SPDC PROPOSAL TO COMMENCE NEGOTIATIONS (PCN)
CRUDE HANDLING (TERMINALING) AGREEMENT FOR SEPLAT, PAN OCEAN AND NPDC (OREDO FIELD) CRUDE PRODUCTION

Summary information

Company	The Shell Petroleum Development Company of Nigeria Limited (SPDC)
Group Equity Interest	100% in SPDC; 30% in SPDC-JV
Other Partners	SPDC-JV Partners : • Nigerian National Petroleum Corporation ("NNPC") (55%) • Total E & P Nigeria Ltd. ("TEPNG") (10%) • Nigerian Agip Oil Company Ltd. ("NAOC") (5%)
Potential third parties	SEPLAT JV: • Seplat Petroleum Development Company Ltd ("SEPLAT"). (45% partner in SEPLAT JV), in its capacity as Operator of OMLs 4, 38 and 41 • Nigerian National Petroleum Corporation ("NNPC") (55% partner in SEPLAT JV) PANOCEAN JV: • Panocean Oil Corporation (Nigeria) Ltd ("POOC") (40% partner in PANOCEAN JV), in its capacity as Operator of OML 98). • Nigerian National Petroleum Corporation ("NNPC") (60% partner in PANOCEAN JV) NPDC: • Nigerian Petroleum Development Company Ltd ("NPDC")in its capacity as Operator of OML 111 ("NPDC-OREDO") NPDC/SHORELINE JV: • Nigerian Petroleum Development Company Ltd (55%) Partner in NPDC/SHORELINE JV), in its capacity as Operator of the Trans Forcados Pipeline. • Shoreline Natural Resources Limited (SHORELINE) (45% partner in are NPDC/SHORELINE JV)
Project	Description: Execution of five (5) year individual (Stand-alone) Crude Handling Agreements (CHAs) with SEPLAT, PANOCEAN and NPDC-OREDO respectively. Headline Size: Total $87.96 Million Shell share MOD ($293.20 Million = 100%) of projected CHA revenues

Revenue	SEPLAT	PANOCEAN	NPDC OREDO	Total
100% ($)	254,640,000	23,730,423	14,831,514	293,201,937
Shell share ($)	76,392,000	7,119,127	4,449,454	87,960,581

Project objectives and expected	Objectives: • To renew three (3) Crude Handling Agreements (one each with SEPLAT, POOC and NPDC-OREDO) o To provide Terminal services for the SEPLAT, POOC and NPDC -OREDO

deliverables	co-mingled crude injection transported to SPDC JV's Forcados Oil Terminal (FOT) via the Trans Forcados Pipeline (TFP). Deliverable: ▪ Executed CHAs by Q3 2016
Timescales	Secure mandate via this PCN — September 2016 Negotiate CHA — September/October 2016 Execute Agreement — October 2016

Section 1: The Proposal (Management Summary)

A. This PCN seeks management approval to commence negotiations to renew the existing CHAs with each of SEPLAT, POOC and NPDC-OREDO for another five year period from 1st August 2016 to 31st July 2021. The three CHAs are to be negotiated simultaneously for execution in September 2016. Each of the 3 injectors will be required to settle any CHA debt due and outstanding under the current contract before the renewal contract is executed, otherwise they will be moved to the prepayment terms from the effective date of the new contract.

B. The crude volume targeted for each of the CHAs is as per the current Reserved Production Capacities (RPC's):

a. SEPLAT's RPC of 80kbbl/d
b. POOC's RPC of 8 kbbl/d
c. OREDO's RPC of 5 kbbl/d

Background Information

NPDC injects it's OREDO field production into the POOC's pipeline at the Ogharefe manifold and the commingled NPDC-OREDO/POOC crude is transported and injected into SEPLAT's Pipeline at the Amukpe manifold from where it is commingled with SEPLAT's crude and injected at the Rapele Manifold into the NPDC/Shoreline JV owned TFP operated by NPDC. The NPDC OREDO/POOC/SEPLAT crude stream is further comingled and transported with other crude streams via the TFP to the SPDC JV FOT with delivery point at the Forcados River Manifold (FRM).

These complex interrelationships are governed by a number of back-to-back contracts and Agreements and the most critical ones for the NPDC-OREDO/POOC/SEPLAT crude handling are:

a. The Crude Transportation Agreements between NPDC (SHORELINE JV) and the respective Injectors into the TFP (in this case SEPLAT, POOC and NPDC-OREDO)
b. Terminal Pipeline Interface Agreement (TPIA) between SPDC and NPDC (SHORELINE JV)

The TPIA apportions rights and obligations to the PIPELINE OPERATOR (NPDC) and the TERMINAL OPERATOR (SPDC) to ensure seamless crude handling services for the comingled crude which is transported via the TFP and delivered to the FOT at the FRM. The renewed CHAs with SEPLAT, POOC and NPDC-OREDO will have provisions which align with the TPIA provisions with respect to measurement and allocation procedures:

- NPDC (SHORELINE JV) as the TFP operator shall, at its own expense, install, maintain, renew and operate the DELIVERY POINT MEASURING EQUIPMENT at the FRM to measure and has the responsibility for notifying SPDC of the daily quantity of crude delivered at the DELIVERY POINT (FRM). In addition, NPDC shall on a monthly basis notify SPDC of the individual quantities of crude of each user of (or Injector into) TFP.

- o However, until such time as the DELIVERY POINT MEASURING EQUIPMENT has been installed and commissioned by NDPC, SPDC shall on interim basis be responsible for the allocation of crude to the individual users of the TFP. Therefore, prior to the installation of and commissioning of the DELIVERY POINT MEASURING EQUIPMENT, SPDC crude allocation to SEPLAT, POOC and NPDC-OREDO shall be after the overall reconciliation of terminal receipt volumes against the individual injected volumes; (less crude losses/thefts, shrinkage etc.). The split of the comingled crude injected at the Rapele Manifold will be as per the reconciled and signed off by SEPLAT, PANOCEAN and NPDC-OREDO (as directed by DPR).

SEPLAT's current overdue crude handling debt of about F$USD 18Mln, though significant, is an improvement from its 2015 closing debt position of F$USD 28Mln; payment of FUSD 10Mln has been received in 2016. Liquidation of outstanding debt as well as agreement to be moved to prepayment terms in the event of a default, are conditions precedent for SEPLAT's CHA renewal.

POOC currently has overdue crude handling payments of about $FUSD 7.6Mln, however there is currently an "Irrevocable Assignment of Proceeds from POOC Crude Sales Instrument" to enable SPDC completely recovery POOC's debt. The movement to pre-payment terms for payment default is an option will also be included in the POOC CHA.

NPDC-OREDO currently has overdue crude handling payments of about F$USD 1.4Mln which is consistent with its debt position as at end 2015. Debt recovery has been hampered by the unavailability of the FOT for most of 2016. However, liquidation of debt is a condition precedent for the CHA renewal. There is currently a proposal for NPDC to execute an Irrevocable Assignment of Proceeds from Crude Sales Payment Agreement with SPDC to mitigate future debt accumulation.

<u>Section 2: Value Proposition and Strategic Context</u>

<u>Value Proposition</u>

Key benefits of this proposal are:

- SPDC will earn revenue ($USD 293.2Mln 100% SPDC JV ($USD 88Mln SS)) as ullage fees for utilization of spare capacity within the FOT during the 5years term.
  - o SEPLAT CHA - $USD 254.6Mln 100% SPDC JV ($USD 76.4Mln SS)
  - o POOC CHA - $USD 23.7Mln 100% SPDC JV ($USD 7.1Mln SS)
  - o OREDO CHA - $USD 14.8Mln 100% SPDC JV (USD 4.4Mln SS)
- The renewal also provides an opportunity for review/increase of the NPDC OREDO and POOC CHA tariffs Capacity charges to align with NPDC SHORELINE JV and SEPLAT CHA tariffs respectively. This would deliver $USD 7.9Mln 100% SPDC JV ($USD 2.5Mln SS) as incremental revenue per annum:
  - o POOC CHA - $USD 4.9Mln 100% SPDC JV ($USD 1.5Mln SS)
  - o OREDO CHA - $USD 3.0Mln 100% SPDC JV ($1.0Mln SS)
- Improved relationship with government (NNPC/DPR) as continued provision of the service demonstrates support to Federal Government's drive to optimize existing JV facilities.
- Enable growth of local content and capacity in the industry.

<u>Strategic Context</u>

Total headline value for these CHAs is **$USD 293.2Million (100% SPDC JV)** and **$USD 88 Million (Shell Share),** see details in Appendix1**.**
The target CHA tariff is based on Terminal Capacity Charges and Terminal Production Charges. SPDC's capacity to accommodate and handle the target crude volumes at the FOT has been confirmed by Corporate Shipping. SEPLAT, PANOCEAN and NPDC-OREDO will be required to pay excess charges for crude injected above their respective Reserved Production Capacity.

The agreed tariff will apply to the first calendar year, and will thereafter be escalated in line with the applicable CPI rates (for capacity charge/CAPEX) and 3 year running average increases adjusted for inflation (for production charge/OPEX). In arriving at this tariff due consideration was given to the following factors:

- Guidelines for tariff calculations issued by NAPIMS and DPR.
- Strict adherence to industry standards in accounting for costs and associated charges
- Tariff calculations for injection points in the West (See Appendix 2).

The 3rd party crude handling business is regulated by the DPR (e.g. DPR Procedure Guide for The Determination of the Quantity and Quality of Crude Oil and Petroleum Products at Custody Transfer Points). NPDC is currently working to install the TFP Custody transfer (LACT) meter at the FRM with target OSD of Dec 2016 and post commissioning, NPDC will be responsible for the monthly reconciliation/allocation of the delivered volume to all the TFP injectors (including SEPLAT, POOC and NPDC-OREDO).

SPDC will carry out the TFP crude injection reconciliation and allocation process at the FOT during the interim period before the FRM LACT OSD. DPR is opposed to the historic (fixed ratio) Crude Theft methodology in the current CHAs and SPDC does recognise that it is unsustainable due to constantly changing operational practices and meter status. Consequently, there is an ongoing engagement with DPR on the principles of a new Theft allocation methodology, but pending its conclusion and approved for implementation; SPDC will continue to apply the methodology in the current CHAs for all TPIs into the FOT.

<u>Section 3:</u> <u>Risks, Opportunities and Alternatives</u>

<u>Risks</u>

The following are the risks identified in relation to this transaction:

Risks & Issues	Managing & Mitigation Action
Non recovery of allocated crude theft/losses during the interim period: The three companies acting individually or jointly may dispute the theft/losses allocation by SPDC. DPR is also opposed to the historic (70/30 fixed ratio) Crude Theft methodology in the current CHA. :	SPDC recognises that the fixed ratio method unsustainable due to constantly changing operational practices and meter status. Consequently, SPDC is working with DPR on a roadmap to deliver a new DPR approved theft methodology for the SPDC JV network/facilities by end August/Early Sept 2016. However, pending the approval of the new methodology, SPDC will continue to apply the methodology in the current CHAs for all TPIs into FOT • In the meantime SPDC is also monitoring the schedule and also provide necessary practical assistance to

	NPDC to speed up the installation of the Delivery Point Measurement Equipment (FRM LACT Unit) which when commissioned would completely eliminate this risk.
Crude injection reconciliation disputes between SEPLAT, POOC and OREDO during the interim period.	Crude allocation to SEPLAT, POOC and NPDC-OREDO during the interim period will be based on the signed reconciled sheet between the parties and where the parties are unable to reach an agreement to provide the jointly signed reconciled sheet, the crude allocation will be based on the DPR authorised split as per the 2015 resolution of the DPR led committee on crude reconciliation disputes between SEPLAT, POOC and NPDC-OREDO: • The respective CHA's will include the above provisions, including default to the DPR advised % split whenever the parties fail to produce the jointly signed reconciled sheets.
Measurement Inaccuracies from LACT unit non-compliance: LACT units may fail to meet calibration and proving requirements, resulting in measurement inaccuracies:	• The new (DPR approved) crude theft loss methodology will apply specific error factors to address non-compliant/functional measurement equipment • Prior to the agreement and approval of a new crude theft loss methodology, any non-functional LACT will be treated as an allocation meter and the 30% measurement inaccuracy factor will be applied as per the current (fixed ratio) methodology. • Non-functional measurement equipment will also be a cause for curtailment/suspension of injection under the contract.
Payment delays/Non-payment of crude handling fees by SEPLAT, POOC OREDO	• Customer credit rating system has been developed with the objective of moving customers with poor payment performance (hence low credit rating) to pre-payment terms • Parties will be required to pay overdue invoices before the CHAs are renewed otherwise the contract will be on pre-payment basis. In the event that CHA's cannot be renewed and SPDC has to suspend the provision of CHA services to the Injectors, DPR will be engaged to ensure their understanding of SPDC's position i.e. inability to continue providing services with huge outstanding CHA debts by Injectors. • The standard CHA now provides for payment security in form of an irrevocable Letter of Credit (LC) or any other payment security acceptable to SPDC and in the event that Parties are unable to clear overdue invoices and SPDC is unable to draw on their respective LCs/Payment Securities due to unavailability or non-replenishment, SPDC shall:

	(i) Suspend/Withhold all services (including but not limited to cargo programing and scheduling of the defaulting party's crude oil cargo(s) in the lifting program) with immediate effect until full and final payment/settlement of the invoices and accrued interest thereon or (ii) Move Parties to prepayment terms as provided in the CHA for the remaining period of the agreement. In the case of POOC the existing arrangement to pay for CHA services via assigned proceeds of crude sales will be incorporated into the CHA but on a prepayment basis.
Chemical Contamination and Injection of off-spec crude: Contamination of Forcados blend due to use of unapproved additives during operations, or injection of off-spec crude by Parties	• The CHAs will include a provision (which is aligned with OML 30 TPIA) that makes Parties liable for damage arising from Parties injecting contaminated or off-spec crude/additives into the terminal • Parties to use only SPDC approved chemicals in its operations. • SPDC will retain the right to carry out routine/ad-hoc sampling/testing for harmful chemicals. • SPDC will also retain the right to request immediate suspension of off-spec crude injection by Parties. • The CHA will include that Parties provide a crude assay biannually to check the injected crude API level against the specified API acceptable limits for FOT
Value loss due to inconsistency with FOT Crude API	• In addition to the requirement for Injectors to submit their crude assay on a biannual basis, SPDC will also collect samples and analyse the SEPLAT commingled crude stream on a biannual basis. • Also there will be a provision in the CHA for a tariff escalator to be applied if TPI crude falls outside a particular API range. • SPDC will also retain the right to curtail/suspend crude injections if the API level falls outside of the FOT acceptable band.
Revenue Loss to Competing Crude Handling/Evacuation Infrastructures: SEPLAT has installed 7KM export line to WRPC. POOC is about to complete (85% completed) the Amukpe Escravos Pipeline Project (AEPP) to transport crude oil from Pan Ocean's Amukpe Metering Station to CNL Escravos Tank Farm) The 160kbd capacity line has the POOC/SEPLAT/NPDC Oredo) production as primary	• There is no specific mitigation for this risk as SPDC cannot stop other operators from making alternative arrangements. However, SPDC will continue to strengthen its position as the preferred terminal service provider in terms of customer value proposition.

target customers .	
FOREX exposure TPIs generally prefers to pay for crude handling services in NGN (some have relied on the CBN circular of 17th April 2015 which directed that pricing of goods and services in Nigeria should be in NGN).	• The CBN clarification letter of 21st May 2015 exempts Oil and Gas operations and services from the directive in their letter of 17th April 2015, it states clearly that Operators in Oil and Gas include Oil Service Companies are allowed to make and receive payments in foreign currencies. • Crude handling services to Parties (except for NPDC-OREDO) will be billed 40% in NGN and 60% in USD.

<u>Alternatives Considered</u>

The decision to decline the Parties request to handle their crude is not proposed, as it could result in the following:

a) Perception that SPDC is not supportive of government's interest in optimising oil production, as crude from the respective fields will be stranded.

b) Considering the investment so far made by the Parties (as indigenous operators) to process, transport and measure their crude injection into the SPDC JV facility under the current CHA; SPDC may suffer reputational damages as it may be perceived as deliberately attempting to frustrate them.

With respect to the structure of the CHA's other options considered are:

1. Negotiate a tripartite agreement between SPDC as TERMINAL OPERATOR, NPDC (SHORELINE JV) as PIPELINE OPERATOR and the respective TPI's as SHIPPER as currently being standardized for TPI's injecting into the Bonny Oil Terminal (BOT).
   a. Pros: This option aligns with the ongoing CHA standardisation in the east.
   b. Cons: The tripartite CHA is a more complicated voluminous document; NPDC as pipeline operator is not disposed to a tripartite CHA; The existing of individual bilateral CHA's + TPIA model works so there is no need to change
2. Incorporate the SEPLAT/POOC/NPDC-OREDO crude as TPI's under the NPDC SHORELINE JV (OML 30) CHA:
   a. Pros: Minimize the number of contract/interfaces to be managed; For NPDC-OREDO (only) this option would align its CHA tariff with OML 30 CHA; NPDC has also requested for the NPDC-OREDO volumes to be incorporated into the OML 30 CHA.
   b. Cons: It takes away agreement confidentiality for SEPLAT, POOC and NPDC; SEPLAT (who are currently the highest injectors in the west) have made it clear that they prefer to have and manage their own bilateral CHA with SPDC for terminal services

The decision is to implement option 2 above for the NPDC-OREDO production and negotiate the renewal of SEPLAT and POOC CHA as individual bilateral contracts between each of them and SPDC

<u>Section 4:</u> <u>Negotiation Strategy</u>

Building on the Midwestern Terminalling Agreement (which is the latest in the suite of CHA's for TFP users); a standard template CHA is being developed for TFP users in the West and both SEPLAT and POOC CHA's will be based on this standard template. The NPDC SHORELINE JV CHA (under which it is proposed that the NPDC-OREDO crude production be handled) will also be migrated to the template CHA when it is due for renewal in 2017.

This standard template will have provisions for novation by any of the Parties, separation of the Pipeline Operator and its role in crude measurement and allocation after the Delivery Point Measurement Equipment has been installed with adjustments to accommodate issues that are peculiar to each Party. Also ensuring that the provisions for crude measurement standards, crude allocation notifications and crude theft loss allocation procedures are aligned and consistent with the TPIA between SPDC and NPDC (the TFP operator).

The current tariffs review up to 2015/2016 is robust enough as it sufficiently covers the costs of Terminalling services to SPDC with some margin. However POOC's Terminal Capacity Charge will be increased by $0.14/bbl to match SEPLAT tariff and OREDO's Terminal capacity charge is to be increase by $0.06/bbls to align with SHORELINE JV CHA tariff.

Section 5: Corporate Structure and Governance

This opportunity will be negotiated and managed by SPDC on behalf of the SPDC-JV in line with the Joint Operating Agreement.

Section 6: Functional Support and Consistency with Group Standards

Functional support is provided by Economics, Legal, Finance, Tax, Treasury and Controllers to ensure alignment with Group Standards.

Section 7: Project Management, Monitoring and Review

Decisions relating to this CHA will be subject to the GM Commercial and NOV) as Decision Executive (DE); The Business Opportunity Manager is the Commercial Manager, Crude Handling (Ralph Gbobo). The "core" negotiation team will be led by Deji Aliu for Seplat and PANOCEAN CHAs and Chijioke Ojiako for NPDC Oredo, with primary support from Olotu Ehi (Legal).

Section 8: Budget Provision

This opportunity is structured to be a zero CAPEX project. OPEX cost for staff time and logistics will be met from SPDC JV 2016 budget provisions.

Section 9: Group Financial Reporting Impact

Group Financial Reporting Impact not required at this time.

Section 10: Disclosure

This proposal does not require disclosure of material confidential information. However, disclosure, if required, will be in accordance with Group and SPDC policies and procedures.

Section 11: Financing

Not relevant, no capital investments are associated with this project.

Section 12: Taxation

There are no unusual Taxation features.

Section 13: Key Parameters

This proposal seeks the mandate to negotiate a CHA with SEPLAT, PANOCEAN and NPDC as follows:
Term: 5 Years
SEPLAT; Initial Reserved Production Capacity (RPC):80kbbl/d
Minimum Tariff Charge: US$ 2.04 Gross against current total unit cost of $0.985/bbls

POOC; Initial Reserved Production Capacity (RPC):8kbbl/d
Minimum Tariff Charge: US$ 1.90 for Gross against current total unit cost of $0.985/bbls

NPDC-OREDO; Initial Reserved Production Capacity (RPC):5kbbl/d
Minimum Tariff Charge: US$ 1.90 for Gross against current total unit cost of $0.985/bbls

<u>Section 14:</u> <u>Signatures</u>

<u>Initiated by:</u>

…………………………………
Markus Droll
(SEPA-UIO/G, VP Nigeria and Gabon)
Date: ….. /……/ …..

<u>Supported by:</u>

………………………………
Bart Van De Leemput
(SIEP-UIO/ EVP UI Operated)
Date: …../…../…..

………………………………
Erwin Nijsse
(SIEP-FUI/O, VP Finance Operated)
Date: …../…../…..

APPENDIX 1 Summary Economics

The economics evaluation for this PCN was carried out on a forward-look basis using the proposed dry crude tariff receivable of US$2.04/bbl (SEPLAT) and US$1.90/bbl (NPDC, PANOCEAN) a total SPDC Opex of US$49.7 Mln over the 5 year contract life. The proposed tariffs are the current tariff charged in the existing Agreements. Our request is to continue with this rate in the renewals.

The consolidated base case result returns an NPV7% of US$ 6.86 Mln (Shell Share). This project requires no Capex investment to gain the revenues, hence non-applicability of VIR whilst OPEX to SPDC is derived from the actual calculated Terminal Capacity and Production Charges.

Sensitivities were carried to show the value of the CHA if production increases by 25% or decreases by 15%. These returned NPV7% on the consolidated case of US$ 9.46 Mln and US$5.83 Mln respectively. Additional consolidated sensitivities were also carried out to show the impact of high and low Opex. This returned an NPV7% of US$5.25 Mln and US$7.82 Mln respectively. Details are shown in Table 1 on sensitivities for the CHA tariffs

Table 1: Economics Table (Shell Share RT16)

SEPLAT

		Sensitivities			
Case	**Base Case**	**Prod. +25%**	**Prod. -15%**	**Opex +25%**	**Opex -15%**
NPV0 US$ (Mln)	6.86	9.84	6.08	5.51	8.13
NPV7 US$ (Mln)	6.01	8.27	5.11	4.62	6.84
VIR	NA	NA	NA	NA	NA
Proposed Tariff USD/bbl	2.0	2.0	2.0	2.0	2.0
Total Opex US$ (Mln)	42.8	53.5	36.4	53.5	36.4

POOC

		Sensitivities			
Case	**Base Case**	**Prod. +25%**	**Prod. -15%**	**Opex +25%**	**Opex -15%**
NPV0 US$ (Mln)	0.62	0.87	0.53	0.46	0.72
NPV7 US$ (Mln)	0.52	0.73	0.44	0.38	0.60
VIR	NA	NA	NA	NA	NA
Proposed Tariff USD/bbl	1.9	1.9	1.9	1.9	1.9
Total Opex US$ (Mln)	4.3	5.4	3.6	5.4	3.6

NPDC

		Sensitivities			
Case	**Base Case**	**Prod. +25%**	**Prod. -15%**	**Opex +25%**	**Opex -15%**
NPV0 US$ (Mln)	0.39	0.55	0.33	0.29	0.45
NPV7 US$ (Mln)	0.33	0.46	0.28	0.24	0.38
VIR	NA	NA	NA	NA	NA
Proposed Tariff USD/bbl	1.90	1.90	1.90	1.90	1.90
Total Opex US$ (Mln)	2.7	3.4	2.3	3.3	2.3

Consolidated

		Sensitivities			
Case	**Base Case**	**Prod. +25%**	**Prod. -15%**	**Opex +25%**	**Opex -15%**
NPV0 US$ (Mln)	7.83	11.26	6.93	6.26	9.30
NPV7 US$ (Mln)	6.86	9.46	5.83	5.25	7.82
VIR	NA	NA	NA	NA	NA
Proposed Tariff USD/bbl- NPDC $ POOC	1.90	1.90	1.90	1.90	1.90
Proposed Tariff USD/bbl-SEPLAT	2.04	2.04	2.04	2.04	2.04
Total Opex US$ (Mln)	49.7	62.2	42.3	62.2	42.3

Economic Assumptions

- Education tax of 2% assessable profit.
- PPT taxed at 85%
- NDDC levy 3% of total expenditure.

PCN CHA Assumptions

SEPLAT; Initial Reserved Production Capacity (RPC):80kbbl/d
Minimum Tariff Charge: US$ 2.04 for Gross

- Terminal Capacity Unit Cost of US$ 0.545/bbl
- Terminal Production Unit Cost of US$ 0.44/bbl

PANOCEAN; Initial Reserved Production Capacity (RPC):8kbbl/d
Minimum Tariff Charge: US$ 1.90 for Gross

- Terminal Capacity Unit Cost of US$ 0.545/bbl
- Terminal Production Unit Cost of US$ 0.44/bbl

NPDC Oredo; Initial Reserved Production Capacity (RPC):5kbbl/d

Minimum Tariff Charge: US$ 1.90 for Gross

- Terminal Capacity Unit Cost of US$ 0.545/bbl
- Terminal Production Unit Cost of US$ 0.44/bbl

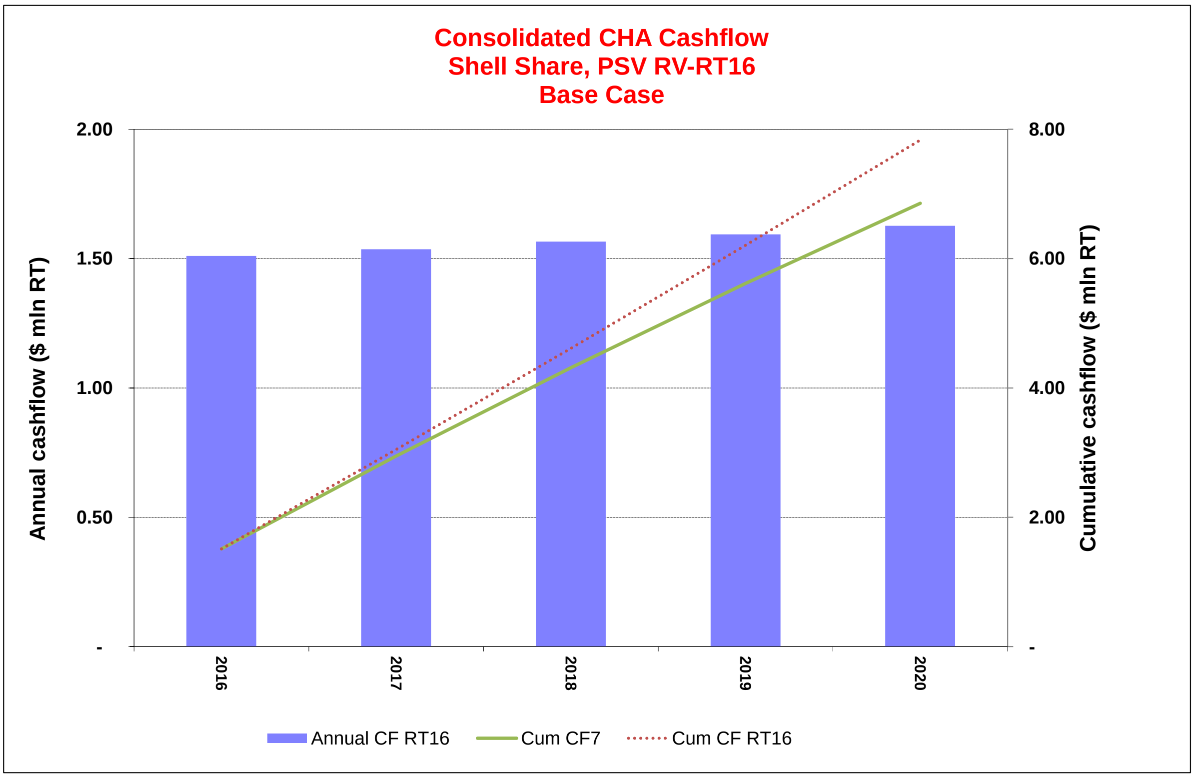
CHA REVENUE PROJECTIONS

Seplat CHA REVENUE PROJECTION IN MOD $US					
Year	**2016**	**2017**	**2018**	**2019**	**2020**
Tariff	**2.04**	**2.08**	**2.12**	**2.16**	**2.21**
Volume/Day	**80,000**	**80,000**	**80,000**	**80,000**	**80,000**
Daily Revenue	163,200	166,400	169,600	172,800	176,800
Operational Days/Year	**300**	**300**	**300**	**300**	**300**
Annual Revenue	48,960,000	49,920,000	50,880,000	51,840,000	53,040,000
5 YEAR SUMMARY					
Total ($)	**254,640,000**				
Shell Share (30%)$	**76,392,000**				

Panocean CHA REVENUE PROJECTIONS IN MOD $US					
Year	**2016**	**2017**	**2018**	**2019**	**2020**
Tariff	**1.9**	**1.94**	**1.98**	**2.02**	**2.06**
Volume/Day	**8,000**	**8,000**	**8,000**	**8,000**	**8,000**
Daily Revenue	**15,200**	**15,504**	**15,814**	**16,130**	**16,453**
Operational Days/Year	**300**	**300**	**300**	**300**	**300**
Annual Revenue	**4,560,000**	**4,651,200**	**4,744,224**	**4,839,108**	**4,935,891**
5 YEAR SUMMARY					
Total ($)	**23,730,423**				
Shell Share (30%)$	**7,119,127**				

NPDC Oredo CHA REVENUE PROJECTIONS IN MOD $US					
Year	**2016**	**2017**	**2018**	**2019**	**2020**
Tariff	**1.9**	**1.94**	**1.98**	**2.02**	**2.06**
Volume/Day	**5,000**	**5,000**	**5,000**	**5,000**	**5,000**
Daily Revenue	**9,500**	**9,690**	**9,884**	**10,081**	**10,283**
Operational Days/Year	**300**	**300**	**300**	**300**	**300**
Annual Revenue	**2,850,000**	**2,907,000**	**2,965,140**	**3,024,443**	**3,084,932**
5 YEAR SUMMARY					
Total ($)	**14,831,514**				
Shell Share (30%)$	**4,449,454**				

SEPLAT ,PANOCEAN & NPDC Oredo Consolidated 5 year Summary		
Total Headline Size ($)	**293,201,937**	
Shell Share (30%) $	**87,960,581**	



APPENDIX 2: Unit Cost Vs Current and Proposed tariffs

TPI	UNIT COST ($)	CURRENT TARIFF ($)	PROPOSED TARIFF ($)
SEPLAT	0.985/barrel	2.04/barrel	2.04/barrel
POOC	0.985/barrel	1.90/barrel	1.90 (upside 2.04)/barrel
OREDO	0.985/barrel	1.90/barrel	1.90 (upside 2.04)/barrel

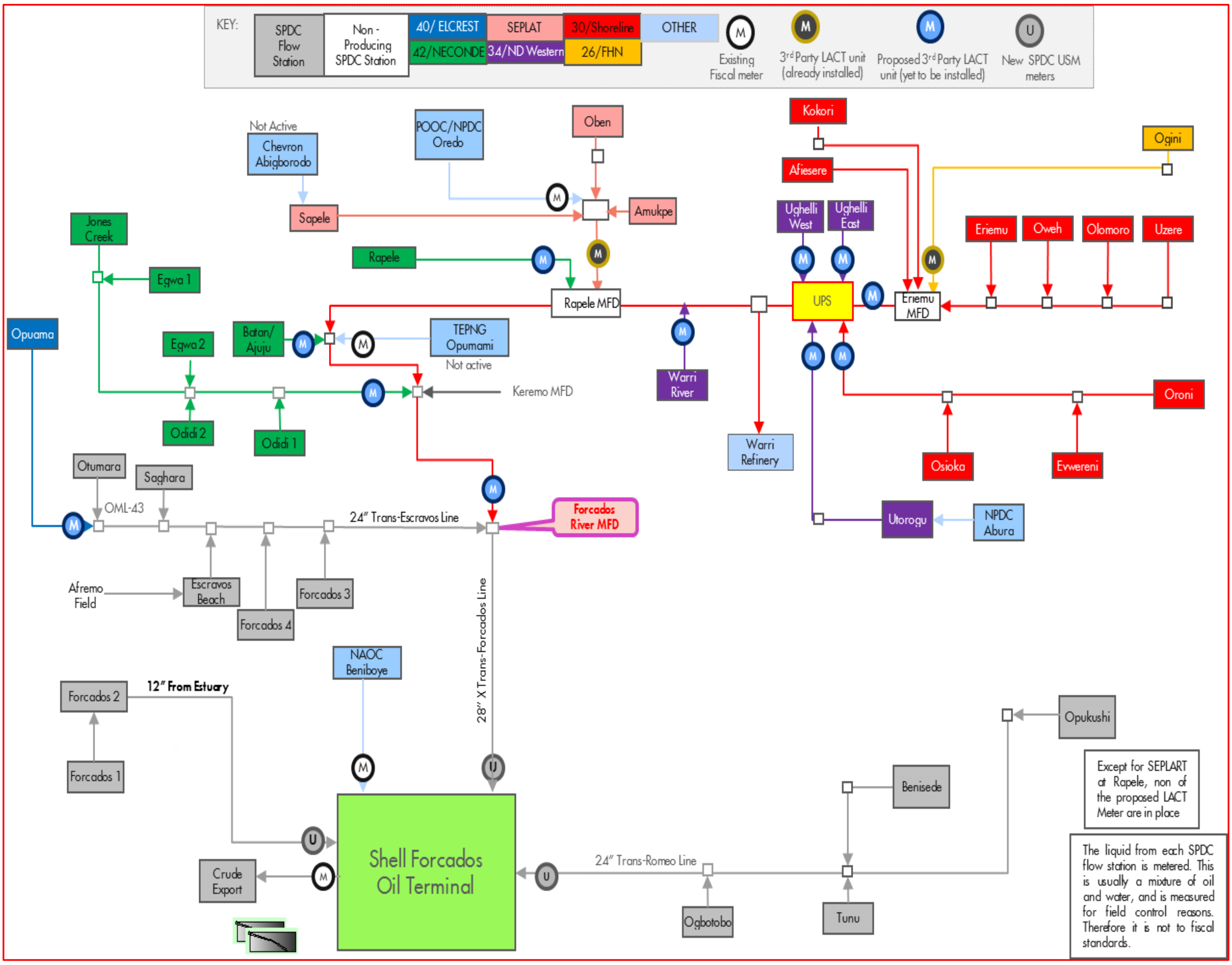
APPENDIX 3: FUNCTIONAL SUPPORT

Functional Support for this PCN was obtained from the following:

Function	Name	Date
Treasury	Claudia Kroeger	
Tax	Eric van der Maas	
Legal	Barbara Blum	
Economics	Chidi Nkazi	

Controllers	Tjerk Huysinga	

APPENDIX 4: SPDC WEST NETWORK


KEY:
SPDC Flow Station
Non - Producing SPDC Station
40/ ELCREST
SEPLAT
30/Shoreline
OTHER
42/NECONDE
34/ND Western
26/FHN
Existing Fiscal meter
3rd Party LACT unit (already installed)
Proposed 3rd Party LACT unit (yet to be installed)
New SPDC USM meters
Not Active
Chevron Abigborodo
POOC/NPDC Oredo
Oben
Kokori
Ogini
Afiesere
Sapele
Amukpe
Ughelli West
Ughelli East
Jones Creek
Rapele
Eriemu
Oweh
Olomoro
Uzere
Egwa 1
Rapele MFD
UPS
Eriemu MFD
Opuama
Egwa 2
Batan/ Ajuju
TEPNG Opumami
Not active
Warri River
Keremo MFD
Oroni
Odidi 2
Odidi 1
Warri Refinery
Osioka
Evwereni
Otumara
Saghara
OML-43
24" Trans-Escravos Line
Forcados River MFD
Utorogu
NPDC Abura
Afremo Field
Escravos Beach
Forcados 3
Forcados 4
28" X Trans-Forcados Line
NAOC Beniboye
Forcados 2
12" From Estuary
Opukushi
Forcados 1
Benisede
Except for SEPLART at Rapele, non of the proposed LACT Meter are in place
Crude Export
Shell Forcados Oil Terminal
24" Trans-Romeo Line
Ogbotobo
Tunu
The liquid from each SPDC flow station is metered. This is usually a mixture of oil and water, and is measured for field control reasons. Therefore it is not to fiscal standards.