ellison J.J. Finneran
 R.L. Gentry C. R. Greene Jr. D. Kastak D.R. Ketten J. H. Miller. 2007. Marine mammal noise
 exposure criteria Initial scientific recommendations. Aquatic Mammals 334 411521. Marine Geology
 and Sediments Ellis D. V. and C. Heim. 1985. Submersible surveys of benthos near a turbidity
 cloud. Mar Poll Bull 165 197203. MarLIN Marine Life Information Network. 2011. Benchmarks for the
 Assessment of Sensitivity and Recoverability. The Marine Biological Association of the UK Citadel
 Hill Plymouth Devon U.K. Retrieved from <http://www.marlin.ac.uk/sensitivity/benchmarks.php> Biological
 Resources Beaches Mangroves Vegetation and Wetland Habitats BirdLife International. 2012a.
Pterodroma hasitata. The IUCN Red List of Threatened Species 2012 e.T22698092A38940168.
 Accessed October 2 2016. Retrieved from
<http://dx.doi.org/10.2305/IUCN.UK.20121.RLTS.T22698092A38940168.en> BirdLife International.
 2012b. *Agamia agami*. The IUCN Red List of Threatened Species 2012 e.T22697200A40244589.
 Accessed October 2 2016. Retrieved from
<http://dx.doi.org/10.2305/IUCN.UK.20121.RLTS.T22697200A40244589.en> BirdLife International. 2012.
Calidris pusilla. The IUCN Red List of Threatened Species 2012 e.T22693373A38788283.

Accessed October 2 2016. Retrieved from

<httpdx.doi.org10.2305IUCN.UK.20121.RLTS.T22693373A38788283.en> IUCN. 2014. The IUCN Red List of Threatened Species. Version 20162. Accessed November 29 2016. Retrieved from www.iucnredlist.org Rheingantz M .L. and C. S. Trinca. 2015. *Lontra longicaudis*. The IUCN Red List of Threatened Species 2015 e.T12304A21937379. Accessed October 2 2016. Retrieved from <httpdx.doi.org10.2305IUCN.UK.20152.RLTS.T12304A21937379.en> Seabirds Baird P. H. 1990. Concentrations of seabirds at oil drilling rigs. *Condor* 92 768771. Deda P. I. Elbertzhagen M. Klussmann. 2007. Light pollution and the impacts on biodiversity species and their habitats. In C. Marn and J. Jafari eds *Starlight A common heritage*. Starlight Initiative Instituto de Astrofísica de Canarias IAC La Palma Canary Islands Spain April 1920 2007. Gaston K. J. J. Bennie T. W. Davies J. Hopkins. 2013. The ecological impacts of nighttime light pollution a mechanistic appraisal. *Biol Rev* 88 912927. February 2017 440 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Marquenie J. 2007. *Green Light to Birds Investigation into the Effect of BirdFriendly Lighting*. Retrieved from <http://www.waddenzee.nl/fileadmin/Dossiers/Energie/pdf/greenlighttobirdsNAM.pdf> Platteeuw M. and R. Henkens. 1997. Possible Impacts of Disturbance to Waterbirds Individuals Carrying Capacity and Populations. *Wildfowl* 48 225236. Ronconi Robert A. Karel A. Allard Philip D. Taylor. 2015. Bird interactions with offshore oil and gas platforms Review of impacts and monitoring techniques. *Journal of Environmental Management* 147 3445. RPS. 2016. *Marine Fauna Observer Report*. Prepared by ExxonMobil. Wiese F. K. W. A. Montevecchi G. K. Davoren F. Huettmann A. W. Diamond. 2001. Seabirds at Risk around Offshore Oil Platforms in the Northwest Atlantic. *Marine Pollution Bulletin* 42 12851290. Marine Fish Barnhouse L.W. 2013. Impacts of entrainment and impingement on fish populations A review of the scientific evidence. *Environmental Science Policy* 31 149156. August 2013. BOEM Bureau of Ocean Energy Management. 2014. *Programmatic Environmental Impact Statement for Atlantic OCS Proposed Geological and Geophysical Activities in the MidAtlantic and South Atlantic Planning Areas*. US Department of the Interior. Gulf of Mexico

OCS Region. Brungs W.A. 1973. Effects of Residual Chlorine on Aquatic Life. Journal of the Water Pollution Control Federation 45:1021-1029. Oct. 1973 Donelson J. M. M. I. McCormick D. J. Booth P. L. Munday. 2014. Reproductive Acclimation to Increased Water Temperature in a Tropical Reef Fish. PLoS One 9:5 e97223. Hastings R. W. L. H. Ogren M. T. Mabry. 1976. Observations on the fish fauna associated with offshore platforms in the northeastern Gulf of Mexico. US Natl Mar Fish Serv Fish Bull 74:387-402. Keenan S. F. M. C. Benfield J. K. Blackburn. 2007. Importance of the artificial light field around offshore petroleum platforms for the associated fish community. Marine Ecology Progress Series 331:219-231. 2007. Lindquist D. R. Shaw F. Hernandez. 2005. Distribution patterns of larval and juvenile fishes at offshore petroleum platforms in the northcentral Gulf of Mexico. Estuar Coast Shelf Sci 62:655-665. MartinezAndrade F. and D. M. Baltz. 2003. Marine and Coastal Fishes Subject to Impingement by Cooling Water Intake Systems in the Northern Gulf of Mexico An Annotated Bibliography. U.S. Dept. of the Interior Minerals Management Service Gulf of Mexico OCS Region New Orleans LA. OCS Study MMS 2003-040. 113 pp. February 2017 441 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Pankhurst N. W. and P. L. Munday. 2011. Effects of climate change on fish reproduction and early life history stages. Marine and Freshwater Research 62:1015-1026. Stanley D. R. and C. A. Wilson. 1997. Seasonal and spatial variation in the abundance and size distribution of fishes associated with a petroleum platform in the northern Gulf of Mexico. Can J Fish Aquat Sci 54:1166-1176. Svecevicius G J. P. Syvokiene L. Stasinaite L. Mickeniene. 2005. Acute and chronic toxicity of chlorine dioxide ClO₂ and chlorite ClO₂ to rainbow trout *Oncorhynchus mykiss*. Environ Sci Pollut Res Int. Sep 125:3025. US EPA. 2010. Comparative Toxicity of Eight Oil Dispersant Products on Two Gulf of Mexico Aquatic Test Species. U.S. Environmental Protection Agency Office of Research and Development. Retrieved from https://archive.epa.gov/bps/spillweb/pdf/comparative_tox_test_final.6.30.10.pdf Water ReUse. 2011. Desalination Plant Intakes Impingement and Entrainment Impacts and Solutions. Retrieved from https://www3.epa.gov/region1/npd/esschiller_station/pdfs/AR026.pdf Marine Benthic Habitat Ellis D. and

C. Heim. 1985. Submersible surveys of benthos near a turbidity cloud. *Marine Pollution Bulletin* 165 197203. IOGP. 2016. Environmental fates and effects of ocean discharge of drill cuttings and associated drilling fluids from offshore oil and gas operations. Retrieved from <http://www.iogp.org/pubs/543.pdf> Jones D. J. Cruz Motta D. Bone J. Kaariainen. 2012. Effects of oil drilling activity on the deep water megabenthos of the Orinoco Fan Venezuela. *Journal of the Marine Biological Association of the United Kingdom* 92 245253. Retrieved from <https://www.researchgate.net/publication/259418552/EffectsofoildrillingactivityonthedeepwatermegabenthosoftheOrinocoFanVenezuela> Kilgour M. J. and T. C. Shirley. 2008. Bathymetric and spatial distribution of decapod crustaceans on deepwater shipwrecks in the Gulf of Mexico. *Bulletin of Marine Science* 82 333344. Retrieved from <https://www.researchgate.net/publication/259418552/EffectsofoildrillingactivityonthedeepwatermegabenthosoftheOrinocoFanVenezuela> MarLIN Marine Life Information Network. 2011. Benchmarks for the Assessment of Sensitivity and Recoverability. The Marine Biological Association of the UK Citadel Hill Plymouth Devon U.K. Accessed April 2011. Retrieved from <http://www.marlin.ac.uk/sensitivity/benchmarks.php> Smit M. G. D. J. E. Tamis R. G. Jak C. C. Karman G. Kjeilen Eilertsen H. Trannum J. Neff. 2006. Threshold levels and risk functions for nontoxic sediment stressors burial grain size changes and hypoxia. Summary. TNO Report no. TNO 2006DH0046A Open February 2017 442 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Special Status Species Chapter 13 References Nihoul J. C. J. and C. T. A. Chen. 2008. *Oceanography. Volume 1. Encyclopedia of Life Support Systems*. ISBN 9781905839629 NOAA National Oceanic and Atmospheric Administration. 2016. Large Marine Ecosystems of the World. XVI 52 North Brazil Shelf LME 17. Retrieved from http://www.lme.noaa.gov/index.php?option=com_content&view=article&id=55/northbrazilshelflme17&catid=16&Itemid=114 Ecological Balance and Ecosystems Caribbean Invasive Alien Species Network. 2010. Green mussel *Perna viridis*. Available at <http://www.ciasnet.org/2010/08/10/green-mussel-perna-viridis/>. Accessed February 2017. European Maritime Safety Agency. 2017. Ballast Water. Available at

<http://www.emsa.europa.eu/implementation/tasks/environment/ballastwater.html>. Accessed February 2017. Maritime and Coastguard Agency. 2008. Marine Guidance Note MGN 363 MF. The Control and Management of Ships Ballast Water and Sediments. Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/440722/MGN363.pdf.

Accessed February 2017. Ruiz G. Murphy K.R. Verling E. Smith G. Chaves S. and A.H. Hines. 2005. Ballast Water Exchange Efficacy of treating ships ballast water to reduce marine species transfers and invasion success. Final Report Submitted to U.S. Fish Wildlife Service American Petroleum Institute Prince William Sound Regional Citizens Advisory Council. Available at <http://www.psmfc.org/ballastwordpress/wp-content/uploads/2011/05/BallastWaterExchangePWSAkRuiz2005.pdf>. Accessed February 2017. Socioeconomic Resources Marine Water Quality ITOPF undated. Effects of Oil Pollution on the Marine Environment. Technical Information Paper No. 13. Retrieved from

http://www.itopf.com/fileadmin/data/Documents/TIPS20TAPSTIP13/Effects_of_Oil_Pollution_on_the_Marine_Environment.pdf Ecological Balance and Ecosystems Chanton J. P. J. Cherrier R. M. Wilson J. Sarkodee-Adoo S. Bosman A. Mickle W. M. Graham. 2012. Radiocarbon evidence that carbon from the Deepwater Horizon spill entered the planktonic food web of the Gulf of Mexico. Environmental Research Letters 7 4. February 2017 443 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References GOMRI Gulf of Mexico Research Initiative. 2015. Studies Identify Oil Spill Effects in Deep Sea Fish. Retrieved from <http://gulfresearchinitiative.org/studies/identify-oil-spill-effects-in-deep-sea-fish> ITOPF undated. Effects of Oil Pollution on the Marine Environment. Technical Information Paper No. 13. Retrieved from http://www.itopf.com/fileadmin/data/Documents/TIPS20TAPSTIP13/Effects_of_Oil_Pollution_on_the_Marine_Environment.pdf MBC Applied Environmental Sciences. 2011. Life History Parameters of Common Southern California Marine Fishes. Prepared for the California Energy Commission Public Interest Energy Research Program. Retrieved from <http://www.energy.ca.gov/2011publications/CEC5002011008/CEC5002011008.pdf> Montagna P. A. J.

G. Baguley C. Cooksey J. L. Hyland. 2013. Deepwater Horizon Oil Spill Assessment of Potential Impacts on the Deep SoftBottom Benthos. Interim Data Summary Report. NOAA Technical Memorandum NOS NCCOS 166. NOAA National Centers for Coastal Ocean Science Charleston SC. 32 p.

Moreno R. L. Jover C. Diez F. Sarda C. Sanpera. 2013. Ten Years After the Prestige Oil Spill Seabird Trophic Ecology as Indicator of LongTerm Effects on the Coastal Marine Ecosystem. PLoS One 810 e77360.

Neff J. 2002. Bioaccumulation in Marine Organisms Effect of Contamination from Oil Well Produced Water. Elsevier Inc. 468 pp.

Nihoul J. C. J. and C. T. A. Chen. 2008. Oceanography. Volume 1. Encyclopedia of Life Support Systems. ISBN9781905839629 NOAA National Oceanic and Atmospheric Administration. 2016. How Oil Harms Animals and Plants in Marine Environments. Retrieved from <http://response.restoration.noaa.gov/oilandchemicalspillsoilspillshowoilharmsanimalsandplantsmarineenvironments.html>

Ozhan K. M. L. Parsons S. Bargu. 2014. How Were Phytoplankton Affected By the Deepwater Horizon Oil Spill. Bioscience 649.

Piatt J. F. and P. Anderson. 1996. Response of Common Murres to the Exxon Valdez Oil Spill and LongTerm Changes in the Gulf of Alaska Marine Ecosystem. American Fisheries Society Symposium 18 720737.

Press 2015. How Oil Damages Fish Hearts Five Years of Research Since the Deepwater Horizon Oil Spill. Retrieved from <http://www.fisheries.noaa.gov/stories/2015/04/dwh5yrs.html>

Teal J. M. and R. W. Howarth. 1984. Oil spill studies A review of ecological effects. Environmental Management 8 27. doi10.1007/BF01867871.

February 2017 444 EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References Graham W. M. R. H. Condon R. H. Carmichael I. D'Ambra H. K. Patterson L. J. Linn F. J. Hernandez. 2010. Oil carbon entered the coastal planktonic food web during the Deepwater Horizon oil spill. Environmental Research Letters 54045301.

Marine Fish ITOPF. Undated. Effects of Oil Pollution on the Marine Environment. Technical Information Paper No. 13. Retrieved from http://www.itopf.com/fileadmin/data/Documents/TIPS20/TAPSTIP13/Effects_of_Oil_Pollution_on_the_Marine_Environment.pdf

Press 2015. How Oil Damages Fish Hearts Five Years of Research Since the

Deepwater Horizon Oil Spill. Retrieved from <http://www.fisheries.noaa.gov/stories/2015/04/dwh5yrs.html>

Transboundary Impacts Miloslavich P. A. Martn E. Klein Y. Daz C. A. Lasso J. J. Crdenas O .M. LassoAlcal. 2011. Biodiversity and Conservation of the Estuarine and Marine Ecosystems of the Venezuelan Orinoco Delta. In *Ecosystems Biodiversity*. O. Grillo and G. Venora eds. ISBN 9789533074177 474 pages Publisher InTech DOI 10.5772/2913

Personal Communications ERM

Personal Communication 1. Interview with the Guyana Rice Producers Association. September 6 2016. ERM Personal Communication 2. Interview with the Guyana Association of Trawler Owners and Seafood Processors. September 5 2016. ERM Personal Communication 3. Interview with the Department of Tourism. August 30 2016. ERM Personal Communication 4. Interview with MainstayWhyaka Amerindian Village. September 2 2016. ERM Personal Communication 5. Interview with Pomeroon Womens AgroProcessors Association. August 31 2016. ERM Personal Communication 6. Interview with SupenaamParika Speedboat Operators Association. August 31 2016. ERM Personal Communication 7. Interview with Ministry of Public Health. August 29 2016. ERM Personal Communication 8. Interview with Ministry of Communities. August 29 2016. ERM Personal Communication 9. Interview with Ministry of Public Infrastructure. September 2 2016. ERM Personal Communication 10. Interview with Private Sector Commission of Guyana. September 2 2016. February 2017 445

EEPGL Environmental Impact Assessment Liza Phase 1 Development Project Chapter 13 References ERM Personal communication 11. Interview with Guyana Marine Turtle Conservation Society. September 5 2016. ERM Personal Communication 12. Interview with Guyana Hindu Dharmic Sabha. September 2 2016. ERM Personal Communication 13. Interview with African Culture Development Association. September 25 2016. ERM Personal Communication 14. Interview with Ministry of Agriculture. September 5 2016. ERM Personal Communication 15. Interview with West End Agricultural Development Society. September 2 2016.ERM Personal Communication 16. Interview with fisherman in Lima. August 31 2016. ERM Personal Communication 16. Email from Denzil Roberts with fish bycatch from shrimp trawling fishery. October 4 2016. ERM Personal Communication 17. Interview with anonymous fisherman in Charity.

August 31 2016. ERM Personal Communication 18. Interview with National Aquaculture Association. September 6 2016. ERM Personal Communication 19. Interview with VilvordeenFairfield Womens Association. August 31 2016. ERM Personal Communication 20. Interview with Member of Lima Fishermans Development Cooperative. August 31 2016. ERM Personal Communication 21. Interview with Fish processor in Lima area. August 31 2016. February 2017 446 Western Australia Dampier Solar Salt Industry Agreement Act 1967 As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au Western Australia Dampier Solar Salt Industry Agreement Act 1967 . 2. 3. 3A. 4. Short title Definition Approval and ratification of agreement Approval and ratification of variation agreement Bylaws First Schedule Dampier Solar Salt Industry Agreement Second Schedule Variation agreement Notes Compilation table Defined terms 1 1 1 2 2 31 As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page i Western Australia Dampier Solar Salt Industry Agreement Act 1967 An Act to approve an agreement between the State of Western Australia and Dampier Salt Limited relating to the establishment and carrying on at and in the vicinity of Dampier of a solar salt industry and certain other industries and for inental and other purposes. 1. Short title This Act may be cited as the Dampier Solar Salt Industry Agreement Act 19672. Definition 1. In this Act the Agreement means the agreement a copy of which is set out in the First Schedule and if the Agreement is varied in accordance with its provisions includes the Agreement as so varied; the variation agreement means the agreement a copy of which is set forth in the Second Schedule. [Section 2 amended No. 50 of 1974 s. 2.] 3. Approval and ratification of agreement 1 The Agreement is approved and ratified. 2 Notwithstanding any other Act or law the Agreement shall be carried out and take effect as though its provisions had been expressly enacted in this Act. As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 1 Dampier Solar Salt Industry Agreement Act 1967 s. 3A 3A. Approval and ratification of variation agreement 1 The variation agreement is approved and ratified. 2 Notwithstanding any other Act or law the variation agreement shall be carried out and take effect as though its provisions had been expressly enacted in this Act. [Section 3A inserted No. 50 of 1974

s. 3.] 4. Bylaws The Governor may make alter or repeal bylaws in accordance with and for the purposes of clause 7 of the Agreement and the bylaws a b shall be published in the Gazette; shall take effect and have the force of law from the date they are so published or from a later date fixed by the order making the bylaws; c may prescribe penalties not exceeding 100 for a breach d of any of the bylaws; are not subject to section 36 of the Interpretation 2 but shall be laid before each House of Act 1918 Parliament within 6 sitting days of such House next following the publication of the bylaws in the Gazette. page 2 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule [Heading deleted No. 19 of 2010 s. 422.] First Schedule Dampier Solar Salt Industry Agreement [s. 2] [Heading amended No. 50 of 1974 s. 4; No. 19 of 2010 s. 4.] AN AGREEMENT under seal made the 21st day of November One thousand nine hundred and sixtyseven BETWEEN THE HONOURABLE DAVID BRAND M.L.A. Premier and Treasurer of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter referred to as the State of the one part AND DAMPIER SALT LIMITED a company incorporated under the provisions of the statutes of Western Australia and having its registered office in the State of Western Australia at Perth hereinafter called the Company which term shall include the successors and assigns of the Company including where the context so admits the assignees and appointees of the Company under Clause 23 hereof of the other part. WHEREAS the parties hereto desire to enter into this Agreement with the object of the establishment and carrying on at and in the vicinity of Dampier of a solar salt industry and such other allied mining and ancillary industries as may conveniently be carried on in conjunction therewith and to do all acts matters and things to attain and to facilitate the abovementioned object. NOW THIS AGREEMENT WITNESSETH and the parties hereto COVENANT AND AGREE with one another as follows

Definitions 3 1. In this Agreement subject to the context Director of Engineering means the Director of Engineering for the time being in the Public Works Department of the State of Western Australia or the officer for the time being discharging the duties of that office; Land Act means the Land Act

1933; Mining Act means the Mining Act 1904; Minister means the Minister of the Crown to whose administration the ratifying Act is for the time being committed or if there is no such committal the Minister for Industrial Development; As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 3 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement month means calendar month; notice means notice in writing; person or persons includes bodies corporate; production site means any land leased to and held by the Company pursuant to the provisions of Clause 3 hereof; ratifying Act means the Act referred to in subclause 1 of Clause 2 hereof; shipped includes removal from the work sites by ship or any other means; stockpile site means the land for the time being leased from the State pursuant to subclause 3 of Clause 4 or held by the Company under any other tenure for the purpose of being used for stockpiling salt; this Agreement hereof and hereunder refer to this Agreement whether in its original form or as from time to time added to varied or amended; ton means a ton of two thousand two hundred and forty 2 240 lbs. net dry weight; work sites includes the production site stockpile site whether or not leased from the State and the land comprised in or the subject of any lease license or easement granted or given hereunder other than any grant or lease under Clause 13 hereof; year means a year commencing on the 1st day of July; reference in this Agreement to an Act shall include the amendments to such Act for the time being in force and also any Act passed in substitution therefor or in lieu thereof and the regulations for the time being in force thereunder; marginal notes shall not affect the interpretation or the construction of this Agreement

3. Ratifying Act

3 1 The State shall introduce and sponsor a Bill in the Parliament of 2. Western Australia to ratify this Agreement before the 15th day of December 1967 or such later day as the parties hereto may agree upon. If the Bill is not so

page 4 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule passed as an Act before the 31st day of December 1967 or such later day as the parties hereto may agree upon this Agreement shall be of no force or effect and neither of the parties hereto shall have any claim against the other of them with respect to any matter or thing

arising out of done performed or omitted to be done or performed under this Agreement. 2 If the Bill to ratify this Agreement is passed as an Act before the 31st day of December 1967 or such later day as aforesaid the following provisions of this clause shall notwithstanding the provisions of any Act or law thereupon operate and take effect namely a the State may by Agreement acquire or compulsorily take or resume as for a public work within the meaning of the Public Works Act 1902 any land or any estate or interest in land which in the opinion of the State is reasonably required for the objects of this Agreement and may thereafter dispose or deal with the same in accordance with or for the purposes of this Agreement apart from the provisions of that Act or any other Act AND when any land is to be so compulsorily taken or resumed under the powers conferred by this paragraph the provisions of subsections 2 to 7 inclusive of section 17 and section 17A of the Public Works Act 1902 shall not apply to or in respect of the land or to the taking thereof except that notice of intention to take or resume the land shall be given in accordance with the provisions of paragraph b of subclause 2 of the said Act; b all land the subject of any lease hereunder shall for the purposes of the Mining Act 1904 be deemed to be Private Land for the purposes of that Act. Production Site 3

1 As soon as conveniently may be after the coming into operation of 3. the ratifying Act the State shall on the written application of the Company cause all that land edged in red in the Plan initialled on behalf of the parties hereto for the purpose of identification and comprising approximately 28600 acres or so much of it as the Company in that application specifies to be leased to the Company under the provisions of the Mining Act 1904 which shall be deemed to be so amended varied and modified as to enable the lease to be granted on the following terms and conditions namely a for a term of twentyone 21 years commencing from a day to be agreed upon by the parties hereto; As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 5 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement b at a rental computed at the rate of 4 per one hundred 100 acres per annum; c subject to the payment by the Company of the royalties hereinafter mentioned and to the due and punctual performance by the Company of its obligations hereunder; d that the Company shall be entitled provided the right of

reentry contained in the lease or the renewal thereof as the case may be has not been exercised to the options to renew the lease for a further term of twentyone 21 years and on the expiry thereof to further renew the lease for a further term of twentyone 21 years on the same terms and conditions as are contained in paragraphs b c f and g of this subclause; e that the cost of any survey required by the State be paid by the Company; f subject to the reservations required in Crown Leases pursuant to the Petroleum Act 1936 or required for the purpose of preserving rights that have been or may be granted under the Petroleum Submerged Lands Act 1967; g otherwise on such terms and conditions as are reasonably required to give effect to the provisions and objects of this Agreement; and h that the State without compensation to the Company may at any time excise from the lease such area adjacent or near to the existing railway as shall be sufficient to permit the construction of another railway or road or both across the leased area. The Company on demand shall pay to the State a sum sufficient to reimburse the State for the cost of resuming or taking any land required for the production site. 2 Until the 31st day of December 1977 subject to the provisions of subclauses 4 and 5 of this Clause the Company shall have options exercisable at any time and from time to time on notice to the State to have added to the area leased pursuant to subclause 1 of this clause the whole or such part of the area edged in blue in the Plan referred to in subclause 1 of this Clause hereinafter referred to as the optioned areas as the Company specifies in any such notice. page 6

Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule 3 If at any time before the 31st day of December 1977 the Company gives notice to the State that it desires an option over the whole or any specified part of the area edged in green on the plan referred to in subclause 1 of this clause then providing that it is satisfied that the area nominated by the Company is not important for the breeding or development of prawns the State shall extend to the said area the option referred to in subclause 2 of this clause. Any reference in this Agreement to the optioned areas shall include any such area to which the option is extended pursuant to the provisions of this subclause. 4 If the State should ever require any part of the optioned areas either for its own use or

for any other public purpose or for lease to any other business enterprise then it may notify the Company accordingly and thereafter in respect of the area notified the date by which the Company may exercise the options granted in subclause 2 of this clause will be two years from the date of the States notice if the States notice be given within five years of the date of the production site lease or otherwise one year. 5 The Company may not exercise any option given pursuant to this clause in respect of any land leased by Hamersley Iron Pty. Ltd. without its prior written consent. 6 The Company may not exercise any option pursuant to this clause without first giving not less than 3 months notice to the Director of Engineering of its wish to exercise the option in respect of the land described in such notice and thereafter the Company shall not exercise an option in respect of so much of that land as the Director of Engineering informs the Company will in his opinion be reasonably required for public or private road or rail purposes.

Lease for Shiploading Facilities

3 1 If the Company notifies the Minister that it wishes to construct a 4. jetty with berthing and loading facilities in the vicinity of Dampier harbour then the State shall grant the Company an appropriate lease at a nominal rental of the area reasonably necessary for the Companys requirements and a licence therefor under the provisions of the Jetties Act 1926 and the Company may thereupon construct such jetty and berthing and loading facilities provided that the Minister has approved of the specifications therefor and is satisfied that ships using the same would not be likely to unduly interfere with the traffic of ships to and from the service wharf and any other wharf constructed by Hamersley Iron Pty. Ltd. under the Iron Ore Hamersley Range Agreement Act 1963. As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 7

Dampier Solar Salt Industry Agreement Act 1967 First Schedule

Dampier Solar Salt Industry Agreement

2 If the Company makes all necessary arrangements with Hamersley Iron Pty. Ltd. for the construction of such a jetty and facilities as an extension to the northern end of the said service wharf then the Company may construct such jetty and facilities provided that the State has first approved of the specifications therefor and the State shall issue a license therefor under the provisions of the Jetties Act 1926.

Lease for Stockpile Site

3 3 If the Company notifies the Minister that it requires a stockpile site in the

vicinity of a jetty used for the loading into ships of salt produced at the production site and if having regard for the general development of the vicinity with a view to the reasonable use thereof by others there is available to the State land sufficient for the Companys requirements which are presently estimated would be 20 acres then the State shall grant to the Company a lease thereof subject to the same term and options of renewal as apply in respect of the production site lease and at a rental of Five Dollars 5 per acre per annum.

Flood Protection 3 The State shall not unreasonably refuse applications by the Company for 5. licenses to establish and maintain levees channels or other like works on Crown lands adjacent to the production site for the purpose of diverting the flow of ground waters away from the Companys production facilities provided that the Company first obtains the written approval of any lessee of the lands and provided also that the Company submits to the Minister and receives his written approval of the plans and specifications of the works.

Road Rail or Conveyor Transport 3 1 If the Company notifies the Minister that it requests from the State 6. appropriate rights to permit the Company to construct and operate between the production site and the stockpile site or jetty used by the Company for loading salt into ships or between the stockpile site and such jetty a railway a private roadway or an apparatus for conveying salt by other mechanical means including without limitation pumping in slurry or transferring by conveyor or aerial ropeway and if the Companys notice a gives a general description of a proposed route and of the intended railway roadway or apparatus and b bears the approval of Hamersley Iron Pty. Ltd. insofar as the proposed route traverses any lands owned or leased by that page 8 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule Company or to which it is entitled to a lease pursuant to the Iron Ore Hamersley Range Agreement Act of 1963; then subject to subclause 4 of this Clause the State after consulting with Hamersley Iron Pty. Ltd. and the Company will cause to be surveyed at the cost of the Company the route which the State considers would be most practicable and convenient. 2 As soon as practicable after the completion of that survey and subject to the payment by the Company of all inental costs and expenses including the

cost and expense of any necessary acquisition or resumption of lands over which the route passes the State shall cause to be granted to the Company a lease easement or license whichever is most appropriate in the circumstances over the surveyed route exclusive of any part which is a public road on such terms as are reasonably required to give effect to the objects and provisions of this Agreement and to ensure compliance with the conditions if any upon which Hamersley Iron Pty. Ltd. approved of the grant and thereafter the Company shall be entitled to construct and use the particular railway with or without compliance with the requirements of section 96 of the Public Works Act 1902 roadway or apparatus in accordance with the terms of the said lease easement or license.

3 The lease easement or license will continue for so long as the Company is the lessee of the production site and will enable the Company to use the surveyed route for the purposes only of constructing operating repairing renewing and subject to Clause 19 removing the railway private roadway or apparatus as the case may be. 4 Notwithstanding anything hereinbefore contained the State shall have no obligations to cause a survey to be made or grant a lease easement or license under this Clause insofar as to do so would be inconsistent with the obligations of the State and the rights of Hamersley Iron Pty. Ltd. pursuant to the Iron Ore Hamersley Range Agreement Act of 1963 or would unreasonably prejudice or interfere with the general requirements of the State in regard to the use of the area for public purposes or industrial development. Bylaws 3 At the reasonable request of the Company from time to time the Minister 7. shall recommend to the Governor in Executive Council that he make alter or repeal as may be desirable bylaws in respect of the management or use of any of the Companys facilities that have been constructed pursuant to this Agreement. As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 9 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement 1 On application by the Company the State shall cause to be granted to 8. the Company such machinery and tailings leases and such other leases licenses reserves and tenements under the Mining Act or under the provisions of the Land Act modified as in subclause 2 of this Clause provided as the Company may reasonably require and request for its purposes under this

Agreement on or near the production site. Without limiting the generality of the foregoing the State shall grant to the Company appropriate rights enabling the Company to take without royalty stone gravel sand or earth for the purpose of making improvements to the work sites. 2 For the purposes of the preceding subclause the Land Act shall be deemed to be modified by a the substitution for subsection 2 of section 45A of the following subsection 2 Upon the Governor signifying approval pursuant to subsection 1 of this section in respect of any such land the same may subject to this section be sold or leased; b the deletion of the proviso to section 116; c the deletion of section 135; d the deletion of section 143; e the inclusion of a power to offer for sale or leasing land within or in the vicinity of any townsite notwithstanding that the townsite has not been constituted a townsite under section 10; and f the inclusion of a power to offer for sale or grant leases or licenses for terms or periods and on such terms and conditions including renewal rights and in forms consistent with the provisions of this Agreement in lieu of the terms or periods and the terms and conditions and the forms referred to in the Act. 3 The provisions of subclause 2 of this Clause shall not operate so as to prejudice the rights of the State to determine any lease license or other right or title in accordance with the other provisions of this Agreement. Companies Obligations 3 If the Company gives to the Minister the notice referred to in subclause 1 9. of Clause 34 then page 10 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule a the Company shall not later than the thirtyfirst day of December 1968 commence and thereupon diligently proceed with the construction and establishment on the work sites of a solar salt plant designed to have the capacity to produce and to load into ships not less than 475000 tons of salt per annum and estimated with its equipment and staff housing to cost not less than 5000000. The Company shall complete the construction and establishment of the plant not later than the thirtyfirst day of December 1972. b the Company will be obliged subject to it obtaining satisfactory markets and finance to progressively increase the capacity of the plant to produce and load into ships not less than one million tons of salt per annum. Royalty 3 1 Throughout the continuance of this Agreement the Company shall 10. pay

to the State a royalty on all salt produced at the work sites and shipped computed as set out hereunder On the first 500000 tons in any year Rate per ton 5 cents On the second 500000 tons in any year 6.25 cents On all tonnages in excess of 1000000 tons in any year 7.5 cents Tonnages shall be ascertained at Dampier in such manner as the parties hereto may from time to time agree upon.

Returns 3 2 Within twentyone days after the quarter days being the last days of March June September and December in each year commencing with the quarter day next following the first shipment of salt produced at the work sites the Company shall furnish to the Minister for Mines a return showing the quantity of all salt the subject of royalty hereunder shipped during the quarter ending on the respective quarter day and shall not later than one month after the date on which such return is due pay to the State the royalty in respect of all salt shipped during that quarter. As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 11 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement Inspection of Records 3 3 Throughout the continuance of this Agreement the Company shall permit a nominee of the Minister for Mines to inspect at all reasonable times the books of account and records of the Company relative to the production of salt on the work sites and any sale or shipment thereof and to take copies or extracts therefrom so far as is necessary for the purpose of determining the royalty payable in respect of salt shipped hereunder. The Company will take reasonable steps to satisfy the State either by the certificate of a competent independent party acceptable to the State or otherwise to the reasonable satisfaction of the Minister for Mines as to all relevant weights and will give due regard to any objection or representation made by the Minister for Mines or his nominee as to any particular weight of salt which may affect the amount of royalty payable hereunder.

Other Charges 3 11. The State may make or cause to be made against vessels using any jetty erected by the Company the usual charges from time to time prevailing in respect of services rendered to vessels by the State or any agency instrumentality or other authority of the State and may charge vessels using any such jetty such conservancy and pilotage charge or dues as are payable from time to time pursuant to the provisions of any Act.

Escalation 3 1 Notwithstanding anything herein contained it is

hereby agreed by 12. and between the parties hereto in order to provide for the equitable performance of this contract that in the event of the price of salt as hereinafter defined on the 14th 21st 28th 35th 42nd 49th or 56th anniversaries of the commencement date being the day of the commencement of the term of the lease of the production site exceeding the price of salt on the 7th anniversary of the commencement date then the percentage by which the price of salt on the relevant anniversary exceeds the price of salt on the 7th anniversary of the commencement date shall be calculated and the several amounts and payable by the Company to the State as a rental under paragraph b of subclause 1 of Clause 3; b rental under subclause 3 of Clause 4; c royalty under subclause 1 of Clause 10; page 12 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule shall be increased by the percentage so calculated and such increased amounts in respect of those items shall be payable by the Company to the State during the seven 7 years next following the relevant anniversary. 2 For the purposes of this Clause the price of salt on the 7th anniversary of the commencement date and on each of the aforesaid anniversaries means the average price of salt shipped from the work sites during the previous year payable by the purchaser or purchasers thereof to the Company less all export duties taxes and fees payable to the Commonwealth on the export of salt and the costs and expenses properly incurred and payable by the Company in respect of that sale from the time it is shipped to the time it is delivered to and accepted by the purchaser or purchasers including a ocean freight; b marine insurance; c port and handling charges at the port of discharge d all costs properly incurred in delivering the salt from the port of discharge to the purchaser as evidenced by relevant invoices; e all weighing sampling analysis inspection and representation costs; f all shipping agency charges after shipment; and g all import taxes imposed or levied by the country or the port of discharge. 3 Throughout the continuance of this Agreement the Company shall use its best endeavours to obtain for the salt produced at the production site the best price possible having regard to market conditions from time to time prevailing. Housing 3 1 Subject to the provisions of this Clause the state will on the written

13. application made from time to time by the Company for land for housing or staff amenity purposes grant to the Company in such locality as land is available therefor a lease of such vacant lots as the Company requests on the following terms and conditions namely a for a term of five years commencing from a day to be agreed upon by the parties hereto; As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 13 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement b at a rental sufficient to reimburse a reasonable proportion of the costs if any incurred by the State in the preparation of the land for subdivision; c that the lessee will within eighteen months of the commencement of the term of each lease granted for housing purposes complete on the land the subject of that lease the erection of a building for the accommodation for a family or single persons at a cost of not less than 15000; d that on the expiration of the term of the lease and subject to the due and punctual observance and performance by the lessee of all the covenants agreements and conditions on the lessees part therein contained on the request of the lessee the State will grant to the lessee an estate in fee simple in the land the subject of the lease at a price not exceeding two hundred dollars 200 plus Crown Grant and survey fees; e that the Company will not sell transfer assign sublet or mortgage charge or encumber any lease without the consent of the Minister first had and obtained PROVIDED THAT the consent of the Minister shall not be required to the transfer assignment or sublease to an employee of the Company of a lot leased for housing purposes nor to any mortgage of a lot in respect of which the Company has complied with paragraph c of this Clause in relation to that lot; f that the Company will pay to the relevant local authority when requested by the local authority so to do such amount as the local authority reasonably requires at the time of the grant of the lease to enable it to supply or make available the usual services; g otherwise on such terms and conditions as are reasonably required to give effect to the provisions and objects of this Agreement. 2 The State shall not be required to lease to the Company pursuant to this Clause more than one hundred lots. The request for each lot shall be made by the Company at least six months before the Company requires the lease of that lot to be granted to it. In the event of the Minister consenting

under the provisions of paragraph e of subclause 1 of this Clause to a transfer assignment or subletting of the lot the State shall not be required to lease another lot in lieu of the lot so transferred assigned or sublet. page 14 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule Road Transport 3 1 Subject to the provisions of subclause 2 of this Clause it shall be 14. lawful for the Company to use for the carriage of salt on any public road between the production site and the stockpile site prime movers each with two trailers the combined length of which shall not exceed eightyfive 85 feet notwithstanding any provision in any Act to the contrary. 2 The right conferred by subclause 1 of this Clause shall operate until the tenth anniversary of the day of the first shipment of salt and thereafter until determined by not less than three years notice in writing by the State. Such notice may be given to expire on the tenth anniversary of the day of the first shipment of salt or at any time thereafter. Sea Water 3 15. The Company may without charge draw take and use sea water for all or any one or more of its operations in respect of the mining extraction and production of salt on the work sites and the Company may store at such place within the work sites as may be convenient or discharge at or below high water mark at such points near to the work sites as are approved by the State residual brines resulting from those operations. If requested by the Company the State shall grant to the Company any necessary easement or licence for these purposes over Crown lands upon such terms and conditions as shall be reasonable having regard to the requirements of the Company under this Clause and the overall development and use by others of those Crown lands. Subject to the Companys compliance with the Mining Act and all other relevant statutes and regulations for the time being in force the Company if and when it becomes economical so to do shall have the right to the exclusion of any other person to mine and recover any other minerals substances or chemicals in the said residual brines. Rights of Ingress and Egress 3 16. The State shall from time to time on the written application of the Company grant to the Company a license or licenses over Crown lands to permit the Company by its servants agents contractors invitees and customers the right of ingress to and egress from all or any one or more

part or parts of the work sites on such terms and conditions as shall be reasonable having regard to the requirements of the Company in respect of the construction maintenance operation and inspection of the improvements from time to time constructed or As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 15 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement installed on the work sites and to the overall development and use by others of those Crown lands. Export License 3 If at any time or times under Commonwealth law an export license is 17. required by the Company for the export of salt then on written request by the Company the State shall make representations to the Government of the Commonwealth of Australia for the grant to the Company of a license or licenses under Commonwealth law for the export of salt in such quantities and at such rate or rates is shall be reasonable having regard to the tonnage of salt being produced by the Company at such time or times as a license is so required and to all contracts made or likely to be made by the Company for the export or supply of salt from the work sites. Limitation of Liability 3 18. Where the Company from time to time constructs a levee or other works on the production site for or inental to the production of salt and thereafter a third party makes improvements to lands or becomes the owner of improvements so made on lands adjacent to the production site and subsequent to those improvements being made the Company removes either wholly or partly or fails to maintain or to repair that levee or other works and in consequence thereof the third party suffers sustains or incurs damage to those improvements or any part thereof then notwithstanding any Act or any rule of law or equity to the contrary the Company shall not be liable for those damages to any person or persons whatsoever. Default 3 19. The parties hereto covenant and agree with each other as follows a that in any of the following events namely if the Company fails in any year after the 30th June 1977 to ship at least 350000 tons of salt and furthermore the average of the tonnage shipped in that year and in the previous three years is less than 350000 tons a year or if the Company makes default in the due and punctual performance of any of the covenants agreements or obligations to the State herein or in any lease sublease easement license or other right or title

granted under this Agreement on its part to be performed or observed and shall fail to remedy that default within reasonable time after notice specifying the default is given by the State to the Company and also to any Mortgagee approved pursuant to page 16 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule Clause 23 hereof if it has a registered office in Perth or if the alleged default is contested by the Company and promptly submitted to arbitration within a reasonable time fixed by the arbitration award where the question is deed against the Company the arbitrator finding that there was a bona fide dispute and that the Company had not been dilatory in pursuing the arbitration or if the Company abandons or repudiates its operations under this Agreement or if the Company goes into liquidation other than a voluntary liquidation for the purpose of reconstruction then and in any of such events the State may by notice given to the Company determine this Agreement and the rights of the Company hereunder and under any lease license easement or right granted or demised hereunder or pursuant hereto PROVIDED HOWEVER that if the Company fails to remedy any default after notice is given to the Company specifying the default or within the time fixed by the arbitration award as aforesaid the State instead of determining this Agreement as aforesaid because of such default may itself remedy such default or cause the same to be remedied for which purpose the State by its agents workmen or otherwise shall have full power to enter upon lands occupied by the Company and to make use of all plant machinery equipment and installations thereon and the costs and expenses incurred by the State remedying or causing to be remedied such default shall be a debt payable by the Company to the State on demand made by the State; Effect of determination of Agreement 3 b that on the cessation or determination of this Agreement i except as otherwise agreed by the Minister the rights of the Company to in or under this Agreement and the rights of the Company or any assignee of the Company or any mortgagee to in or under any lease license easement or right granted or demised hereunder or pursuant hereto shall thereupon cease and determine but without prejudice to the liability of either of the parties hereto in respect of any antecedent breach or default under this

Agreement AND the Company shall without further consideration but otherwise at the request and cost of the State transfer or surrender to the State or the Crown all land the subject of any lease license easement or right granted or demised As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 17 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement hereunder or pursuant hereto AND the Company hereby irrevocably constitutes and appoints the Minister or such person as he may from time to time nominate the true and lawful attorney of the Company to execute the transfer or surrenders aforesaid; ii iii the Company shall forthwith pay to the State all moneys which may then have become payable or accrued due; save as aforesaid and as provided in paragraph c of this Clause neither of the parties hereto shall have any claim against the other with respect to any matter or thing in or arising out of this Agreement; c that on the cessation or determination of any lease license easement or right granted or demised hereunder or pursuant hereto by the State to the Company or except as otherwise agreed by the Minister to an assignee of the Company under Clause 23 hereof the improvements and things erected on the relevant land other than machinery equipment and removable buildings shall remain or become the absolute property of the Crown without compensation and freed and discharged from all mortgages and encumbrances and the Company will do such things and execute such documents including surrenders as the State may reasonably require to give effect to this provision AND the Company hereby irrevocably constitutes and appoints the Minister or such person as he may from time to time nominate the true and lawful attorney of the Company to do those things and to execute those documents including surrenders. In the event of the Company immediately prior to such expiration or determination or subsequent thereto deing to remove its machinery equipment and removable buildings or any of them from the work sites the Company shall not do so without first notifying the State in writing of its decision and thereby granting to the State the right or option exercisable within three 3 months thereafter to purchase at valuation in situ the said machinery equipment and removable buildings or any of them. Such valuation will be mutually agreed or in default of agreement shall be made by such competent

valuer as the parties hereto may appoint or failing agreement as to such appointment then by two competent valuers one to be appointed by each party or by an umpire appointed by such valuers should they fail to agree; page 18 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule d the provisions of this Clause shall not apply to any land which at or prior to the date of cessation or termination of this Agreement had been the subject of a lease granted to the Company pursuant to Clause 13 and which at that date is held for an estate in fee simple by any person or is held for an estate in leasehold by any person other than the Company or is held for an estate in leasehold by the Company and in respect of which the Company has effected some improvements and has not failed to observe any obligation on its part under the lease. 20. Any hospital or educational facilities including staff accommodation which appear to be reasonably necessary to meet the needs of employees of the Company or contractors engaged by the Company and their families shall be supplied by the State subject to the Company bearing and paying the capital cost thereof and if the State and the Company are unable to agree upon the necessity for such facilities or the standard or cost thereof then the matter shall be determined by arbitration. Salt for use in Australia 3 21. The Company acknowledges the desire of the State to have available a constant and reliable source of supply of salt for use in Australia. To attain this object the Company subject to the fulfilment of its overseas contracts will use its best endeavours to have such quantities of salt available at all times during the currency of this Agreement for sale for use in Australia as will meet reasonable demands therefor made on the Company from time to time at a price which is competitive in the Australian market provided that such price is not less than that which the Company is receiving or able to receive for similar quantities of salt sold on similar terms and conditions for use outside Australia. Restrictions on resumption 3 22. The State further covenants with the Company that the State a having regard to the particular nature of the industry proposed to be established by the Company under this Agreement and subject to the performance by the Company of its obligations hereunder shall not resume or suffer or permit to be resumed by

any State instrumentality or by any local or other authority of the said State any portion of the work sites the resumption of which would unreasonably impede the Companys activities nor shall the State create grant or permit or suffer to be created or granted by an As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 19 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement instrumentality or authority of the said State as aforesaid any road right of way or easement of any nature or kind whatsoever over or in respect of the work sites which may unduly prejudice or interfere with the Companys operations hereunder without the consent in writing of the Company first having been obtained which consent shall not be arbitrarily or unreasonably withheld; nothing in this paragraph shall prevent the State exercising any power given it pursuant to paragraph h of subclause 1 of Clause 3 of this Agreement; No discriminatory taxes or charges 3 b except as provided in this Agreement shall not impose or permit or authorise any of its agencies or instrumentalities or any local or other authority of the State to impose discriminatory taxes rates or charges of any nature whatsoever on or in respect of the titles property or other assets products materials or services used or produced by or through the operations of the Company in the conduct of the Companys business hereunder nor shall the State take or permit to be taken by any such agency instrumentality or authority any other discriminatory action which would deprive the Company of full enjoyment of the rights granted and intended to be granted under this Agreement; Upgrading of Roads 3 c shall at the request and cost of the Company except where and to the extent that the Commissioner of Main Roads agrees to bear the whole or part of the cost involved widen upgrade or realign any public road over which the State has control subject to the prior approval of the said Commissioner to the proposed work; Rating 3 d shall ensure that notwithstanding the provisions of any Act or anything done or purported to be done under any Act the valuation of all lands whether of a freehold or leasehold nature the subject of this Agreement except as to any part upon which a permanent residence shall be erected or which is occupied in connection therewith shall for rating purposes be deemed to be on the unimproved value thereof and no such lands shall be subject to any discriminatory rate; page 20 Version 01c006

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Dampier Solar Salt Industry Agreement Act 1967 First Schedule Labour Conditions 3 e shall ensure that during the currency of this Agreement and subject to compliance with its obligations hereunder the Company shall not be required to comply with the labour conditions imposed by or under any Act in regard to any lease of any land within the work sites.

Assignment 3 23. 1 Subject to the provisions of this Clause and of paragraph e of subclause 1 of Clause 13 hereof the Company may at any time with the prior written consent of the Minister a assign mortgage charge sublet or dispose of to any company or person the whole or any part of the rights of the Company hereunder including its rights to or as the holder of any lease license easement grant or other title and of the obligations of the Company hereunder and b appoint any other company or person to exercise all or any of the powers functions and authorities which are or may be conferred on the Company hereunder; subject however to the assignee or the appointee executing in favour of the State a deed of covenant in a form to be approved by the Minister to comply with observe and perform the provisions hereof on the part of the Company to be complied with observed or performed in regard to the matter or matters so assigned or the subject of the appointment. 2 Notwithstanding anything contained in or anything done under or pursuant to subclause 1 of this Clause the Company unless the Minister otherwise agrees shall at all times during the currency of this Agreement be and remain liable for the due and punctual performance and observance of all the covenants and agreements on its part contained herein and in any lease license easement grant or other title the subject of an assignment under the said subclause 1.

Arbitration 3 24. Any dispute or difference between the parties arising out of or in connection with this Agreement or any agreed amendment or variation thereof

As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 21 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement or agreed addition thereto or as to the construction of this Agreement or any such amendment variation or addition as to the rights duties or liabilities of either party hereunder or as to any matter to be agreed upon between the parties under this Agreement shall in default of agreement between the parties

and in the absence of any provision in this Agreement to the contrary be referred to and settled by arbitration under the provisions of the Arbitration Act 1895. Variation 3 25. The parties hereto may from time to time by mutual agreement in writing add to vary or cancel all or any of the provisions of the Agreement or any lease license easement or right granted or demised hereunder or pursuant hereto for the purpose of more efficiently or satisfactorily implementing or facilitating any of the objects of this Agreement. 26. During the period of this Agreement the State shall not authorise the construction of any works which could reasonably be considered as having the possible effect of stopping the from of sea water around the northern or southern ends of West Intercourse Island to or from the production site or so diminishing such flow as to result in the drawing of sea water by the Company from the western side of the production site being either impracticable or only practicable with the expenditure by the Company of additional money for capital or in operating costs. Force Majeure 3 27. This agreement shall be deemed to be made subject to any delays in the performance of obligations under this Agreement and to the temporary suspension of continuing obligations hereunder and to relief from forfeiture for failure to produce the annual and average tonnages referred to in paragraph a of Clause 19 which may be occasioned by or arise from circumstances beyond the power and control of the party responsible for the performance of such obligations including delays or any such temporary suspension or failure as aforesaid caused by or arising from Act of God force majeure floods storms tempests washaways abnormal tides and waves fire unless caused by the actual fault or privity of the Company act of war act of public enemies riots civil commotions strikes lockouts stoppages restraint of labour or other similar acts whether partial or general shortages of labour or essential materials reasonable failure to secure contractors delays of contractors and inability common in the salt export industry to profitably sell salt or factors due to overall world economic conditions or factors which could not reasonably have been foreseen PROVIDED ALWAYS that the party whose performance of obligations is page 22

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of the said causes shall minimise the effect of the said causes as soon as possible after their occurrence.

Continuance of Agreement 3 1 If the Company is desirous of a further continuance of this 28. Agreement whether in the same or any varied or modified form and if the parties hereto have not at least fifteen 15 months prior to the expiration of the second term of renewal of the lease of the production site hereinafter referred to as the expiration of the second renewal agreed upon the terms and conditions in respect of a further agreement for the production at and shipment of salt from the work sites then the State shall at least fourteen 14 months prior to the expiration of the second renewal make the Company such written offer hereinafter called the offer of the terms and conditions of the further agreement as it deems reasonable and unless the Company has i within the month next following the receipt of the offer accepted it either in the form so offered or as modified or varied by negotiation between the parties hereto or ii within the fourteen days next following the receipt of the offer referred that offer or the part or parts thereof which the Company considers unreasonable to arbitration as provided in subclause 2 of this Clause; the State may at the expiration of that month proceed as in manner set out in subclause 3 of this Clause. 2 Within the fourteen 14 days next following the receipt of the offer the Company may elect by notice to the State to refer to arbitration any dispute concerning the reasonableness of the States offer or any part or parts thereof and will within fourteen 14 days next following such election refer to arbitration that dispute. Unless the Company within the fourteen 14 days next following the receipt by it of the award on arbitration by notice to the State accepts the offer as valid or modified by the award on arbitration the State may proceed as in manner set out in subclause 3 of this Clause. 3 If the Company has not accepted the offer or the offer as varied or modified by the award on arbitration subject to and in accordance with the provisions set out in subclause 1 or 2 respectively of this clause then the State may enter into an agreement for the production and shipment of salt from the sites previously leased to the Company with any other person on terms and conditions more favourable on the whole than the offer made by the State or in As at 11 Sep 2010 Version 01c006

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First Schedule Dampier Solar Salt Industry Agreement the event of the offer having been submitted to arbitration the offer as varied or modified by the award on arbitration provided the State has first offered to the Company the right of first refusal of such terms and conditions and such offer is not accepted by the Company within a reasonable time. Indemnity 3 29. The Company will indemnify and keep indemnified the State and its servants agents including all Ministers of the Crown in right of the State of Western Australia and contractors in respect of all actions suits claims demands or costs arising out of or in connection with the construction maintenance or use by the Company or its servants agents contractors or assignees of the Companys solar salt plant jetty berthing or loading facilities roads railways or other works or services the subject of this Agreement or any plant apparatus or equipment associated therewith. Compliance With Laws 3 30. Subject to this Agreement the Company in the construction operation maintenance and use of any work installation plant machinery equipment service or facility provided or controlled by it shall comply with and observe the laws for the time being in force in the State of Western Australia. Notices 3 31. Any notice consent request or other writing authorised or required by this Agreement to be given shall be deemed to have been duly given by the State or the Minister if signed by the Minister or by any senior officer of the Civil Service of the said State acting by the direction of the Minister and forwarded by prepaid registered post to the Company or an approved mortgagee or assignee as the case may require at its registered office for the time being in the said State and by the Company if signed on its behalf by any person or persons for the time being appointed by it for the purposes of this Clause and forwarded by prepaid registered post to the Minister at his office in Perth AND any such notice consent or writing shall be deemed to have been duly given on the day on which it would be delivered in the ordinary course of post. Relevant Law 3 1 This Agreement shall be interpreted according to the law for the time 32. being in force in the said State. page 24 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule 2 All payments made or to be made under this Agreement shall be made in the State of Western Australia in Australian

currency unless otherwise agreed. All sums mentioned herein are in Australian currency. Expiration of Agreement 3 33. This Agreement shall expire on the expiration or sooner determination of the lease of the production site including the respective renewals thereof but without prejudice to the right of action of either party hereto in respect of any breach of the covenants agreements and conditions herein contained. Conditions 3 1 This Agreement is conditional upon the Company at any time prior 34. to the 31st day of December 1968 giving notice to the Minister that a the Company has entered into or intends to enter into contracts or arrangements satisfactory to the Company for the sale by the Company of salt; and b the Company has made or is about to make arrangements satisfactory to the Company for financing the works referred to in Clause 9 hereof and that the Company proposes to proceed with such works. Determination by Company 3 2 Notwithstanding anything herein contained the Company may at any time give notice to the State that matters have arisen which make the completion or continuance of the works impracticable or uneconomic and desires to determine this Agreement whereupon this Agreement will then cease and determine and the State may enforce all or any one or more of its rights remedies or powers set out in Clause 19 hereof. Right of Surrender 3 3 The Company shall have the right at any time and from time to time to surrender to the Crown in right of the State any reasonably substantial part of the work sites which is no longer required by the Company. Power to extend periods 3 35. Notwithstanding any provision hereof the Minister may at the request of the Company from time to time extend any period or alter any date referred to in As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 25 Dampier Solar Salt Industry Agreement Act 1967 First Schedule Dampier Solar Salt Industry Agreement this Agreement for such period or to such other date as the Minister thinks fit and the extended period or other date when advised to the Company by notice from the Minister shall be deemed for all purposes hereof substituted for the period or date so extended or altered. Provided that where any such extension of period or alteration of date would have the effect either directly or indirectly of extending the term of any lease license temporary reserve or other concession granted under the Mining Act the consent of the Minister shall not operate until the

Company has also obtained the like consent of the Minister for Mines. 36. The State shall exempt from any stamp duty which but for the operation of this clause would or might be chargeable on a this Agreement; b any instrument executed by the State pursuant to this Agreement granting to or in favour of the Company or any permitted assignee of the Company any lease license easement or right granted or demised hereunder or pursuant hereto PROVIDED THAT this clause shall not apply to any instrument or other document executed or made more than seven years from the date hereof. IN WITNESS whereof this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore mentioned. SIGNED SEALED AND DELIVERED by THE HONOURABLE DAVID BRAND M.L.A. in the presence of DAVID BRAND. [L.S.] C. W. COURT Minister for Industrial Development. page 26 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Dampier Solar Salt Industry Agreement Act 1967 First Schedule THE COMMON SEAL OF DAMPIER SALT LIMITED WAS HEREUNTO AFFIXED BY AUTHORITY OF THE DIRECTORS in the presence of [L.S.] S. CHRISTIE Director. NEIL R. CAFFIN Secretary. As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 27 Dampier Solar Salt Industry Agreement Act 1967 Second Schedule Variation agreement Second Schedule Variation agreement [s. 2] [Heading amended No. 19 of 2010 s. 4.] AN AGREEMENT made the 18th day of October 1974 BETWEEN THE HONOURABLE SIR CHARLES WALTER MICHAEL COURT O.B.E. M.L.A. Premier of the State of Western Australia acting for and on behalf of the said State and instrumentalities thereof from time to time hereinafter referred to as the State of the one part AND DAMPIER SALT LIMITED a company incorporated under the provisions of the statutes of Western Australia and having its registered office in the State of Western Australia at Perth hereinafter called the Company of the other part. WHEREAS a The parties are the parties to the agreement between them defined in section 2 of the Dampier Solar Salt Industry Agreement Act 1967 which agreement in the form printed in that Act is hereinafter referred to as the principal agreement. b The parties desire to add to and amend the principal agreement as hereinafter provided. NOW THIS AGREEMENT

WITNESSETH 1. Subject to the context the words and expressions used in this Agreement have the same meanings respectively as they have in and for the purposes of the principal agreement. The provisions of this agreement shall not come into operation unless and 2. until a Bill to approve and ratify this Agreement is passed by the Legislature of the said State and comes into operation as an Act. 3. The principal agreement is hereby amended as follows 1 Clause 3 is amended a as to subclause 1 by substituting for the passage Plan initialled on behalf of the parties hereto for the purpose of identification and comprising approximately 28600 acres in lines four five and six the passage Plan marked A initialled on behalf of the parties hereto for page 28 Version 01c006 Published on www.legislation.wa.gov.au As at 11 Sep 2010 Dampier Solar Salt Industry Agreement Act 1967 Second Schedule Variation agreement the purpose of identification and comprising approximately 36362 acres; b as to subclause 2 by substituting for the word Plan in line six the passage Plan marked A ; and c as to subclause 3 by substituting for the word plan in line four the passage Plan marked A ; 2 Clause 27 is amended by adding after the word shall in line twenty three the words promptly give notice to the other party of the event or events and shall; and 3 by adding after Clause 30 a new clause 30A as follows Environmental Protection 3 30A. Nothing in this Agreement shall be construed to exempt the Company from compliance with any requirement in connection with the protection of the environment arising out of or inental to the operations of the Company hereunder that may be made by the State or any State agency or instrumentality or any local or other authority or statutory body of the State pursuant to any Act for the time being in force.

IN WITNESS whereof this Agreement has been executed by or on behalf of the parties hereto the day and year first hereinbefore mentioned. SIGNED by THE HONOURABLE SIR CHARLES WALTER MICHAEL COURT O.B.E. M.L.A. in the presence of ANDREW MENSAROS Minister for Industrial Development CHARLES COURT As at 11 Sep 2010 Version 01c006 Published on www.legislation.wa.gov.au page 29 Dampier Solar Salt Industry Agreement Act 1967 Second Schedule Variation agreement The Common Seal of DAMPIER SALT LIMITED was hereunto affixed by authority of the Directors in the presence of C.S. I. BORRIE Director. N. R. CAFFIN

Secretary. [Second Schedule inserted No. 50 of 1974 s. 5.] page 30 Version 01c006 Published on
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Notes 1 This is a compilation of the Dampier Solar Salt Industry Agreement Act 1967 and includes
the amendments made by the other written laws referred to in the following table. The table also
contains information about any reprint. Compilation table Short title Number and year Assent
Commencement 76 of 1967 11 Dec 1967 11 Dec 1967 Dampier Solar Salt Industry Agreement Act
1967 Dampier Solar Salt Industry Agreement Act Amendment Act 1974 Reprint of the Dampier
Solar Salt Industry Agreement Act 1967 as at 6 Dec 2002 includes amendment listed above 26 Nov
1974 26 Nov 1974 50 of 1974 Standardisation of Formatting Act 2010 s. 4 and 422 19 of 2010 28
Jun 2010 11 Sep 2010 see s. 2b and Gazette 10 Sep 2010 p. 4341 2 3 Repealed by the
Interpretation Act 1984. Marginal notes in the agreement have been represented as bold headnotes
in this reprint but that does not change their status as marginal notes. As at 11 Sep 2010 Version
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Act 1967 Defined terms Defined terms [This is a list of terms defined and the provisions where they
are defined. The list is not part of the law.] Defined term Provisions the Agreement
..... 2 the variation agreement
..... 2 page 32 Version 01c006 Published on
www.legislation.wa.gov.au As at 11 Sep 2010 QueenslandAlcan Queensland Pty. Limited
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Agreement Act 1965Contents12344A4B4C4D5Short title
..... .Execution of agreement authorisedExecuted agreement to
have force of lawVariation of agreement
.. .Application of GST to rents after 30 June 2005Declaration for Commonwealth Act
..... .Authorisation of variation by further agreement
.. .Authorisation of variation by further agreementRegulation making power
..... .Schedule 1The Agreement

.Schedule 2Proposed further agreementSchedule 3Proposed further agreementSchedule 4Proposed further agreement

.Page333344555 6 69 72 75Alcan Queensland Pty. Limited Agreement Act 1965[s 1]Alcan Queensland Pty. Limited Agreement Act 1965An Act with respect to an agreement between the State andAlcan Queensland Pty. Limited; and for purposes inentaltherto and consequent thereon12Short titleThis Act may be cited as the Alcan Queensland Pty. LimitedAgreement Act 1965.Execution of agreement authorisedThe Premier and Minister for State Development is herebyauthorised to make for and on behalf of the State with AlcanQueensland Pty. Limited a company duly incorporated in thesaid State and having its registered office at 163 AdelaideStreet Brisbane in the said State the agreement a draft ofwhich is set out in schedule 1 the agreement.NoteSince the making of the agreement Alcan Queensland Pty. Limited haschanged its name to Alcan South Pacific Pty Ltd.3Executed agreement to have force of lawUpon the making of the agreement the provisions thereof shallhave the force of law as though the agreement were anenactment of this Act.4Variation of agreement1 The agreement may be varied onlyaby further agreement between the State and thecompany; andCurrent as at 11 September 2015Page 3Authorised by the Parliamentary CounselAlcan Queensland Pty. Limited Agreement Act 1965[s 4A]bunder the authority of an Act.2 A variation of the agreement purported to be made other thanunder subsection 1 is of no effect.3 The Minister must notify the date of the making of eachfurther agreement by gazette notice.4 The agreement as varied has the force of law as if it were anenactment of this Act.4AApplication of GST to rents after 30 June 20051 This section applies to rent payable after 30 June 2005underabcthis Act; orthe agreement; ora lease granted under or mentioned in the agreement.2If the rent is for a supply for which GST is payable the rentpayable is the total ofabthe rent that would have been payable if the rent werenot for a supply for which GST is payable; and10 of the rent that would have been payable if the rentwere not for a supply for which GST is payable.3 Subsection 2 applies despiteabcsections 2 to 4; orthe agreement; orthe Mineral Resources Act 1989.4 A reference in this section to the agreement includes

any amendment of the agreement.4B Declaration for Commonwealth Act A special bauxite mining lease is declared not to be personal property under the Personal Property Securities Act 2009 Cwlth. Page 4 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 [s 4C] 4C Authorisation of variation by further agreement The agreement may be varied by further agreements corresponding to the proposed further agreements set out in schedules 2 and 3. 4D Authorisation of variation by further agreement The agreement may be varied by further agreement corresponding to the proposed further agreement set out in schedule 4. 5 Regulation making power The Governor in Council may make regulations under this Act. Current as at 11 September 2015 Page 5 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Schedule 1 The Agreement section 2 Note Consistent with the provisions of the Act this schedule only contains the proposed agreement authorised to be entered into by the Act as originally enacted. It does not purport to be either the agreement actually entered into or that agreement as amended from time to time. Page 6 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Current as at 11 September 2015 Page 7 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Page 8 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Current as at 11 September 2015 Page 9 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Page 10 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Current as at 11 September 2015 Page 11 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Page 12 Current as at 11 September 2015 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Current as at 11 September 2015 Page 13 Authorised by the Parliamentary Counsel Alcan Queensland Pty. Limited Agreement Act 1965 Schedule 1 Page 14 Current as at 11 September 2015 Authorised by the Parliamentary

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of the Queensland ParliamentaryCounsel each time a change to the legislation takes effect.The
notes column for this reprint gives details of any discretionary editorial powers underthe Reprints Act
1992 used by the Office of the Queensland Parliamentary Counsel inpreparing it. Section 5c and d
of the Act are not mentioned as they contain mandatoryrequirements that all amendments be
included and all necessary consequentialamendments be incorporated whether of punctuation
numbering or another kind. Furtherdetails of the use of any discretionary editorial power noted in the
table can be obtained bycontacting the Office of the Queensland Parliamentary Counsel by
telephone on 30039601 or email legislation.queriesoqpc.qld.gov.au.From 29 January 2013 all
Queensland reprints are dated and authorised by theParliamentary Counsel. The previous
numbering system and distinctions between printedand electronic reprints is not continued with the
relevant details for historical reprintsincluded in this table.Reprint No.Amendments
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4 PROPOSED FURTHER AGREEMENT sch 4 ins 2015 No. 64 s 5 State of Queensland 2017 Current
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81 EX10.14 ex101.htm EXHIBIT 10.1 NOVATION AGREEMENT Dated April 7 2010 ALLIED ENERGY PLC
and CAMAC INTERNATIONAL NIGERIAN LIMITED and NIGERIAN AGIPE EXPLORATION LIMITED CAMA
C PETROLEUM LIMITED and Exhibit 10.11 2
34 AGREEMENT NOVATING PRODUCTIONS SHARING CONTRACT Contents 1. Definitions and interpret
ation 2. Novation 2. Confirmation of Terms 4. Representations and Warranties 5. Miscellaneous... Schedule
1 Oyo Field 23444 This Agreement is dated 2010 and is made BETWEEN 1 ALLIED ENERGY PLC formerly All
ied Energy Resources Nigeria Limited a company incorporated under the laws of the Federal Republic of Nige
ria and having its registered office at Plot 1649 Olosa Street Camac House Victoria Island Lagos Allied Energy

CAMAC INTERNATIONAL NIGERIA LIMITED a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at Plot 1649 Olosa Street Camac House Victoria Island Lagos Camac Nigeria and together with Allied Energy Allied 34 NIGERIAN AGIPEXPLORATION LIMITED a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at Plot PC23 Engineering Close Victoria Island Lagos NAE and CAMAC PETROLEUM LIMITED a company incorporated under the laws of the Federal Republic of Nigeria and having its registered office at [] CPL together the Parties and each a Party. WHEREAS.

On 3 June 1992 Allied Energy was awarded an oil prospecting licence to block 210 OPL 210 an interest of 2.5 in which Allied subsequently assigned to Camac Nigeria on 30 September 1992. B.

On 28 August 2002 Allied were granted oil mining leases 120 and 121 OMLs with respect to the OPL 210 for a term of 20 years commencing from 27 February 2001. C. Pursuant to a Deed of Assignment dated 22 July 2005 Allied assigned to NAE a 40 interest in the OMLs with remaining 60 being retained by Allied. D. On 22 July 2005 Allied and NAE entered into a Production Sharing Contract PSC setting out the terms of agreement in relation to petroleum operations on the territory of the OMLs. E.

Each of Allied Energy and Camac Nigeria wish to novate to CPL the beneficial ownership of their respective interests in and all rights and obligations under the PSC in relation to the Oyo Field further details of which are set out in Schedule 1. NOW IT IS HEREBY AGREED as follows

1 Definitions and interpretation

1.1 In this Agreement unless the context otherwise requires

1.2 In this Agreement unless the context otherwise requires all words and expressions defined in the PSC shall have the same respective meanings in this Agreement.

1.2.1 reference to clauses and schedules are to Clauses of and Schedules to this Agreement

1.2.2 headings do not affect the interpretation of this Agreement the singular shall include the plural and vice versa and reference to one gender include all genders

1.2.3 reference to any English legal term or concept shall in respect of any jurisdiction other than England be construed as reference to the term or concept which most nearly corresponds to it in that jurisdiction

1.2.4 a reference to any other document referred to in this Agreement is a reference to that other document as amended revised varied novated or supplemented at any time and

1.2.5 any phrase introduced by the terms

including include in particular or any similar expressions shall be construed as illustrative and shall not limit the sense of the words preceding those terms. 2.1 Subject to Clause 3.3 and with effect from and including the Novation Date Allied Energy and Camac Nigeria assign to CPL all their respective rights liabilities duties covenants undertakings warranties and other obligations contained in the PSC in respect of the Oyo Field only including all claims and demands in respect of the Oyo Field arising in connection with the PSC. 2.2 Subject to Clause 3.3 and with effect from and including the Novation Date CPL accepts all respective rights and liabilities of Allied Energy and Camac Energy under the PSC and agrees to perform all the duties and to discharge all the covenants undertakings warranties and other obligations of Allied Energy and Camac Energy respectively and to be bound by all the terms and conditions of the PSC in respect of the Oyo Field only in every way.

2.3 This Agreement shall become effective on the date Novation Date on which all the Parties hereto have signed

this Agreement. Allied Energy shall indemnify and hold each of NAE and CPL harmless against all losses damages injuries expenses and actions of whatever kind and nature suffered by each of them respectively where such losses damages injuries expenses and actions are as the result of the failure of Allied Energy to notify the Department of

Petroleum Resources DPR of the transaction described in this Agreement. 2.4 Subject to Article 2.3 NAE acknowledges and agrees to the novation of the PSC contemplated under this Agreement and agrees to be bound by the terms of this Agreement. 2.5 Unless the context otherwise requires with effect from and including the Novation Date references to Allied Energy and/or Camac Nigeria and/or Allied in the PSC as far as the Oyo Field is concerned in accordance with

this Agreement shall be deemed to be references to CPL. 3 Confirmation of Terms 3.1 Subject to Clause 3.3 of this Agreement and except where inconsistent with the provisions of this Agreement the terms of the PSC are confirmed and shall remain in full force and effect. 3.2 With effect from the Novation Date this Agreement and the PSC shall be read and construed as one document. 3.3 For the avoidance of doubt the Parties hereby confirm that at 3.3.1 the terms and conditions of Articles 8.1 a 8.1 c and 8.3 of the PSC relating to Royalty Oil Tax Oil and the Escrow Account shall remain unaffected by this Agreement and Allied Energy shall retain its rights and

obligations

under those Articles 3.3.2 the waiver by NAE of its rights in Article 8.1 of the PSC in favour of Allied Energy in respect of the Oyo field NAE Waiver is no longer applicable with effect from the Novation Date and will be reinstated by NAE with effect from the Novation Date upon receipt of a notice from Allied Energy that CPL has become an Affiliate of Allied Energy to be served together with appropriate supporting documentation reasonably satisfactory to NAE evidencing that status of CPL as an Affiliate of Allied Energy. For purposes of the foregoing reasonably satisfactory evidence shall include without limitation any document filed and available to the public with the United States Securities and Exchange Commission disclosing that CPL is a subsidiary of Pacific Asia Petroleum Inc. PAPI and that the same company that controls Allied Energy controls PAPI and a certificate signed by an officer or director of a PAPI certifying that CAMAC Energy Holdings Limited CEHL owns more than 50 of the shares in PAPI and further certifying that PAPI owns more than 50 of the shares in CPL and b CEHL certifying that it owns more than 50 of the shares in Allied Energy. Notwithstanding the foregoing if CPL becomes an Affiliate of Allied more than two (2) months after the Novation Date then the reinstatement of the NAE Waiver will be effective from the date CPL has become an Affiliate of Allied and when the NAE Waiver is reinstated pursuant to Article 8.1 such waiver will be deemed to extend to the interest of CPL in the Oyo Field. For the avoidance of doubt if at any time CPL ceases to be an Affiliate of Allied then the NAE Waiver shall no longer apply in accordance with Article 8.1 of the PSC.

3.3.3 all terms and conditions of the Cooperation Agreement between NAE and Allied Energy dated 15 January 2006

as amended remain in full force and effect and shall remain unaffected by this Agreement including without limitation to procurement and engineering services provided by Allied Energy to NAE with respect to the Oyo Field.

3.3.4 notwithstanding anything to the contrary in this Agreement or the PSC CPL shall not be entitled to appoint any representatives in the Management Committee nor to exercise any right to vote therein in respect of any matters including with respect to the Oyo field. It is understood that CPL's interest in the Oyo field will be represented by Allied.

3.3.5 notwithstanding anything to the contrary in this Agreement or the PSC but without prejudice to Clause 3.3.1

the following provisions of the PSC shall not apply to CPL but will continue to apply to Allied or the First Party as the case may be Article 57.27.38.69 11 12 13.31 4.3. For the avoidance of doubt the evaluation procedures of Article 9 of the PSC shall be binding on CPL. 4 Representations and Warranties Each Party severally represents and warrants on behalf of itself that 4.1 it has full power and authority under its memorandum or articles of association or other governing documents and otherwise to enter into and perform its obligations pursuant to this Agreement and 4.1.1 it has duly authorised executed and delivered this Agreement and this Agreement constitutes valid and binding obligations enforceable against it in accordance with its terms. 4.1.25 Miscellaneous 5.1 The provisions of Articles 16 Confidentiality and Public Announcements and 20 Laws and Language of the

PSC shall apply mutatis mutandis to this Agreement. 5.2 This Agreement may be executed in any number of counterparts each of which when executed and delivered shall be an original but all of which when taken together constitute a single instrument. IN WITNESS WHEREOF the Parties have entered into this Agreement on the day and year first above written. Signed for and on behalf of ALLIED ENERGY PLC Signatures Mickey A. Lawal Name Mickey A. Lawal Designation Director 4 Signed for and on behalf of CAMAC INTERNATIONAL NIGERIA LIMITED Signatures Mickey A. Lawal Name Mickey A. Lawal Designation Director Signed for and on behalf of NIGERIAN AGIPEXPLORATION LIMITED Signatures Ciro A. Pagano Name Ciro A. Pagano Designation Vice Chairman MD Signed for and on behalf of CAMAC PETROLEUM LIMITED Signatures Frank C. Ingriselli Name Frank C. Ingriselli Designation Director 5 Schedule 1 Oyo Field Description 6 PETROLEUM

AGREEMENT BETWEEN THE GOVERNMENT OF THE COOPERATIVE REPUBLIC OF GUYANA AND ESSO EXPLORATION AND PRODUCTION GUYANA LIMITED CNOOC NEXEN PETROLEUM GUYANA LIMITED HESS GUYANA EXPLORATION LIMITED Article 1 Definitions Article 2 Agreement the Operator Liabilities and Indemnities Article 3 Petroleum Prospecting Licence and Guarantee Article 4 Exploration Programme and Expenditure Obligation Article 5 Relinquishment of Areas Article 6 Delegation; Cooperation between Contractor and GGMC Article 7 Annual Work Programme and Budget Article 8 Discovery and Development Article 9 Records

Reports and Information; Confidentiality Article 10 Annual Licence Rental Charge Article 11 Cost Recovery and Production Sharing Article 12 Associated and Non Associated Gas. Article 13 Valuation of Crude Oil or Natural Gas Article 14 Disposal of Production Article 15 Taxation and Royalty Article 16 Contracts and Assignments Article 17 Domestic Supply Obligation Article 18 Guyana Resources Article 19 Employment and Training Article 20 Rights to Assets and Insurance Article 21 Import Duties Article 22 Foreign Exchange Control Article 23 Accounting and Audits Article 24 Force Majeure Article 25 Assignment Article 26 Arbitration Article 27 Applicable Law Article 28 Social Responsibility and Protection of the Environment..... Article 29 Termination and Cancellation Article 30 Effective Date Article 31 Miscellaneous Article 32 Stability of Agreement Article 33 Signature Bonus Article 34 Notices Annex A Description of Contract Area Annex B Map of Contract Area Annex C Accounting Procedure Annex D PreApproved and Certified Petroleum Operations

Items ii R.N.O. 2070 AH ap ib A Reg Fee PETROLEUM AGREEMENT Stamp Duty

Copys of the Cooperative Republic of Guyana the Government represented herein by the Minister Responsible for Petroleum hereinafter referred to as the Minister of the One Part Z10 pol and 7h Esso Exploration and Production Guyana Limited hereinafter referred to as Esso a company incorporated in Bahamas and registered in Guyana under Section 259 of the Companies Act Chapter 8901 with a registered office at 62 Hadfield and Cross Streets WerkenRust Georgetown Guyana; CNOOC Nexen Petroleum Guyana Limited hereinafter referred to as Nexen a company incorporated in Barbados with a registered office at CGI Tower 2 Floor Warrens St. Michael Barbados and an office in Guyana at 62 Hadfield and Cross Streets Werk enRust Georgetown Guyana; and Hess Guyana Exploration Limited hereinafter referred to as Hess a company incorporated in the Cayman Islands with a registered office at 62 Hadfield and Cross Streets WerkenRust Georgetown Guyana of the Other Part. WHEREAS 1 By virtue of the Petroleum Production Act Cap. 6505 Petroleum existing in its natural condition in strata in Guyana is vested in the State; the Petroleum Exploration and Production Act No. 3 of 1986 and the Petroleum Exploration and Production Regulations 1986 make provision with respect to prospecting for and

production of Petroleum and for matters connected therewith; 2 The Guyana Geology and Mines Commission a body corporate established under the Guyana Geology and Mines Commission Act No. 9 of 1979 has been seised with the responsibility inter alia of planning and securing the development exploitation and management of Petroleum as defined in the Act in Guyana so as to ensure for the people of Guyana the maximum benefits therefrom and for doing such things in relation thereto; 3 With respect to prospecting for and producing Petroleum and for matters connected therewith the Act and Regulations subject to certain limitations and conditions contained therein authorize the Minister to grant Petroleum Prospecting Licences and Petroleum Production Licences; 4 Section 10 of the Act authorizes the Minister to enter into an agreement with any person with respect to inter alia the grant of a Licence the conditions to be included in a Licence the procedure to be followed by the Minister while exercising any discretion conferred upon him by or under the Act and the manner in which the discretion shall be exercised and any matter inental to or connected therewith; 5 Esso Nexen and Hess have submitted to the Minister a Production Sharing Agreement in respect of a certain and conditions specified in the proposal; posalthe proposal for a FoR AS Guyana on terms Page Petroleum Agreement Government of Guyana Esso Nexen and Hess6 GGMC has been authorised by the Minister to assist in and support the negotiation of this Agreement subject to the provisions of the Act and Regulations and to the final written approval of the Minister of its and execution thereof and to assist in the administration and implementation thereof; 7 Esso Nexen and Hess will have or will acquire the financial resources the managerial technical and industrial competence and the experience to carry out Petroleum Operations and will provide an affiliate company guarantee in accordance with section 13 of the Act; 8 Pursuant to the aforesaid recitals Esso Nexen and Hess made an application to the Minister for a Petroleum Prospecting Licence in accordance with regulation 13 of the Regulations as hereinafter defined over the area described in Annex A and shown on the map attached as Annex B subject to the terms and conditions herein set forth and subject to the provisions of the Act and Regulations and Esso Nexen and Hess have agreed by execution of this Agreement to accept the said Licence on the said terms

and conditions and provisions. NOW THEREFORE in consideration of the premises and covenants and conditions herein contained IT IS HEREBY AGREED between the Parties as follows Page 2

Petroleum Agreement u nw Government of Guyana Esso Nexen and Hess Le ub Article 1

Definitions 1.1 Petroleum Agreement Government of Guyana Esso Nexen and Hess In this Agreement unless the context otherwise requires 1999 Petroleum Agreement means that certain Petroleum Agreement dated June 14 1999 entered into by the Minister Responsible for Petroleum representing the Government of the CoOperative Republic of Guyana and Esso Exploration and Production Guyana Ltd. as amended; 1999 Petroleum Prospecting Licence means the petroleum prospecting licence dated 14 June 1999 as amended granted by the Government to the Contractor in respect of the Contract Area; Accounting Procedure means the procedure set out in Annex C; 8g Act means the Petroleum Exploration and Production Act No.3 of 1986 as from time to time modified amended or supplemented; Affiliated Company in relation to the Contractor means a company or corporation; i which is directly or indirectly controlled by the Contractor; or ii which directly or indirectly controls the Contractor; or iii which is directly or indirectly controlled by a company or corporation that also directly or indirectly controls the Contractor. For the purpose of this definition control means the right to exercise a vote of fifty percent 50 or more of all the voting shares; Agreed Interest Rate means interest computed on a monthly basis at the rate per annum equal to the average London Interbank Offer Rate LIBOR for six 6 months United States dollar deposits as published by the Wall Street Journal on the first Business Day of such month being calculated plus three 3 percentage points; Agreement means this Agreement and the Annexes hereto attached and made a part hereof; Appraisal Programme means a programme carried out following a discovery of Petroleum in the Contract Area for the purpose of delineating the Petroleum Reservoir as defined in the Act to which that discovery relates in terms of thickness and lateral extent and estimating the quantity of recoverable Petroleum therein prior to declaration of commerciality; Appraisal Well means a well drilled for the purpose of an Appraisal Programme; Article means an Article of this Agreement; Associated Gas means all Natural Gas produced Page 3 the predominant production is

Crude Oil and includes the gascap which overlies and is in contact with Crude Oil; Barrel means a quantity consisting of fortytwo 42 United States gallons liquid measure measured at standard conditions of atmospheric pressure and temperature 14.7 lbssq. inch absolute or 1 Kgsq. cm. absolute and corrected to a temperature of sixty 60 degrees Fahrenheit or fifteen 15 degrees Celsius; Bridging Deed means the agreement entered into the Parties on or around the date of this Agreement pursuant to section 10 of the Act to set out the process whereby the 1999 Petroleum Agreement and the 1999 Petroleum Prospecting Licence will be replaced by this Agreement and a new Petroleum Prospecting Licence in respect of the Contract Area. Business Day means a day on which the banks in Georgetown Guyana are customarily open for business. Calendar Month or Month means any of the twelve months of the Calendar Year; Calendar Quarter or Quarter means a period of three 3 consecutive months beginning on the first day of January April July or October; Calendar Year or Year means a period of twelve 12 consecutive Months commencing on January and ending on the succeeding December 31 provided however that a Year of a term of a Licence shall be the period specified in section 2 2 b of the Act; Commercial Discovery means any discovery which the Contractor in its sole judgment considers economic to develop and produce pursuant to the terms of the Agreement; Contract Area means i on the Effective Date the area described in Annex A and shown on the map in Annex B and the subject of the Petroleum Prospecting Licence granted to the Contractor pursuant to Article 3; and ii thereafter any areas which at any particular time are subject to the Petroleum Prospecting Licence or Petroleum Production Licences granted to the Contractor under Article 8; Contract Costs means Exploration Costs Development Costs Operating Costs Service Costs General and Administrative Costs as well as Annual Overhead Charge but excluding PreContract Costs; Contractor means Esso Nexen and Hess and includes their successors and permitted assignees; Cost Gas has the meaning assigned in Article 11; Page 4 Petroleum Agreement Government of Guyana Esso Nexen and Hess Cost Oil has the meaning assigned in Article 11; Crude Oil or Oil means crude mineral oil asphalt ozokerite distillates condensates and all kinds of hydrocarbons and bitumens both in solid and liquid forms at standard

conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or 1 Kgsq. cm; Delivery Point means unless otherwise agreed the point at which title control and possession of a marketed product under this Agreement transfers from seller or rightholder to buyer as defined in a Development Plan and agreed to by the Contractor and the Minister. In the event there is no agreement between the Minister and the Contractor in regard to the preceding sentence i in the case of waterborne export of a marketed product including but not limited to Crude Oil LNG or NGLs the Delivery Point shall be the inlet loading flange and ii in the case of pipeline deliveries of a marketed product including but not limited to Natural Gas or NGLs the Delivery Point shall be the inlet flange to buyers pipeline or distribution system or the inlet flange to a third partys pipeline transporting buyers product; Development Costs means the expenditure so categorized in Annex C; Development Plan means the plan referred to in Article 8.4; Development Well means any well drilled as part of a Development Plan; Discovery Area means an area which is part of a Prospecting Area consisting of a Discovery Block or Blocks in respect of which the Minister has been informed under section 30 of the Act; Discovery Block means that as defined in the Act; Discovery of Petroleum means that as defined in the Act; Effective Date means the date on which this Agreement comes into force pursuant to Article 30; Expatriate Employee means any employee other than a Guyanese citizen not permanently resident in Guyana who is engaged under a contract of service for the purpose of Petroleum Operations; Exploration Costs means those expenditures so categorized in Annex C; Exploration Period means the initial period andor the Page 5 Petroleum Agreement Government of Guyana Esso Nexen and HessExploration Well means a well drilled which is not a Development Well with the objective of exploring for Petroleum on a geological entity be it of structural stratigraphic facies or pressure nature to a depth or stratigraphic level specified in the work programme for the exploration work programme; Field means an area within the Contract Area consisting of a Petroleum Reservoir or multiple Petroleum Reservoirs all grouped on or related to the same individual geological structural features or stratigraphic conditions from which Petroleum may be produced commercially; General and Administrative Costs and Annual Overhead Charge

means the expenditures so categorised in Annex C; Geologic Basement means any igneous or metamorphic rock or any stratum in and below which the geological structure or physical characteristics of the rock sequence do not have the properties necessary for the accumulation of petroleum in commercial quantities and which reflects the maximum depth at which any such accumulation can be reasonably expected; Government means the Government of the Cooperative Republic of Guyana and its ministries and agencies; GGMC means the Guyana Geology and Mines Commission established under section 3 of the Guyana Geology and Mines Commission Act 1979 or the lawfully appointed successor to GGMC in regard to duties or responsibilities assigned to GGMC under this Agreement as assigned by the Government and notified in advance to the Contractor with ninety 90 days written notice; GGMC Act means the Guyana Geology and Mines Commission Act 1979 as from time to time modified amended or supplemented; Licences or both as the context requires; Lifting Entitlement means the quantity of Petroleum to which a Party any given period pursuant to Article 11; Minister means the Minister assigned responsibility for Petroleum or such Minister the President; Natural Gas or Gas means all hydrocarbons which at standard conditions of temperature and pressure 60 degrees Fahrenheit or 15 degrees Celsius and 14.7 lbssq. in or Kgsq. cm is in a gaseous state including but not limited to wet mineral gas dry mineral gas and casing head gas all substances contained therein including helium which Page 6 g 2 Petroleum Agreement Government of Guyana Esso Nexen and Hess ral Jare produced from an oil or gas well in their natural state or residue gas remaining after extraction of NGLs from wet gas. For purposes of this Agreement Natural Gas shall also include liquefiable hydrocarbons obtained from Natural Gas by condensation or extraction including ethane propane butane pentane and other plant liquids and excluding condensates Natural Gas Liquids or NGLs. Liquefied methane shall not be considered Natural Gas Liquids but rather Natural Gas in the liquid state. NonAssociated Gas means Natural Gas or Gas other than Associated Gas; NonResident SubContractor shall mean a SubContractor the control and management of whose business are exercised outside Guyana. Operating Costs means those costs so categorized in Annex C; Operator shall have the meaning

assigned to it in Article 2.2a; Parties means the Government Esso Nexen and Hess and includes their successors and permitted assignees and a Party shall mean any of the Parties; Petroleum has the meaning ascribed in the Act. Petroleum Operations means Prospecting Operations and/or Production Operations as defined in the Act conducted pursuant to this Agreement and which were conducted under the 1999 Petroleum Agreement such previous operations being hereby deemed by the Minister to be carried out under this Agreement; Petroleum Prospecting Licence means a Licence issued by the Government under the Act and the Regulations to Esso Nexen and Hess for carrying out Prospecting Operations and set forth in Form C of the schedule as specified in the Regulations; PreContract Costs means the costs and expenditures so categorised in Annex C; Petroleum Production Licence means a Licence to be issued by the Government under the Act and the Regulations to the Contractor for carrying out Production set forth in Form D of the schedule as specified in the Regulations; Profit Gas has the meaning assigned in Article 11; Profit Oil has the meaning assigned in Article 11; Recoverable Contract Costs means such costs as the Contractor incurs as from the date they have been incurred pursuant to the provisions of the Regulations means the Petroleum Exploration and Production Regulations 1986 as from time to time modified amended or supplemented; Page 7 R Petroleum Agreement nan Government of Guyana Esso Nexen and Hess f 1.2 1.3 1.4 1.5 Petroleum Agreement Government of Guyana Esso Nexen and Hess Service Costs means the expenditures so categorized in Annex C; SubContractor means any company or entity which provides services to the Contractor in connection with Petroleum Operations; Third Party Sales means third party arms length sales made by i Contractor or ii Affiliated Company of Contractor to a third party for an arms length price which is disclosed to the Minister. The words and terms used in this Agreement but not defined herein shall if meanings have been assigned to them under section 2 of the Act have for the purposes of this Agreement the same meanings. The provision of this Agreement relating to the Petroleum Prospecting Licence shall be read as part of the provisions of such Licence. The provision of this Agreement relating to any Petroleum Production Licence shall be read as part of the provisions of such Licence. The provisions in the Act

and Regulations dealing with rights and obligations of the Contractor shall be read as part of but not nullify the provisions of this Agreement and any Licence issued to the Contractor.

Article 2
Agreement the Operator Liabilities and Indemnities

2.1 Agreement This Agreement constitutes an agreement made under section 10 of the Act consistent with the Act and the Regulations and is a production sharing agreement the objective of which is the exploration for development and production of Petroleum in the Contract Area by the Contractor subject to the terms hereof and the provisions of the Act and Regulations under which the Contractor shall have an economic interest in the development of Petroleum from the Contract Area.

2.2. The Operator a Esso shall be the Operator charged with conducting the day to day activities of the Contractor under this Agreement. No transfer of operatorship to another Party not comprising the Contractor shall take effect unless it has been approved by the Minister which approval shall not be unreasonably withheld. The Minister shall be notified of any change of operatorship to another Party comprising the Contractor in writing.

b The Contractor shall provide the Minister with a memorandum summarizing the operating arrangements between the Operator and the Contractor including any Party comprising the Contractor for the conduct of Petroleum Operations which will include inter alia a provision whereby the Operator agrees to conduct the applicable laws of Guyana.

2.3. Liability 2.4 Indemnity The Contractor shall at all times keep Government indemnified against all actions claims and the demands that may be brought or made against Government by a third party by reason of negligence any act or omission or reckless disregard of harmful consequences which results in damage to a third party by the Contractor or the Operator in the exercise or purported exercise of the rights of the Contractor under the Act or the Licence provided however that nothing in this Article shall require the Contractor to give the said indemnity for any claim or demand in respect of Petroleum taken by the Minister pursuant to Article 11 after title has passed to the Minister at the Delivery Point or in respect of assets acquired by the Minister pursuant to Article 20 from and after the date of acquisition. Liability by the Contractor to the Government for damages in respect of Petroleum Operations under this Agreement is limited to insurance required in accordance with Article 20.2 a

Page 9 Petroleum Agreement Government of Guyana Esso Nexen and Hess ph provided however that the Contractor shall not be liable to the Government for indirect punitive or consequential damages including but not limited to production or loss of profits. Page 10 Petroleum Agreement Government of Guyana Esso Nexen and Hess 1 Article 3 Petroleum Prospecting Licence and Guarantee 3.1 Petroleum Prospecting Licence a On the date of this Agreement the Minister in accordance with the Act the Regulations and the terms of this Agreement shall grant to the Contractor the Petroleum Prospecting Licence for an initial period of four 4 years from the Effective Date over the area described in Annex A and shown on the map attached as Annex B hereto. b Subject to Article 4 and the other terms of this Agreement such Petroleum Prospecting Licence may be renewed but not more than twice at the election of the Contractor for consecutive periods of up to three 3 years each in accordance with the provisions of the Act and the Regulations. 3.2 Guarantee Each of the Parties comprising the Contractor shall on or before the sixtieth 60th day from the Effective Date during year one 1 of the initial period in accordance with Article 4.1 a hereunder and thereafter no later than ninety 90 days after the commencement of all subsequent work commitment periods as specified in Article 4.1 provide an Affiliated Company guarantee or other form of guarantee acceptable to the Minister in proportion to each of their corresponding undivided participating interest in the rights and obligations derived from this Agreement and for a combined amount of ten percent 10 of the budget submitted by the Contractor pursuant to Article 7.1 for each specific work commitment period. Notwithstanding the foregoing if the Contractor exceeds its minimum work commitment in any phase specified in Article 4.1 the completion of such work commitment shall constitute a waiver of such proportion of the requirement of the guarantees by the Minister which is the equivalent of the excess work previously completed but which is applicable to the subsequent work commitment phase. If the guarantees are Affiliated Company guarantees they shall be in lieu of and satisfy any obligation to provide a guarantee andor bond pursuant to the Act Regulations or this Agreement on the part or on behalf of the Contractor. Page 11 Petroleum Agreement Government of Guyana Esso Nexen and Hess Article 4 Exploration Programme and

Expenditure Obligation 4.1 Exploration Programme Subject to the provisions of this Agreement in discharge of its obligations to carry out Prospecting Operations in the Contract Area the Contractor shall carry out the minimum work described herein during the periods into which Prospecting Operations are divided hereunder a The initial period of four 4 years shall commence on the Effective Date. The Contractor shall within the initial period complete the interpretation of any 3D seismic acquired in respect of the Contract Area and complete the drilling of a minimum of one 1 Exploration Well. At the end of the initial period of four 4 years the Contractor shall elect either to relinquish the entire Contract Area or renew the Petroleum Prospecting Licence for a further period of up to three 3 years. b First renewal period of three 3 years. The Contractor shall within the first renewal period of three 3 years drill one 1 Exploration Well. At the end of the first renewal period of three 3 years the Contractor shall elect either to relinquish the entire Contract Area or renew the Petroleum Prospecting Licence for a second period of three 3 years in accordance with Article 5. Second renewal period of three 3 years. The Contractor shall within the second renewal period of three 3 years drill one 1 Exploration Well. At the end of the second renewal period of three 3 years the Contractor shall relinquish the entire Contract Area in accordance with Article 5. The minimum work commitment for a given phase or period referred to in Article 4.1a b and c may be undertaken in an earlier phase or period in whole or in part and in such case the work commitment with respect to the subsequent period shall be deemed to be satisfied accordingly in whole or in part as the case may be. Contractor may conduct additional work beyond the minimum work commitment in accordance with the terms and conditions of this Agreement which shall be Recoverable Contract Costs. e Subject to Article 24 herein and section 43 of the Act the Minister may extend any Page 12

Petroleum Agreement AK Government of Guyana Esso Nexen and Hess