The Shell Petroleum Development Company of Nigeria Limited

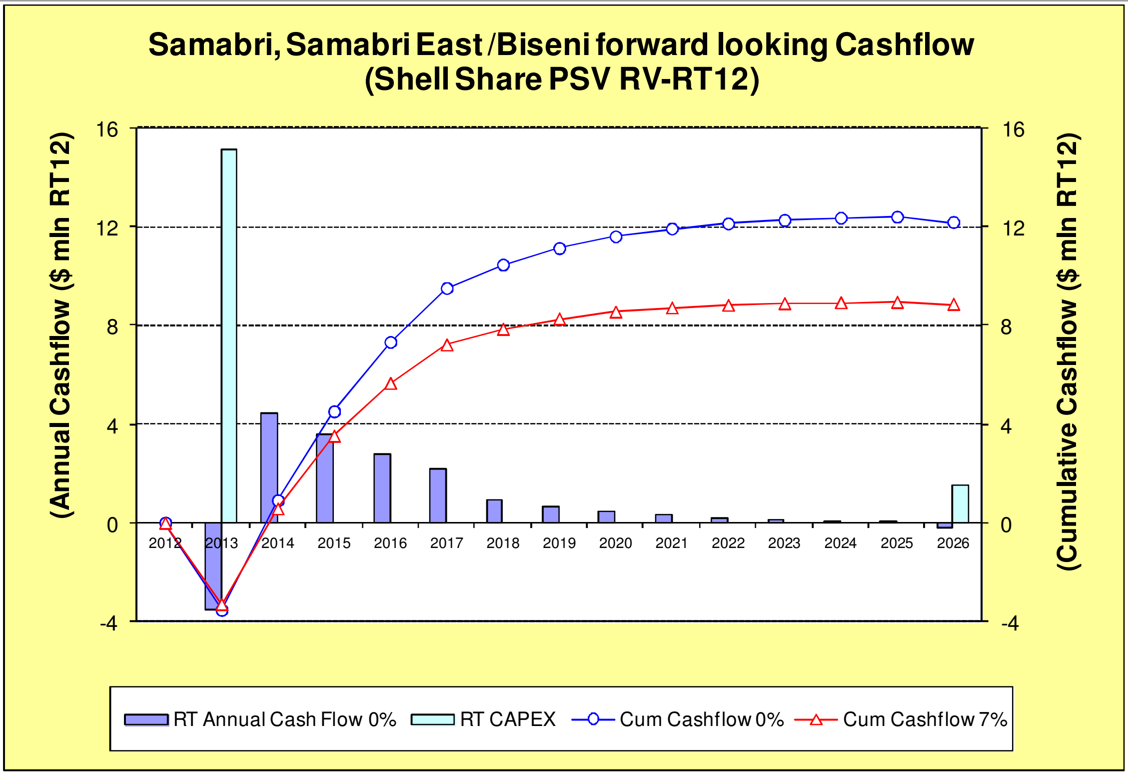
Internal Investment Proposal

Summary Information

Business unit and company	Shell Petroleum Development Company of Nigeria Limited (SPDC)
Group equity interest	100% in SPDC, whereas SPDC has a 19.2% interest in the Samabri, Samabri East / Biseni Unit which is currently operated by NAOC.
Other shareholders / partners/parties	Nigeria National Petroleum Corporation (NNPC: 56.8%), Total E & P Nigeria Limited (TOTAL: 6.4%), Nigeria Agip Oil Company (NAOC: 10.4%), Philips Oil Company Nigeria Limited (POCNL: 7.2%)
Business or Function	Upstream International Operated
Amount	USD 15.7 mln Shell Share MOD, 50/50
Project	Samabri, Samabri East/Biseni Field Pre- FDP Project (Oil & AG Development)
Main commitments	(see table below)
Reserves/ Resources	This project will mature a total 2C Oil and AG volume of 2.21 MMboe SS, (ref: 31.12.2012 ARPR), this resource volume is underpinned by Dynamic Reservoir Models updated by NAOC and jointly reviewed by SPDC and all Unit Partners in September 2012. This 2C volume will be matured to 2P in 2013 post handover of the reservoir models to SPDC.
Production	Samabri East/Biseni Field Pre- FDP Project base case forecast has a startup date of March 2013 with an initial incremental oil rate of 0.89Mbopd (SS) and will peak in 2014 to oil production rate of 1.29 Mbopd (SS) annualised with associated gas production of 0.5 MMscf/d SS thus increasing the effective utilization of existing flowstation and AGG plant.
Source and form of financing	Shell share of this expenditure shall be financed with SPDC own cash flow.

Main commitments:

Activity	**This Proposal**	
	100%	**19.20% (Shell Share)**
	(US$'mln)	**(US$'mln)**
Location Preparation	1.5	0.3
Oil Development Drilling	42.7	8.2
Oil Completions/ Workovers	23.0	4.4
Oil & Gas flowlines	5.8	1.1
Oil & Gas facilities/infrastructure	7.5	1.4
Sub-Total	80.5	15.5
SCD OPEX (Community & ESP electrification)	1	0.2
Total	81.5	15.7

Summary cash flow	
Summary economics	see table below

Summary Economics (RV-RT12)	NPV7% (USD mln)	VIR7%	RTEP (%)
Base case	8.9	0.63	>50
High CAPEX	8.4	0.52	>50

Section 1: The proposal (management summary)

This Pre-FDP Investment Proposal seeks support/approval for headline size of US$15.7 mln (Shell Share, 50/50 MOD), required to Workover Samabri East (SE) Well 4T to replace ESP, commence drilling of 2 new SE development Oil wells, and Workover sidetrack of SE 5T. This IP covers the Oil development part of the Pre-FDP project described in Appendix 1 These activities will be executed by NAOC on behalf of the unit parties in 2013.

Full development of the straddled Samabri-Samabri East/Biseni fields in NAOC JV OML 61 and SPDC JV OML 27 were originally planned in 2 phases with execution of Phase 1 already completed in 2003. Thereafter, a Phase 2 FDP with 100%/headline size of $1.6billion, covering both straddled and non-straddled reservoirs development was jointly produced by NAOC and SPDC in 2006. The selected concept for the development was the construction of 7 new clusters and infill drilling of 24 development (10 oil and 14 gas), 5 gas cap and 1 appraisal well. The development also envisaged that a new 45 Mbopd flowstation and 400 MMscf/d gas processing facility will be built at Biseni-Samabri. The project passed DG3 but further development was stalled pending Unitisation discussions. The full scope project will be executed when agreements are in place to cover full development in view of the fact that the non-straddled reservoirs cannot be unitised with the straddled reservoirs within the present Samabri/Biseni UUOA framework. There are currently ongoing discussions to develop a suitable framework and commercial construct which will enable the development of the non-straddled reservoirs in the Phase 2 FDP.

The unitisation agreement (UUOA), supporting development of straddled reservoirs only was finally signed by all Unit Parties on 19th December 2011. And the unit parties supported further technical work to mature hydrocarbon resources and upfront well activities in the straddled reservoirs, to arrest field decline pending completion of the ongoing discussions on a framework that ultimately allows joint development of straddling and non- straddling reservoirs.
To this end, NAOC completed the FDP reservoir models update in September 2012 followed by a Joint Parties Technical Review and Opportunity Framing. The review identified 2 new infill oil wells which were not in the Phase 2 FDP of 2006 but now included in the 2012 update. The infill oil wells are expected to provide valuable data for further FDP optimization. The workover of existing wells 4T and 5T earlier proposed from a joint PSO in 2009 was also validated.

The SE wells 4T, 5T, 11T and 12T will be executed from the existing Samabri East Cluster 2, and expected to produce to Brass terminal via Idu flowstation. The flowstation has already been installed with an AGG plant and is currently undergoing commissioning.

Section 2: Value proposition and strategic and financial context

Approval of this IP will allow SPDC support the operator's funding for the Pre-FDP oil project aimed at adding oil potential of 10 Mbopd to the current NFA production of ca 5.1 Mbopd 100% unit value. This project also enables Samabri-Biseni Unit comply with Government's directive on straddled fields, utilise existing system capacity and monetise gas through AG sales.

Summary economics

The Samabri East/Biseni project was evaluated on a forward-looking basis using the 50/50 level III cost estimates and the production forecast from the project team.

Sensitivity analysis was carried out on the base case to assess the value of the project in the following circumstances:

- High CAPEX,
- High Reserves (P10),
- Low Reserves (P90),
- 1-Year production delay,
- 1.5% cost mark-up due to BVA issues (provision for costs dispute by NAPIMS)

Economics is presented in Table 2 below and shows the robustness of the project.

Table 2: Economic Grid (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 & NGMP gas price)	7.1	**4.9**	**0.35**	>50	14.6	15.3		
RV ($70/bbl & NGMP gas price)	12.2	**8.9**	**0.63**	>50	14.8	15.4	2014	*12.7 (2013)*
HV ($90/bbl & NGMP gas price)	17.4	**12.9**	**0.91**	>50	14.9	15.4		
Sensitivities (using RV)								
High CAPEX (+15%)		**8.4**	**0.52**				2014	*14.8 (2013)*
High Reserves (P10)		**9.9**	**0.70**				2014	*12.7 (2013)*
Low Reserves (P90)		**4.0**	**0.28**				2014	*12.8 (2013)*
1-Yr Production delay		**8.1**	**0.58**				2015	*13.9 (2013)*
1.5% cost markup due to BVA issues		**7.6**	**0.48**					

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	BP12 Provision	Low	Mid	High	Comments
Capex (MOD)	US$ mln	NA	NA	15.5	17.8	Not as standalone in BP12
Opex (MOD)_Project	US$ mln	NA	NA	0.2	0.2	SCD OPEX
Production Volume	mln boe	NA	1.2	2.2	2.4	
Start Up Date	mm/yy	NA	NA	Mar-13	NA	
Production in first 12 months	mln boe		0.3	0.3	0.3	

Economic Assumptions

- Oil PSVs of $50/bbl @SV-RT12, $70/bbl @RV-RT12 (base) and $90/bbl @HV-RT12 with appropriate offset applied.
- Gas sales to domestic market Aggregate Domgas PSV (based on NGMP framework as at 13/08/2012).
- Oil taxed under PPT (PPT tax rate of 85%).
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- SPDC Generic fixed and variable OPEX assumptions was used
    - Oil fixed - 3.0% of cum. oil CAPEX
    - Gas fixed - 3.5% of cum. gas CAPEX
    - Oil & Gas Variable OPEX - $1.92/boe
- Oil tariff of $2.41/bbl and gas tariff of $0.6/Mscf were used.
- NDDC levy of 3% total expenditure.
- Education Tax of 2% assessable profit.
- GHV of 1000BTU/scf.
- Flare Fees of $3.5/Mscf was applied and is not tax deductible.
- Abandonment cost estimated at 10% of total project RT CAPEX.

Section 3: Risks, opportunities and alternatives considered

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

3.1 Risks

Risks	Mitigation
Earlier than expected water break through resulting in reduced incremental oil recovery.	The downhole gauges on ESPs will allow for real-time reservoir surveillance to optimise the offtake and reduce the risk of early water breakthrough.
HSSE: The project will be executed under challenging circumstances in the Niger Delta area including flooding already affecting location preparation	SPDC NOV Governance team to ensure that NAOC continue to demonstrate strong commitment to identifying and managing HSSE risks including well control, spill and emergency response.
Cost overrun: Cost overrun due to changes in market rates and continued flooding resulting in delay of project execution start up.	• The budget estimates are based on current market rates using current rig rate carried by NAOC. In addition, all costs were reviewed by unit parties including NAPIMS at the unit DEVCOM held in November 2012.

	• A pragmatic approach to well execution has been developed to allow for flexibility on the rig sequence and starting with the well thereby minimising the impact of flooding i.e. SE 4T.
Community and 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. Community disturbance could delay the project as already observed with the NAOC Idu AGG pre-commissioning.	• Risk and impact has been identified and captured in the operators' stakeholder management plan and is actively managed by the operator.
Governance and Control Constraint NAOC could use its leverage as operator to obtain undue favour for NAOC JV e.g. moving the Rig to a preferred location.	SPDC will continue to use the quarterly engagements (in addition to the Unit Governance structure) to monitor NAOC's activities and mitigate this risk.
AG Solution/Flare Fees: The Samabri, Samabri East Unit is yet to secure a commercial agreement with the NAOC JV to deal with its current associated gas which is being flared.	• The NAOC AGG project that will ensure flares down has been pre-commissioned and full commissioning by 2013. • The commercial agreements with NAOC JV to deal with Associated Gas are already being worked by SPDC commercial and other parties.

3.2 Opportunities

New Oil and Information:

This project will yield new oil production and add to the total throughput of Idu flowstation as well as positively impact the Unit Partners' ability to repay underlifted crude oil owed to SPDC as a result of the revised equities in the UUOA.

Knowledge Sharing

This project will provide a very good opportunity for the NOV technical professionals to have insight into field development by another operator in Nigeria especially in ESP application.

3.3 Alternatives Considered

Reservoir Drive Mechanism: Water Injection (WI), Gas Injection (GI) and Infill drilling options were investigated during the joint study. On the basis of the project economics, infill drilling option ranks above other cases.

Early Oil Production Option: The possibility of producing early oil through existing Idu production facilities was analyzed from a technical and economical point of view and was found to be a better option than waiting for the main Biseni Samabri production facility. The evaluation complies with Flares-Down Policy and considers decommissioning of any temporary facilities.

Investment: As a unit partner, our alternatives are invest now, allow NAOC carry out project at its Sole Risk, or totally reject the project. The option of investing now was considered a more technically and commercially viable option.

Section 4: Corporate structure, and governance

This project fits within the existing SPDC corporate structure and governance. The UUOA Unit Operating Committee (UOC - Unitised fields OPCOM is empowered to exercise overall supervision and control of all matters pertaining to the Joint Operations including review and approve work programmes and budgets. The NOV functional leads represent SPDC in the UOC.

Section 5: Functional Support and consistency with Group and Business Standards

This proposal complies with Group Business Principles, policies and standards. Functional support for this proposal is provided by Commercial, Development, Finance, Treasury and Legal functions.

Section 6: Project management, monitoring and review

The Operator (NAOC) shall be responsible for HSE, Security management, Community, government relations and project management amongst others. All budgets and technical/operational performance will be monitored and reviewed in accordance with the specifications of the UUOA and under the authority of the Unit Operating Committee; one member of which is the Shell's shareholder representative in the SPDC NOV team.

Section 7: Budget provision

Early funding of this project was not anticipated in BP12 in view of its limited technical maturity then. However, with the accelerated maturity, funding will be required in 2013. The Samabri, Samabri East/ Biseni unit DEVCOM have already endorsed the project for execution. SPDC will fund 19.2% of the total project cost as covered by this IP.

Section 8: Group financial reporting impact

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 Financials is as indicated in the table below:

US$ mln	**2013**	**2014**	**2015**	**2016**	**Post 2016**
Total Commitment	15.6				
SCD OPEX	0.2				
Pre-FID					
Cashflow					
Capital Expenditure	15.4				
Cash flow From Operations	6.3	7.4	4.4	3.6	7.2
Cash Surplus/(Deficit)	-9.1	7.4	4.4	3.6	7.2
Profit and Loss					
NIBIAT +/-	3.0	3.7	2.9	2.1	5.0
Balance Sheet					
Avg Capital Employed	6.1	10.2	7.6	6.1	3.3

Section 9: Disclosure

NAOC is a subsidiary of the ENI group of companies and are bound by the ENI "Code of Practice" published in 1998, which is similar in intent to the SGBP. There are no disclosures required at this time.

Section 10: Financing

Shell share of this expenditure will be financed with SPDC own cash flow in response to operator's cash calls under the UUOA.

Section 11: Taxation

Taxation will be in line with general SPDC taxation.

Section 12: Key Parameters

SPDC approval is required for US$15.7Mln to allow SPDC meet its commitments in the Samabri, Samabri_East/Biseni unit for the funding for the Pre-FDP oil project aimed at increasing the field's oil potential by 10Mbopd to the current NFA production of ca 5.1Mbopd (100% unit).

Section 13: Signatures

This Proposal is submitted to SEPCiN-UIO/G for approval.

Supported by:	For Business approval:
....	....
Bernard Bos	**Bayo Ojulari**
SEPA-FUI/OG	**UIO/G/D**
Date	Date ....

Initiator:

Kemi C. Osharode

UIO/G/DSSNV

Appendix 1: Samabri East/Biseni Projects – Joint Parties Review Outcome

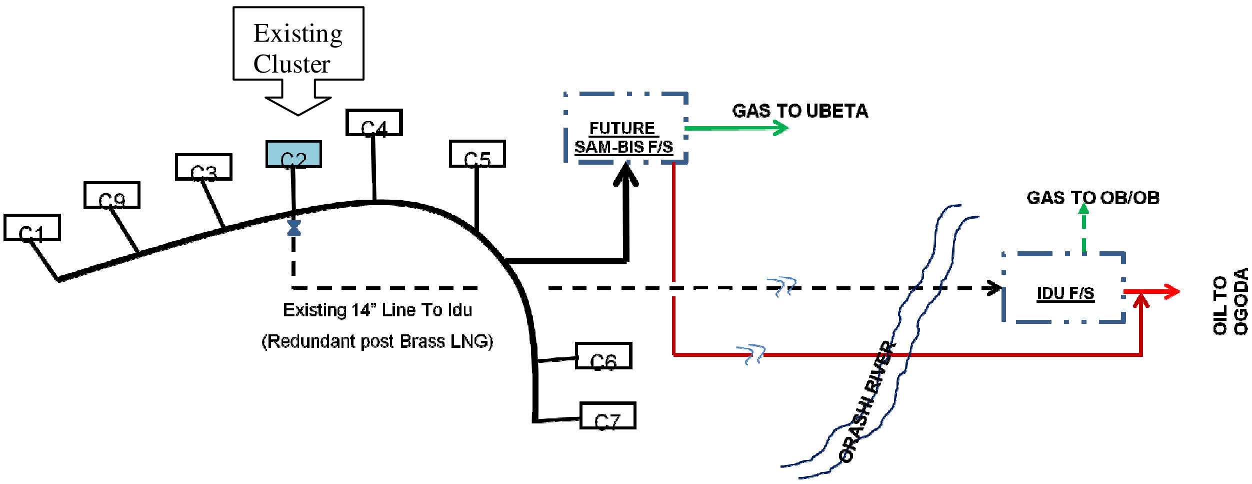
The committee reviewed the in-place volumes and found 2012 update to be consistent with the agreed 2006 volumes. Consequently 2006 development concept remains unchanged. The sub-surface development plan was jointly endorsed as shown below:

PRE-FDP ACTIVITIES

✓ End 2012	Work over on wells SE-4, SE-5 to restore production
✓ 2013	Drilling of 2 wells (SE-11, SE-12)
✓ 2014	Drilling of well H60_Appraisal, in order to verify the extension of H60
✓ 2014	Drilling of gas well SC_2, for data acquisition campaign to support facilities design and well completion material selection

FDP ACTIVITIES

✓ 2014	Phase 2A: Start drilling of 14 oil wells (9 oil wells + 5 wells in oil rim)
✓ 2016	Phase 2B: Start drilling of 9 gas wells, in line with Brass LNG start-up.
✓ 2020	Drilling of 3 Gas-cap blow-down wells



Legend:

- Existing 14" Line To Idu
- Future Clusters & Headers
- Future Oil Line to Ogoda
- Future Gas Line to Ubeta
- Future Gas Line to OB/OB