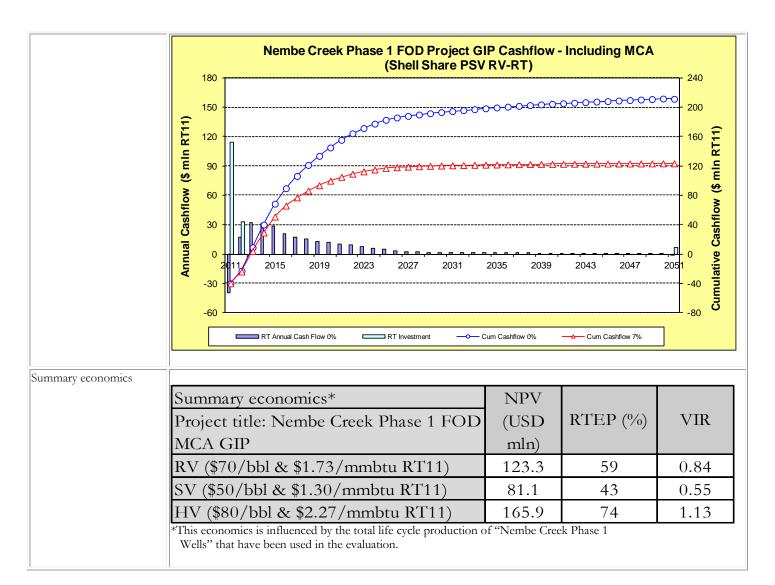
## The Shell Petroleum Development Company of Nigeria Limited

## **Group Investment Proposal**

## **Summary Information**

Business unit and company										
Dusiness unit and company	Shell Petroleum Development Company of Nigeria Limited (SPDC)									
Group equity interest	100% in SPDC	100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.								terest.
Other shareholders / partners		Nigerian National Petroleum Corporation (NNPC: 55%), Total E&P Nigeria Ltd (10%), and Nigerian Agip Oil Company (NAOC: 5%)								ip Oil
Business	Upstream Inter	national (UI	)							
Amount	The headline size is made up of proposal for the CAPEX Shell S  The total common contribution of	US\$81.13 r e execution hare MOD : nitment for	nln approv of the Ne and US\$1.5 Shell of U	ved in the embe Creek 5 mln OPE	previous Phase 1 X Shell S	proposal ar project. The hare.	nd US\$70.42 e headline siz	mln being se is compo	requested osed of US	l for in this S\$150.05mln
Project	Nembe Creek	"		Developmer	nt (FOD)	Phase 1				
Main commitments	50/50 MOD	100	0% JV (\$'mln) M	OD_Previous IP			Shell Share (	\$'mln) MOD_Re	vised IP	
	Description	Previous IP_JV under MCA Funding	Incremental IP Request_JV Funding	Incremental IP Request_MCA Funding	Total IP	Shell Share MCA_Previous IP	Shell Share MCA_Incremental IP	Shell Share_Equity	Shell Share_MCA	Total Shell Share
	Flowline & Hookups	22.12		-	22.12	14.75	-	6.64	8.11	14.75
	Facilities	4.05	-	-	4.05	2.70	-	1.21	1.48	2.70
	Wells	88.42	-	101.07	189.49	58.95	67.38	56.85	69.48	126.32
	PMT	-	5.15	-	5.15	-	1.55	1.55	-	1.55
	Contingency	7.11		-	7.11	4.74	-	2.13	2.61	4.74
	Total CAPEX	121.70	5.15	101.07	227.91	81.13	68.92	68.37	81.68	150.05
	SCD (OPEX)	-	5.00		5.00	-	1.50	1.50	-	1.50
	Total Cost	121.70	10.15	101.07	232.91	81.13	70.42	69.87	81.68	151.55
Reserves/Resources	This project is a MMstb of oil a MMstb (SS) froattached). In ac	and 0.27 bln om PUD to	sm3 of g Proved I	as (SS) to Developed	production in 2012	on and trans with positiv	ferring equiva e impact on	alent SEC SPDC DI	Proved re D&A (Ref	serves of 13 HCM table
Production	Incremental oil (8.2 Mbopd and contributing to	d 2.8 MMsc	f/d SS) by	2013 thus						
Source and form of financing	This investment Nembe project including NNP do not include	bundle und C carry und	er MCA) r er the MC.	ef GFP ap <sub>j</sub> A, will be f	proved by inanced v	y the RDS B vith SPDC I	oard on 22.0'	7.2008. To	tal Shell co	ommitments,



### Section 1: The proposal (Management Summary)

This revised Group Investment Proposal (GIP) seeks support/approval for funding of US\$70.42 mln Shell equity Share MOD and already approved additional investment of US\$81.13 million as NNPC carry under MCA to execute the Nembe Creek D sands Further Oil Development (FOD) phase 1 project.

The GIP update is necessitated by: the change in funding scope from Shell Equity share only to Shell Equity plus NNPC carry under MCA arrangement, project cost increase resulting from higher than anticipated Rig and materials cost, re-categorisation of the cost based on MCA guidelines and also the need to re-run the economics.

Nembe Creek Field is the largest oil field in the Western Swamp area of SPDC East with expectation STOIIP of 2832.3 MMstb and Expectation Ultimate Recovery(100%) of 1401.5 MMstb (reference NNS ARPR 31/12/2010). The cumulative production as at 31/12/2010 was 679.5MMstb of oil and 559.16 Bscf of gas from 64 wells. Undeveloped Expectation oil Reserves of 176.2 MMstb and 130.1 Bscf of gas exist in the field from NEMC phase 1 project and some existing conduits that have not been re-opened post NCTL commissioning. The development was optimised for the D sands by splitting it into two separate phases. The 'D' sands further oil development phases 1 & 2. This GIP covers only the Phase 1 Further Oil Development.

The Nembe Creek phase 1 project aims to drill and complete 8 wells, install flowlines and hook-up wells to existing flowstations, construct/install Remote Field Manifold and Bulk /Test lines. Nembe Creek field has AG gathering infrastructure in-place. There is export/pipeline ullage to deliver the produced gas to the Soku Gas Plant. The produced water will be disposed of at the Bonny Terminal. The total liquid processing capacity of the 4 existing flow stations in Nembe Creek Field is 180 Mbpd. Crude is evacuated from the field via the new Nembe Creek Trunk Line (NCTL).

In March 2007, approval was sought and obtained for US\$31.8 mln CAPEX Shell Share (with US\$4.7 mln previously approved in 2006 pre-FID IP) bringing the total approved Shell Share to US\$36.5 mln to drill 8 oil producers (7 horizontal & 1 conventional) in Nembe Creek field in 2007. As at June 2011, no new well has been drilled due to unavailability of the second Swamp Rig. There have been upward revisions of the well costs as shown above.

Drilling operations started in July 2011 with MCA pickup rig, based on the signed June 2011 Short-Term Drilling and Workover Sequence. The first oil is expected in August 2011 and typically, the new wells are expected to produce dry oil from 6 months to 2 years before water breakthrough. All the 8 wells will have gaslift mandrels to allow for gas lift assistance at a later stage.

The 2007 IP economics returned an NPV of \$61.6 mln at a Project Screening Value (PSV) of \$30/bbl, compared to the full lifecycle evaluation of this revised IP at \$81.1 mln NPV (7%) at a higher PSV of \$50/bbl (ref. Summary Economics section, Table 1) against the background of a different cost profile.

## Section 2: Value proposition and strategic and financial context

- This project is aligned with SPDC's strategic goals and priorities by maturing economic truncated 2P reserves of 26.8 MMstb of oil and 0.27 bln sm3 of gas (SS) to production and transferring equivalent SEC Proved reserves of 13 MMstb (SS) from PUD to Proved Developed in 2012 with positive impact on SPDC DD&A (Ref HCM table attached). In addition 0.26 MMstb PUD associated with MCA had been booked in 2010 (Ref 31.12.2010).
- Incremental oil production, peaking at 27.3 Mbopd by 2013, thus increasing the effective utilization of the new NCTL pipeline and contributing 9.7 MMscf/d to SPDC's gas supply to NLNG. This optimizes further the use of existing Right of Way (RoW) and facilities thereby lowering Unit Technical Cost (UTC) of development and minimizing the footprint.

The additional oil will partly arrest the production decline in Nembe Creek field while the associated gas will also contribute to gas sales. It will also lower the bulk water volume flowing through the Nembe Creek Trunk Line (NCTL) considerably. The result of this is higher volume of dry oil for the same volume of gross liquid.

#### **Summary Economics:**

The base case economics was evaluated on a forward-look basis and assumes that Shell will fund its NNPC share of the Carry (MCA) component of the costs and its Equity share of the project costs. This evaluation used the Shell Equity from 2008 to 2012 of US\$69.87 mln (including US\$1.5mln OPEX) and MCA Shell Share of US\$81.68 mln (i.e. Total cost of US\$151.55 mln out of \$232.91mln MOD 100% JV). The Project Management (PMT) CAPEX and Social Performance OPEX are excluded from MCA funding (treated as JV cost) as they were not originally part of the carry costs under the agreement.

The headline number covers the 2008 – 2012 CAPEX and OPEX Shell share, under JV funding required for the project execution, and the Shell share of the NNPC portion of the project cost, bringing total Shell share of the project cost to approximately 65% of the SPDC JV 100% cost of US\$232.91mln.

Sensitivities evaluated include:

- High CAPEX
- 1yr Schedule delay
- Full Life Cycle
- PIB House Version

- High & Low reserves
- Concession expiration in 2019
- 1.5% cost mark up as provision for costs dispute by NNPC.

The impact of earlier expenditure (\$1mln 100% JV MOD) on the base case economics is shown under the Full Life Cycle sensitivities. The tornado plot is shown in Figure 1 while details of the evaluation results are shown in the economics grid in Table 1.

Table 1: Upstream Economic Grid of Nembe Creek 'D' Sands FOD Phase 1

PV Reference Date: 1/7/2011	NPV (S	/S \$ mln)	VIR	RTEP	UTC (R	T \$/boe	Payout-Time (RT)_0%	Maximum Exposure (RT)
Cash flow forward from: 1/1/2011	0%	7%	7%	%	0%	7%		
Base Case + MCA								
SV (\$50/bbl & \$1.30/mmbtu RT11)	143.3	81.1	0.55	43	8	10		
RV (\$70/bbl & \$1.73/mmbtu RT11)	211.2	123.3	0.84	59	8	10	2013	\$40.0mln in 2011
HV (\$90/bbl & \$2.27/mmbtu RT11)	280.0	165.9	1.13	74	8	10		
Oil BEP (RT \$/bbl)						8.44		
Sensitivities (using RV)								
High CAPEX (P90)		120.6	0.69				2014	\$48.6mln in 2011
High Reserves		136.8	0.93				2013	\$31.8mln in 2011
Low Reserves		43.5	0.30				2015	\$43.5mln in 2012
1-Yr Production Schedule Delay		114.2	0.78				2014	\$47.4mln in 2012
Concession Expiration (2019)		92.9	0.63				2013	\$40.0mln in 2011
Full Life Cycle (Capex - \$1.0mln MOD 100%)		123.0	0.84				2013	\$40.3mln in 2011
1.5% cost markup due to BVA issues		118.3	0.79					
PIB House_v12		146.7	1.00					

Key Project Parameter Data Ranges (Shell Share) BP10 **Parameter** Low Mid High Comments Provision Incremental CAPEX under MCA Funding of \$81.38mln and JV Funding of \$68.01mln. Full Life Cycle cost of \$151.55mln made up by JV Capex (MOD) US\$ mln 149.39 133.45 149.39 Funding of \$68.37mln and MCA of \$81.68mln. Incremental project OPEX under JV 1.80 Opex (MOD)\_Project US\$ mln 1.50 1.34 1.50 Funding. Production volume forecast till end 28.98 **Production Volume** mln boe 28.82 12.01 28.82 of field life Base re-start Up production Start Up Date mm/yy Aug-11 Aug-12 Aug-11 Aug-11 Production vloume from Aug '11 to Production in first 12 months mln boe 1.5 July '12

Figure 1: Tornado Plot for Nembe Creek Sands Phase 1 Project GIP

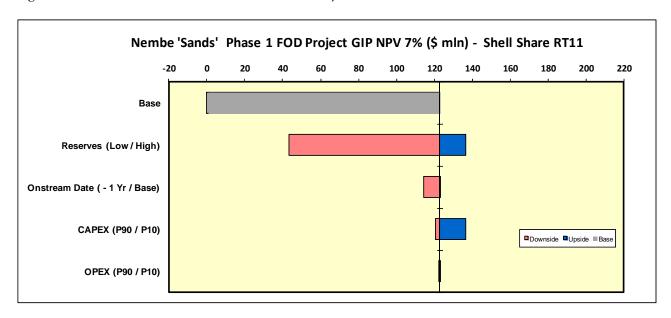
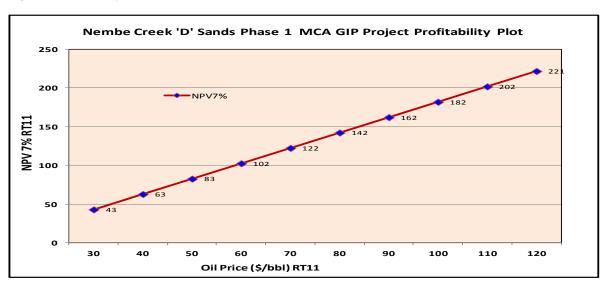


Figure 2: Profitability Plot for Nembe Creek 'D' Sands Phase 1 MCA GIP Project



#### **Key Economic Assumptions:**

- AGFA fiscal treatment applied.
- Gas Supply to NLNG T1-6 assumed Gas Sales Price \$1.73/mmbtu at PSV RV-RT in 2011.
- Gross Heating Value (GHV) of 1,150 btu/scf applied.
- ARPR OPEX as at 31/12/2010 (for 2011) was applied in addition to project Social Performance OPEX.
- AG Gas Sales Assumption is 87% of AG Produced
- NDDC Levy of 3% of total expenditure excluding flare penalty
- Education Tax of 2% assessable profit
- Flare penalty of \$3.5/Mscf applied.
- Water treatment cost at \$0.50/bbl applied.
- 10% of total project RT CAPEX assumed as abandonment cost

## MCA assumptions:

- All costs over the MCA ceiling would be recovered through cost oil.
- Project management costs were not included among the carried cost.
- MCA treatment is unchanged under PIB fiscal regime
- Profit oil ceiling of 8% IRR on carried costs

## PIB assumptions:

- NHT depreciation schedule is 4 x 20%, 19% for qualifying expenditure.
- CIT depreciation schedule is 3 x 25%, 24%, for qualifying expenditure.
- Royalty rates based on product (value) prices and production rates per PML (assumed equal to a field).
- Education tax calculated as 2% of its assessable profit and it is not deductible for CIT, but deductible for NHT.
- NDDC levy calculated as 3% of expenditure
- Withholding tax is applicable at a rate of 7.5% for IAT version but not for the alternate version
- 20% of overseas cost is non-deductible for determination of NHT taxable income
- NHT rate is 50% for onshore and shallow water, and 30% for frontier acreages and Deep Water.
- CIT is 30% of taxable income and is not deductible from NHT
- Recovery in MCA for JV has been assumed for PIB
- Nembe is an existing field hence no production allowance is applicable.

## Section 3: Risks, Opportunities and Alternatives

## Key risks, Mitigation & Opportunities include

The principal risks associated with this proposal, key mitigation measures and opportunities are as follows:

## 3.1 Risks

## Funding:

There is the risk that project value to Shell will be eroded if the MCA-approved cost estimate is exceeded. There is also the risk that costs above the approved cost estimate may not be approved by NNPC and therefore become a Shell exclusive charge.

## Mitigation

Project should be executed strictly based on approved budget. Partners will be engaged early enough where there is variation. Lateral learning from other projects will be implemented to avoid cost overrun.

## Community and Enabling Environment (Security, Sabotage, Political Environment):

Hostage taking, existence of militant groups and (heightened) threat of insurgence are current realities in the Niger Delta especially in the swamp which could threaten project execution.

#### Mitigation

General Memorandum of Understanding (GMoU) has been signed with the community and 2% of the total project cost will be used for Community project. With improvements in the Niger Delta security following the Amnesty programme, it is envisaged that there will be a reduction in community related NPT, although it is still perceived that a safe and secure environment relies on the presence of the government security outfit in the area. Existing Nembe Creek field project specific site security plan is in place and will be reviewed with Corporate Security through the appropriate Area Security Advisors with any amendments approved by Head Security Operations East. Specific threats will be managed through the Security & Surveillance Centre (SIS) and communicated in good time to those that need to "Know" and "act".

#### HSE:

The project is being executed under challenging circumstances in the Niger Delta Eastern Swamp.

#### Mitigation

HSE adviser has been assigned to the project and sustainable HSE-MS culture will be embedded during the execution of the project.

#### • Cost Overrun:

Increase in the rig cost as a result of non-productive time while drilling, escalated materials costs and Security.

#### Mitigation:

The well and facility cost have been updated to reflect current reality. Lateral learning from the completed Santa Barbara and Soku wells will be incorporated into the project and a focused Development Well Delivery Team with Well Engineering will continue to manage the activities.

### Early Water Breakthrough

Early water breakthrough from new wells resulting in reduced incremental oil recovery.

Mitigation

The wells will be optimally placed as possible to reduce the risk of water breakthrough. Learning from the previous wells drilled will be incorporated. Data from permanent down-hole gauges will allow real-time reservoir surveillance to optimize the individual well off-takes.

#### Risk around unapproved incremental MCA Costs

There is a risk that un-approved MCA costs would be disallowed for tax deductions by the FIRS.

Mitigation:

Upstream Commercial Finance would re-negotiate and ensure that incremental costs are approved by NNPC.

## 3.2 Opportunities

## Resources

All the critical positions required to deliver the project have been fully resourced. Development Swamp Asset East (DSSE) Field Development and Execution Team will support the project execution. Engineering support will be provided by both major and Asset Engineering Teams.

## Project support:

Project strongly supports the new oil production and would partly arrest the decline in oil production. The phase 1 wells will be used to acquire more data to help firm up the development proposals of Nembe Creek Phase 2 FDP which will further develop the D sand reservoirs and improve recovery.

## Knowledge Sharing

This project will provide a very good opportunity for the new well-site PEs to have requisite operations experience under the close supervision of their senior PEs and SDEs

#### 3.3 Alternatives

There are no alternatives to drilling these wells to develop the reserves given in this proposal.

### Section 4: Carbon management

The main impact on Greenhouse Gas emissions is at the surface facilities due to increased energy consumption and low compressor uptime. Nembe Creek FOD phase 1 project would raise the 10-year average Green House Gas (GHG) emissions by 31.1KtCO2eq/year. However, if the compressor uptime, measurement device and rotating equipment improvement proposals set out in the facilities GHG & EM plan are executed successfully the average incremental emissions from the project would be 14.8 KtCO2eq/year.

### Section 5: Corporate structure, and governance

This proposal is within the SPDC corporate structure and governance framework.

## Section 6: Functional Support and consistency with Group and Business Standards

This proposal and the execution of the project are consistent with the Group Business standards. Functional support for this proposal has been provided by Technical, Finance, Legal, Treasury, Contracting/Procurement, Social Performance and Tax functions.

## Section 7: Project Management, Monitoring and Review

The execution of the project is managed through the DSSE Field Development & Execution Team, Wells and Engineering Hub Teams in line with the SPDC organizational model. Following successful completion, the wells will be handed back to the Swamp

East Production Operations Team. The Project Team will report weekly and monthly to Asset Development Manager and the Development General Manager on the progress of the well delivery activities. There will also be regular reviews with JV Partners. The general project management is as spelt out in the Opportunity Realisation Process (ORP). All significant reviews and follow up actions had been done in the Development and Engineering Teams with all the Team leaders, Discipline Chiefs and Management. Details of the ORP review gates are shown below:

DG3 approval in December 2005 VAR4/DG4 July/November 2006 Spud date: July 2011. On-Stream Date: August 2011.

## Section 8: Budget provision

This revised Investment Proposal is in line with capital expenditure allocated to the Nembe Creek phase-1 project under the MCA of 2009 though there is shortfall of US\$34 mln (100%) in approved MCA versus current estimated project cost. In line with MCA agreement, NAPIMS will be engaged on the shortfall in order to reach an agreement on how to fund the additional cost.

Learning from recently executed similar projects has been incorporated into this revised budget for realism (e.g. increased well and Facility costs, high Non Productive Time (NPT) and low equipment efficiency). The total headline size being requested now for approval is US\$151.55 mln. The 100% Capex phasing (including Social Performance Opex of US\$5 mln) at 50/50 MOD estimate is shown in Table 2:

Table 2: NEMC FOD Phase 1 project Cost Phasing MOD 100% JV and Shell Share

#### NEMC P50 Estimate & Expenditure Phasing

				JV Fun	ded						A	ICA Funde	ed			
	2007	2008	2009	2010	2011	2012	2013	2014	2008	2009	2010	2011	2012	2013	2014	PROJECT TOTAL
Facilities	-	-			-	-			1.00	-	-	30.33	8.36	-	-	39.69
PMT		-			3.86	1.29	-	-	-	-	-			-	-	5.15
Wells	-	-		-	-	-	-	-	-	-	-	134.42	41.54	-	-	175.96
Contingency	-								-	-	-	5.33	1.78	-	-	7.11
OPEX (SCD)	-	-			3.00	2.00	-	-		-	-					5.00
100% CAPEX Phasing	0				3.86	1.29	-	-	1.00			170.08	51.68	-	-	227.91
100% Cost Phasing	0	0			6.86	3.29	0	0	1.00	-	-	170.08	51.68	-	-	232.91
Years / Phasing (Shell Share)	2007	2008	2009	2010	2011	2012	2013	2014	2008	2009	2010	2011	2012	2013	2014	PROJECT TOTAL
JV_Cost Phasing (Shell Share)_CAPEX	0				1.16	0.39	-	-	0.30	-	-	51.02	15.50		,	68.37
JV_Cost Phasing (Shell Share)_OPEX	0	0.00			0.90	0.60	-	-								1.50
Total JV_Cost Phasing	0	0.00			2.06	0.987	1	1	0.30	ı	-	51.02	15.50	- 1	- 1	69.87
MCA_Cost Phasing (Shell Share)_CAPEX									0.37	-	-	62.36	18.95	,	-	81.68
Total Shell Share_JV & MCA	0			0	2.06	0.99	0.00	0.00	0.67			113.39	34.45	0.00	0.00	151.55

## Section 9: Group financial reporting impact

The financial impact of this proposal on Shell Group financial is as outlined in the Table below:

US\$ mln	<b>Prior Years</b>	2011	2012	2013	2014	2015	Post 2015
Total Commitment	0.67	115.44	35.44	0.00	0.00	0.00	0.00
Cash Flow							
SCD Expenditure	0.00	0.90	0.60	0.00	0.00	0.00	0.00
Capital Expenditure	0.67	114.54	34.84	0.00	0.00	0.00	0.00
Operating Expenditure	0.00	2.64	4.65	4.93	4.79	4.73	65.09
Cash Flow from Operations	0.17	20.69	41.04	47.96	47.78	46.34	197.51
Cash Surplus/(Deficit)	(0.50)	(93.86)	6.20	47.96	47.78	46.34	197.51
Profit and Loss							
NIBIAT +/-	0.03	6.64	20.32	21.33	20.25	19.81	169.09
Balance Sheet							
Average Capital Employed	0.80	69.89	161.20	170.10	149.17	133.39	341.75

#### Section 10: Disclosure

Material disclosures, if any, will be done in line with the Group Disclosure Guidelines.

## Section 11: Financing

Both SPDC's direct share of expenditure and its contribution to NNPC's share will be funded from SPDC's own cash flow and existing intra-group facilities.

## Section 12: Taxation

MCA fiscal arrangements are acceptable to the Tax authorities, provided their sign off is obtained before implementation.

## Section 13: Key Parameters

The following are the main aspects of this proposal:

Approval for the total revised headline size of US\$151.55 mln Shell Share 50/50 MOD. This is made up of US\$81.13 mln (SS MCA) previously approved in 2007 GIP and US\$70.42 mln (SS MCA) in this revised GIP(incremental IP). The Shell only Equity and MCA contributions are US\$69.87 mln and US\$81.68mln respectively.

## Section 14: Signatures

This Proposal is submitted to the ECMB for appro	val.
Supported by:	For shareholder approval:
Maarten Wetselaar (FUI)	Malcolm Brinded (ECMB)
Date/	Date/
Initiator:  Ime Uyouko (UIG/T/DSSE)  Date: 31/07/2011	

# Lifecycle HCM Forecast Sheet

Nembe Creek Phase 1 Project Location & Country Version 2.0

Project No.: SPDC-11-2582

Mandatory for Upstream and mandatory for Exploration, Development and NBD projects  $\geq$  US\$ 100 mln SS, but strongly recommended for all projects < 100 mln US\$

OIL NGL	Date	Prospective Resources		itingent Additions	PR	MS 2P Reser Additions	ves	SEC Proved Reserves Additions		
[min bbi]		Prospect	Dev.	Dev.	Undev	eloped	Developed	Undev	Developed	
DG/Key event	(mm)-yy		Pending Post-DG1	Pending Post-DG2	Post DG3	Post-DG4	Developed	ondev	Бетегоро	
DG 2	Oct-05			26.8						
DG 3	Dec-05			-26.8	26.8					
FID	Jul-06			W. C. W. C.	-26.8	26.8		13.0		
First HC	2011	-		-		26.8	26.8	-13.0	13.0	
1131110	2012								0.0	
	2013					Transfer			0.0	
	2014								0.0	
Perf Update	2015								6.8	
on opacio	2016								0.0	
	2017							· ·	0.0	
Perf Update	2018								4.0	
	2019							-	0.0	
Perf Update	2020						1000		0.0	
	2021		1						2.9	
	2022								0.0	
Perf Update	2023					-	-		0.2	
	2024								0.0	
	2025					-			0.0	
	2026				-				0.0	
	2027				1	1			0.0	
	2028				-	-			0.0	
later years	1			1	0.0	0.0	26.8	0.0	26.8	
Total		0.0	0.0	0.0	0.0	Ų.U	20.0	0.0		

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		2U Prospective	2C Contingent Resources		PR	MS 2P Reser	SEC Proved Reserves		
OIL/NGL [bln sm3]		Prospect	Dev. Pending Post-DG1	Dev. Pending Post-DG2	Undeveloped		Developed	Undev	Developed
					Post DG3	Post-DG4	Developed	Under	Developed
ARPR 31.12.2009	before last					30.3		13.0	
ARPR 31.12.2010	last					30.3		18.3	

GAS	Date	2U Prospective		itingent Additions	PR	MS 2P Reser Additions	ves		Proved Additions
[bin sm3]			Dev.	Dev. Pending Post-DG2	Undev	eloped	Developed	Undev	Developed
DG/Key event	(mm)-yy	Prospect	Pending Post-DG1		Post DG3	Post-DG4	Developed	dilloct	Deteloped
DG 2	Oct-05			0.27					
DG 3	Dec-05		CAT.	-0.27	0.27				
FID	Jul-06				-0.27	0.27		0.20	
								-0.20	0.20
First HC	2011					-0.27	0.27	-0.20	0.00
	2012						-		0.00
	2013				-				0.00
	2014				-		-		0.00
	2015						-		0.00
	2016				-			_	0.00
	2017								0.00
	2018			-			-		0.04
	2019					-	-	-	0.00
	2020			-	-		-		0.00
	2021			-	_		-		0.03
	2022					-	-		0.00
	2023			-					0.00
	2024			1			-		0.00
	2025				-	-	-		0.00
	2026	-		-	-	-			0.00
	2027	-	-	-	-				0.00
later years	2020								0.02
Total		0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.27

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0.00	
0.04	
0.27	

N. S. S. S.	2U Prospecti		2C Contingent Resources		PR	MS 2P Reser	SEC Proved Reserves Additions		
Gas [bln sm3]		Prospect	Dev. Pending Post-DG1	Dev. Pending Post-DG2	Undeveloped		Developed	Undev	Developed
	Post DG3				Post-DG4	Developed	Onder	Developed	
ARPR 31 12 2009	before last					0.63		0.20	
ARPR 31.12.2010	last					0.51		0.29	

Name :

Signature :

VP Technoloal (or VP-X)
Lismont, Bart

0 1

Name :

For ADL-RE (RXC or RXHM)
ne : Emelle, Chima

Signature :

NGCEM3
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Note: Production forecast and PDRA forecast need to be fully consistent with economic and financial evaluations and results presented in the GIP, HCM foecast need to be captured in HRV-MS, which is the single data source for HCM.

developed reserves additions minus cum produciton						
2P Reserves Developed	SEC Proved Developed					
0.0	0.0					
0.0	0.0					
0.0	0.0					
0.0	0.0					
0.0	0.0					
0.0	0.0					
26.2	12.3					
23.1	9.3					
20.3	6.4					
17.5	3.6					
15.2	8.2					
13.2	6.1					
11.4	4.3					
10.1	7.0					
9.0	5.9					
70	4.0					

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developed reserves
additions minus cum
produciton

2P Reserves
Developed

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Nembe Creek FOD Nigeria			Project No.:	Version 2.4 Confidential Approved Cost & Schedule Estimate C11020	
Estimat	or: Olaribigbe, Elic	as	Planner:	Dadi, Musa	
Case: Base				Rates of Exchange are as	per SI-SX Data Set
Market Scenario: RV	Estimate Type:	3		Cost are in: USD Millions	
stimate Start / End: FID Me	ar-2007 / RFSU May-2012			EDM Dates	1-Jul-10
tegory				Total Costs	
acilities				36	
Wells>				180	
wners cost (incl. insurance,	, pre-FID, Capitalized interest)			6	
arket Escalation, EPC Prem	ium & Yaxes			2	
ntingency	Facilities 18%		<wells>: 0%</wells>	7	
flation				3	
			P10	P50	P90
roved Total Project Estimat	ie, MOB	10 3	205	233	280
			-12%		20%
ecution Strategy Premise	Use of existing tig and facilities (fla	owlines and mi	not facilities installation) carbon	of contracts	
-	Callout contracts  Security/community issues. Poor co	ontractor quality	funded and integral and average	tundi statuca sonoca ad	
y Project Risks	Calliour contracts  Security/continuity issues. Poor ca		ε, funding and internal and θ	ternal methoce management	
ontract Strategy  by Project Risks  clusions  nchmarking & Metrics	Security/continuity issues. Poor constitution of interest during a security to see the security of the securit	nonstruction			
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y Project Risks dusions achmarking & Metrics	Security/continuity issues. Poor constitution of interest during a security to see the security of the securit	renstruction (ed connects/P			Enish (P90)
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**ESTIMATE FACT SHEET**