The Shell Petroleum Development Company of Nigeria Limited

Group Investment Proposal

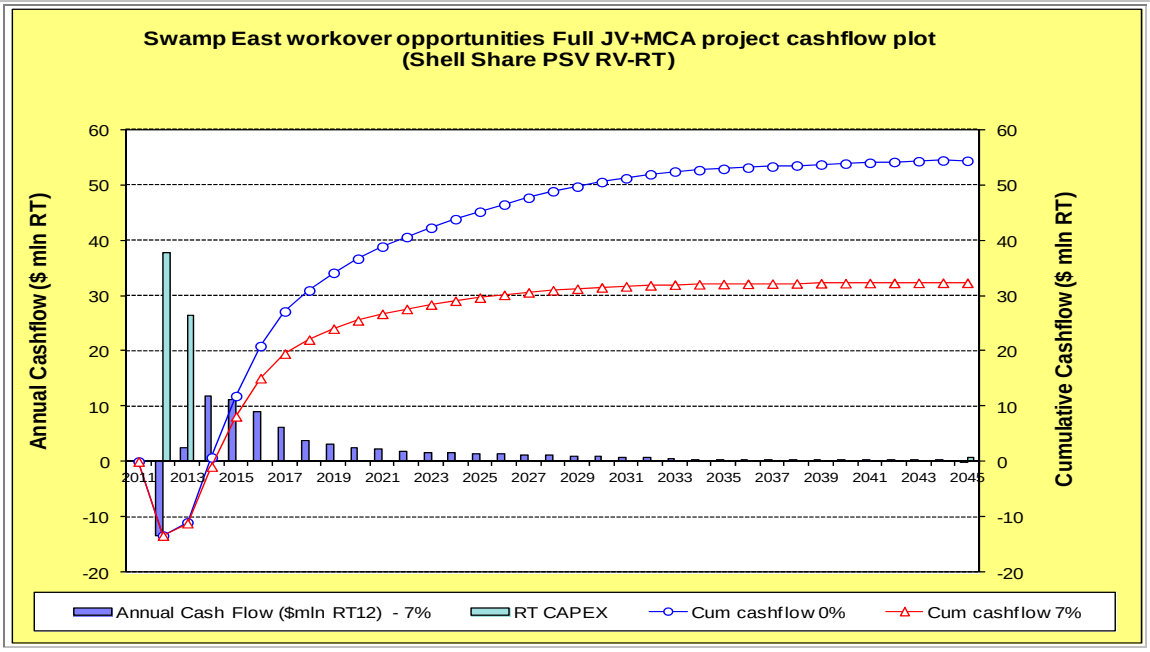
Summary Information

Business Unit and Function	Shell Petroleum Development Company of Nigeria
Group equity interest	100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.
Other Shareholders /Partners	Nigeria National Petroleum Corporation (NNPC: 55%), Total E & P Nigeria Limited (TOTAL: 10%), Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV
Business or Function	E&P
Amount	USD 59.5 mln Shell Share, MOD, 50/50 (USD 100.2 mln 100% JV)
Project	Swamp East Workover Opportunities Project
Main commitments	

Cost	100% JV (USD Mln)	Shell Share (US$ Mln)	Shell Share MCA (US$ mln)	Total Shell Share (US$ mln)
Location Preparation	9.4	2.8	2.7	5.5
Oil Development Drilling	24.3	7.3	8.9	16.2
Oil Development Completeion	12.9	3.9	4.7	8.6
Oil Recompletion	40.7	12.2	10.8	23.0
Flowline Construction/Hookup	8.9	2.7	2.3	5.0
PMT	1.6	0.5	0.0	0.5
Total Capex	**97.8**	**29.3**	**29.4**	**58.8**
SCD OPEX	2.4	0.7	0.0	0.7
Total Opex	**2.4**	**0.7**	**0.0**	**0.7**
Total (CAPEX + OPEX)	**100.2**	**30.1**	**29.4**	**59.5**

Reserves/ Resources	This project will mature 2C volume of 8.17 MMboe SS (of which 5.58 MMboe SS was booked in 31.12.2011 ARPR) and volumes have received the required TA endorsement. The additional 2C volume of 2.59 MMboe SS is from two new opportunities identified in Q1 2012. This volume (8.17 MMboe) will be matured to 2P in 2012 with associated IP volume of 6.36 MMboe.
Production	Nembe Creek Work over project's base case forecast has a startup date of Jan 2013 with an initial incremental oil rate of 1.8 Mbopd SS (6 Mbopd 100%) and peaked in 2014 at oil production rate of 2.6 Mbopd SS (8.7 Mbopd 100%) with associated gas production of 1.6 MMscf/d SS (5.3 MMscf/d 100%) thus increasing the effective utilization of the new NCTL pipeline and contributing to SPDC's gas supply to NLNG.
Source and form of financing	This investment will be financed partly through JV and the ongoing 2012 MCA funding for SPDC projects. Total Shell commitments including NNPC carry under the MCA will be financed with SPDC limited own generated funds and existing intra-group facilities. The MCA terms do not include PMT CAPEX and all OPEX related expenditures.

Summary cash flow



Summary economics

Summary Economics @ RV-RT12	NPV7% (USD mln)	VIR7%	RTEP (%)
Base case	32.3	0.52	50
High reserves	43.2	0.76	
High CAPEX	30.2	0.37	

Section 1: The proposal (Management Summary)

This investment proposal seeks approval for US$58.8 million Shell Share Capex and US$0.7 mln Opex (Shell share, P50, MOD) to enable SPDC fund the execution of three workover re-completions (Nemc-01, -05 & 26), sidetrack of two Nembe Creek wells (Nemc-61 & -09) and laying of flowlines to the flowstations planned for 2012 and 2014. Nemc-26 is not part of MCA but will be funded under JV. The project is driven by the desire to keep the new Niger Coastal Trunkline (NCTL) full, optimize rig utilization in the Swamp area following drop in the well scope of Soku Oil Rim Development Project (ORD).

The project supports SPDC's strategy of maintaining well integrity, increasing production and growing reserves from existing wells. All proposed wells are in field with Associated Gas Gathering (AGG) facilities/solutions.

JV Partner approval for well scope reduction in Soku ORD project led to gaps in the BP-11 Short Term Drilling and Workover Sequence (STDWS). The Cash Flow From Oil (CFFO) project was then initiated to identify quick win opportunities to replace the dropped Soku ORD wells. A basket of workover and sidetrack opportunities were identified and subjected to rigorous cross-functional review and technical endorsement to arrive at Nemc-01, -05, -26, -61 and -09 candidate wells from Nembe Creek Field. These wells do not have scope for remedial activities but provide conduit access to reservoirs creamed out during initial completion but available for re-completion and sidetrack.

These opportunities will add 2C reserves of 8.17MMboe and oil potential of 4.0 Mbopd (SS).

Workover and drilling operations are planned to start in 2012 with LoneStar 203/204 rigs. First oil from the project is expected in 2013.

Section 2: Value proposition and strategic and financial context

This project aligns with SPDC's strategic objectives and will contribute towards keeping NCTL full. The project represents a quick win opportunity generating material oil in the medium term to arrest production decline in Nembe Creek field and fill gap in the drilling sequence.

- This project will mature 2C volume of 8.17 MMboe SS (of which 5.58 MMboe SS was booked in 31.12.2011 ARPR). The additional 2C volume of 2.59 MMboe SS is from two new opportunities identified in Q1 2012. This volume (8.17 MMboe) will be matured to 2P in 2012 with associated IP volume of 6.36 MMboe.

- Nembe Creek Work over project's base case forecast has a startup date of Jan 2013 with an initial oil rate of 1.8 Mbopd (SS). Incremental oil production from this project peaks at 2.6 Mbopd with associated gas production of 1.6 MMscf/d (SS) by 2014 thus increasing the effective utilization of the new NCTL pipeline and contributing to SPDC's gas supply to NLNG.

Summary Economics

The economics for this IP was carried out on a forward-looking basis using the project 50/50 level III cost estimate and the production forecast of the five Nembe wells.
The base case was framed as the consolidation of the four wells (Nemc-01, Nemc-05, Nemc-61 and Nemc-09) funded under MCA and one well (Nemc-26) funded under JV.

Sensitivities were carried out on the base case to reflect project performance under different scenarios. These are:

- High CAPEX (P90),
- High & low reserves,
- Project with ring fencing,
- 1-year schedule delay,
- 1.5% cost mark-up due to BVA issues (provision for costs dispute by NAPIMS),

From the results, the project returns positive NPV7% RT12.
Economics details are shown in Table 1 below;

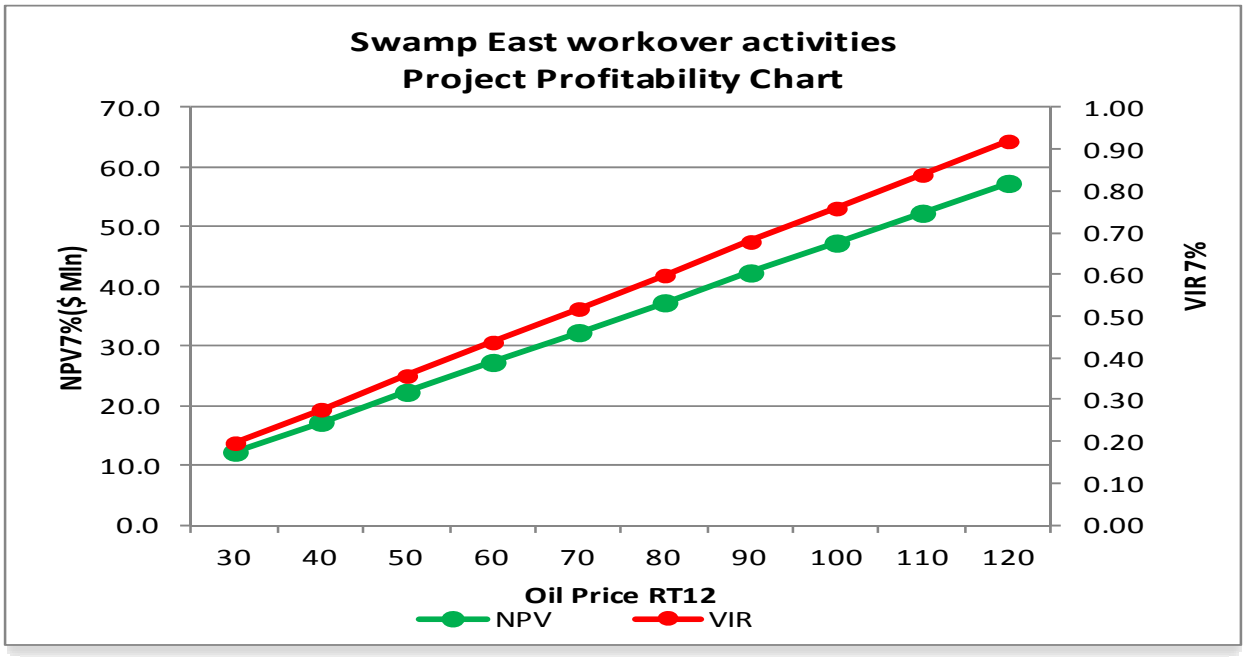
Table 1: Economics Indicators (Shell Share)

PV Reference Date: 1/7/2012	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/boe)		Payout-Time (RT)	Maximum Exposure (RT- AT)
Cash flow forward from: 1/1/2012	0%	7%	7%	%	0%	7%	(yyyy)	$mln (yyyy)
Base Case								
SV ($50/bbl & NLNG price RT12)	39.1	**22.3**	**0.36**					
RV ($70/bbl & NLNG price RT12)	54.4	**32.3**	**0.52**	50	5.0	6.9	2014	*13.4 (2012)*
HV ($90/bbl & NLNG price RT12)	69.6	**42.3**	**0.68**					
Sensitivities (using RV-RT12)								
High CAPEX (P90)		**30.2**	**0.37**					
High Reserves		**43.2**	**0.76**					
Low Reserves		**28.2**	**0.45**					
Project with ring fencing		**30.5**	**0.49**					
1-Yr Production Schedule Delay		**18.5**	**0.30**					
1.5% cost markup due to BVA issues		**30.8**	**0.48**					
Base Case @ RV-RT12 (Well level)								
Nemc-05		**9.0**	**0.70**					
Nemc-26		**0.9**	**0.21**					
Nemc-09		**6.4**	**0.44**					
Nemc-61		**9.7**	**0.70**					
Nemc-01		**6.2**	**0.56**					

Table 2: Key Project Parameter Data (Shell Share) –

Parameter	Unit	BP11 Provision	Low	Mid	High	Comments
Capex (MOD)	US$ mln	56.2	NA	58.7	76.4	Costs of studies have been adjusted to level III with scope changes compared to BP11.
Opex (MOD)_Project	US$ mln	NA	NA	0.7	1.0	SCD OPEX.
Production Volume	mln boe	5.5	6.3	7.3	8.9	13% of the volume produced is gas. A fifth well has been added against 4 wells originally planned in BP11.
Start Up Date	mm/yy	NA	Nov-13	Jan-13	NA	
Production in first 12 months	mln boe			0.7		10% of the total volume produced within the first 12 months.

Profitability plot



Economics Assumptions:

Base case

- Oil PSVs of $50/bbl @SV-RT12, $70/bbl @RV-RT12 and $90/bbl @HV-RT12 with appropriate offset applied.
- 2012 NLNG T1-6 price was used for gas sales to NLNG.
- Oil taxed under PPT (PPT tax rate of 85%).
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- ABCM OPEX was provided by the project team.
- SCD OPEX was provided by the project team.
- GHV of 1150Btu/scf.
- NDDC levy of 3% of total expenditure.
- Education tax of 2% of assessable profit.
- Flare Penalty of $3.5/Mscf (disputed sum) was applied and is not tax deductible.
- 10% of total project RT CAPEX assumed as abandonment cost.

MCA Specific Assumptions

- All project costs on the MCA would be recovered through cost oil.
- Profit oil ceiling of 8% IRR on carried costs
- Cost overrun does not attract any profit oil but recovered through cost oil only.
- Oil PSVs of $50/bbl @SV-RT12, $70/bbl @RV-RT12 and $90/bbl @HV-RT12 with applicable offset applied for Bonny.
- OPEX and PMT not carried under current MCA arrangement.

Section 3: Risks, opportunities and alternatives

Risks and Mitigation

The key risks and mitigation factors for the project are discussed in Table 3.

The main project risks include operational exigencies in carrying out workover operations on wells completed 10 - 30 years ago. There is no certainty on the state of completion in hole and therefore there is potential for schedule overrun, which could lead to project value erosion. However, mitigation and contingency plans have been put in place after comprehensive risk assessment carried out as part of the opportunity maturation and well proposal preparation.

There is also the risk that NNPC would be unable to fund its own share of the equity costs. However, the JV partners and NNPC are being engaged and Partners may need to carry NNPC's share of the project financing via an Alternative Funding (AF) arrangement.

Table 3: Risks and Mitigation

S/N	Risk	Description	Impact	Mitigation
1	Schedule overrun	Delivery schedule could escalate if it takes an unusually long time to accomplish specific tasks during the workover operation. Pulling of old completion often present such challenges. Corrosion and erosion may lead to tubing parting and multiple fishing operations	Erosion of the time-dependent economic indicators like NPV, VIR and RTEP	Rigorous operational planning to take into account worst case scenarios of fishing operations and plan for the relevant fishing tools. Timely decision to execute the contigency plan.
2	Rig Equipment Failure	The rigs are currently undergoing major repairs of key equipment. Incomplete and improper repair could still result in equipment failure leading to downtime and delay in delivery of the wells.	Erosion of the time-dependent economic indicators like NPV, VIR and RTEP	Ensure specialist certification of repairs and procure key spares for rig equipment.
3	Present Fluid Contact	Accurate fluid delineation in a workover scenario and in an active field (or reservoir) could be challenging and may lead to wrongly placed perforations	Reduction in net oil, well performance and therefore erosion of project value	Rigorous petrophysical evaluation has been incorporated into the Proposal. The Petrophysists will take charge of the perforation to ensure full integration of all relevant data for optimal production interval selection.
4	Failure to get Partners approval and Funding	Project is not in BP11 base budget but in the incremental budget. There is risk that NNPC will be unable to provide their own share of the equity cost.	UR and the oil promise will not be realised and therefore erosion of project value	Alternative funding arrangement is being put in place to provide for inability of NNPC to fund their own part of the equity cost.
5	Enabling Environment (Security, Sabotage, Political and Environment):	Hostage taking, existence of militant groups and threat of insurgence are realities in the Niger Delta especially in the swamp which could threaten project execution.	Non Productive Time (NPT) leading to proglonged completion of planned activities and increase in overall project cost.	As per SPDC procedures the contractor handling the project will develop a security plan, agreed to by the Contract Holder, and then sent to the Area Security Adviser for review. Thereafter, the reviewed plan is sent to the Security Coordinator/Asset Manager for approval. It is only then that the contractor mobilizes to site to commence well operations. With improvements in the Niger Delta security following Amnesty programme, it is envisaged that there will be a reduction in Community related NPT. Specific threats will be managed through the Security & Surveillance Centre (SIS) and communicated in good time to those that need to "Know" and "act".
6	HSSE management	HSSE HazardsHazards associated with this project will be identified and documented as part of the HSSE plan for the project. The effects on people, AssetsAssets, environment and reputation will be assessed.	Loss of Lif. Lost Time incidence resulting to Non productive Time leading to cost escalation	There will be an assessment of the risks of identified HazardsHazards for Worst-Case Credible ScenariosWorst-Case Credible Scenarios using the RAMRAM, and documented in the Hazards and EffectsEffects Register which will form part of the project specific HSSE Plan. Where Reasonably PracticableReasonably Practicable, hazards will be totally eliminatedHazards or adequately controlled where elimination is not possible.
7	Social Performance/Community Interface	Community related disturbances	Delay in project execution	Global Memorandum of Understanding (GMoU) is the corporate platform for managing community interface as well as delivering benefits to communities. Currently, SPDC has a functional steady-state GMoU covering the Cawthorne Channel axis, even though there is no GMoU for Bonny community, the project execution will latch on the existing community interface structure to ensure uninterrupted operations. FTO for the project activities will be secured through the GMoU CDB, with provisions for community employment and subcontracts. The social/non technical risks associated with the project will be mitigated in line with the HSSE&SP Control Framework by delivering a robust impact mitigation and stakeholder engagement plan. Contractors being proposed for the project execution will be required to submit an approved Community Affairs Plan that will guide their interface with the impacted communities in project area. In addition, adequate resources, including the active support of the host-Asset Community Relations Team and pro-active management of community issues will be deployed throughout the project duration.

Opportunities

This campaign is hinged on getting oil through workover and sidetrack of existing wells thereby reducing the unit technical cost associated with the development of the reserves and foot-prints on the environment.

Alternatives

The candidate wells have undergone all quality checks and assurances to ensure that all subsurface and well engineering risks are identified and mitigated. Do-Nothing scenario is considered not acceptable considering the opportunity and the value to the business.

Section 4: Carbon Management

Nembe Creek field has a functional Associated Gas Gathering (AGG) system. The produced gas from the wells will be processed and exported through Soku Gas Plant. Carbon emission will be minimal as is currently the practice in the field.

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, Social Performance and Tax functions etc.

Section 7: Project Management, Monitoring and Review

The execution of the project is managed through the Swamp East Field Development & Execution Team, Wells and Engineering Hub Teams in line with the SPDC organizational model. The Sustainable Development and Community Relations directorate is instrumental in creating the community relations that allow the team to operate. There will be regular progress report of the well delivery activities to Asset Development Manager, the Development General Manager and to the JV Partners. All significant reviews and follow up actions had been done in the Development and Engineering Teams. Following successful completion, the wells will be handed back to the Swamp East Production Operations Team.

Section 8: Budget provision

This project is included in the 2011/12 JV Programme. The project will be financed partly through JV and the ongoing 2012 MCA funding for SPDC projects. Total Shell commitments including NNPC carry under the MCA will be financed with SPDC limited own generated funds and existing intra-group facilities.

Section 9: Group financial reporting impact (to be updated)

There are no unusual accounting issues related to this GIP. Expenditure related to the project will be accounted for in line with Group Policy. The financial impact of this proposal on Shell Group is as shown below:

US$ mln	2012	2013	2014	2015	2016	Post 2016
Total Commitment	37.14	22.34				
SCD OPEX	0.43	0.30				
Pre-FID						
Cash Flow						
Capital expenditure	36.71	22.04				
Cash Flow from Operations	20.46	25.19	14.91	11.34	9.64	41.69
Cash Surplus/(Deficit)	-16.24	3.15	14.91	11.34	9.64	41.69
Profit and Loss						
NIBIAT +/-	1.29	10.12	7.92	7.50	5.59	34.35
Balance Sheet						
Average Capital Employed	8.77	21.02	21.01	15.60	11.65	2.95

Section 10: Disclosure

Material disclosures, if any, will be done in line with the Group and SPDC disclosure policies and guidelines.

Section 11: Financing

Shell's share of the capital expenditure will be funded by SPDC's own resources. If this does not prove sufficient in the future, any further financing requirements will be included in the annual SPDC GFP.

Section 12: Taxation

There are no unusual Taxation features.

Section 13: Key Parameters

The following are the main aspects of this proposal:

Approval is requested for the total headline size of US$59.5 mln Shell Share 50/50 MOD to execute two sidetrack/drilling & Completions and three workover recompletions wells in Nembe Creek field. This is made up of Shell Equity contribution of US$30.1 mln and MCA contribution of US$29.4 mln.

Section 13: Signatures

This Proposal is submitted to UIG REVP for approval.

Supported by:

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Nijsse, Erwin S

(SIEP-FUI/O – VP Finance Operated)

Date ..../..../....

For Business approval:

.....

Brekelmans, Harry (SIEP-UIO EVP UI Operated)

Date ..../..../.....

Initiator: _____

Ogagarue, Emmanuel EE
(UIO/G/DSSSW – DM Onshore Nigeria, Acting)
Date …/…. /….

Appendix 1: Project scope

In line with the IDM, HCM forecast sheet is not mandatory for project with headline size < $100 mln, however a table detailing contributions (Resource and potential) for the respective well is hereby included as Appendix 1

Well	Re-entry Category	Objective	Contingent Resource Volume (MMboe SS)	Potential (Mbopd) SS
NEMC-01	Workover and Re-completion into a New Zone	Abandon existing E2.0X, F1.0X and F4.0E intervals. Re-complete on D3.0X and D5.0X	1.95	1.02
NEMC-26	Workover and Re-completion into a New Zone	Abandon existing E2.0J and E3.0J intervals. Re-complete on E1.0J	0.38	0.23
NEMC-05	Workover and Re-completion into a New Zone	Re-complete on D3.0E and D6.0E	2.2	0.75
NEMC-09	Workover and Sidetrack into a New Zone	Abandon existing E2.0X, E3.0X and F4.0X intervals. Sidetrack (horizontal) into E1.0E reservoir	1.83	0.75
NEMC-61	Workover and Sidetrack into a New Zone	Abandon existing D2.0J and D2.9J intervals. Sidetrack (deviated) into E3.0J and E4.0J reservoirs	1.81	1.2