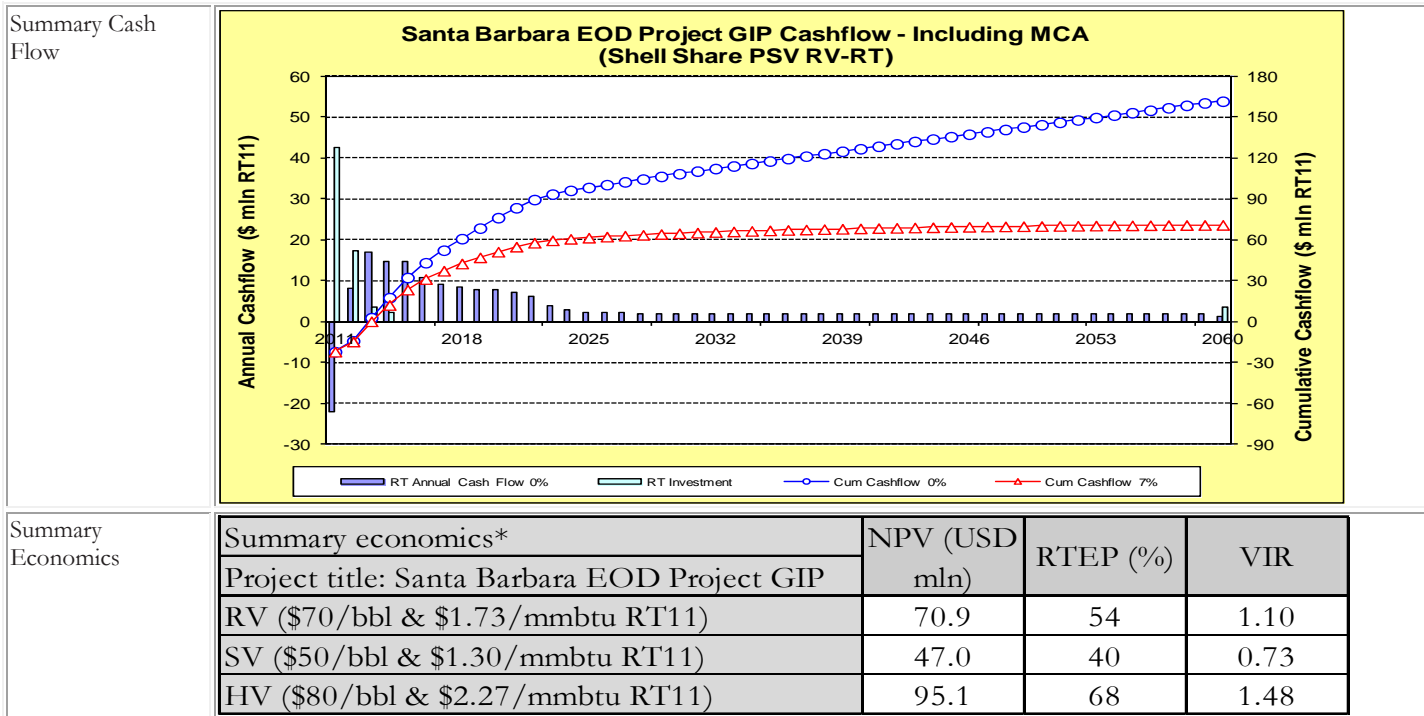


# The Shell Petroleum Development Company of Nigeria Limited

## Group Investment Proposal

### Summary Information

|                               |  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
|-------------------------------|--|--------------------------------------|--------------------------------------|-----------------------------------|------------------------------------|----------|--------------------------------------|----------------------------|--------------------|-----------------|-------------------|
| Business Unit and Company     | Shell Petroleum Development Company of Nigeria Limited (SPDC)  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| 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 | Nigerian National Petroleum Corporation (NNPC: 55%), Total E&P Nigeria Ltd (10%), and Nigeria Agip Oil Company Limited (NAOC: 5%)  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| Business or Function          | Upstream International (UI)  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| Amount                        | <p>The headline size of U\$114.84 mln Shell Share MCA MOD 50/50 is being requested for approval in this revised GIP. This is made up of US\$42.08 mln Shell share approved in the previous proposal and US\$72.76 mln Shell share being requested to complete the project in this GIP. The headline size is composed of US\$113.55 mln Shell Share MOD CAPEX and US\$1.29 mln Shell Share MOD OPEX.</p> <p>The total Shell commitment of \$114.84 is composed of Shell Equity contribution of US\$64.59 mln and MCA contribution of US\$50.25 mln.</p>   |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| Project                       | Santa Barbara Further Oil Development, FOD Phase 1 (also known as Early Oil Development, EOD)  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| Main Commitments              | 50/50 MOD  | 100% JV (\$'mln) MOD_Revised GIP     |                                      |                                   |                                    |          | Shell Share (\$'mln) MOD_Revised GIP |                            |                    |                 |                   |
|                               | Description  | Previous IP_JV Spent not part of MCA | Previous IP_JV spent but part of MCA | Incremental IP Request_JV Funding | Incremental IP Request_MCA Funding | Total IP | Shell Share_Previous IP              | Shell Share_Incremental IP | Shell Share_Equity | Shell Share_MCA | Total Shell Share |
|                               | Flowline & Hookups   | 1.20                                 | 2.51                                 |                                   | 11.45                              | 15.16    | 2.03                                 | 7.63                       | 4.55               | 5.12            | 9.67              |
|                               | Facilities   | -                                    | 0.99                                 |                                   | 16.99                              | 17.98    | 0.66                                 | 11.33                      | 5.39               | 6.59            | 11.99             |
|                               | Facilities (MPF Refurbishment)   |                                      |                                      | 28.50                             |                                    | 28.50    | -                                    | 8.55                       | 8.55               |                 | 8.55              |
|                               | Wells & Location Prep.   | 39.24                                | 40.69                                |                                   | 58.91                              | 138.84   | 38.90                                | 39.27                      | 41.65              | 36.52           | 78.17             |
|                               | PMT  | -                                    | -                                    | 5.03                              |                                    | 5.03     | -                                    | 1.51                       | 1.51               | -               | 1.51              |
|                               | Contingency  | -                                    | -                                    |                                   | 5.50                               | 5.50     | -                                    | 3.67                       | 1.65               | 2.02            | 3.67              |
|                               | Total CAPEX  | 40.44                                | 44.19                                | 33.53                             | 92.85                              | 211.01   | 41.59                                | 71.96                      | 63.30              | 50.25           | 113.55            |
|                               | SCD (OPEX)   | 1.62                                 | -                                    | 2.67                              |                                    | 4.29     | 0.49                                 | 0.80                       | 1.29               | -               | 1.29              |
|                               | Total Cost   | 42.06                                | 44.19                                | 36.20                             | 92.85                              | 215.30   | 42.08                                | 72.76                      | 64.59              | 50.25           | 114.84            |
| Reserves/Resources            | This project is aligned with SPDC’s strategic goals and priorities by maturing economic truncated 2P reserves of 11.58 MMstb of oil and 0.18 bln sm3 of gas (SS) to production and transferring of equivalent SEC Proved reserves of 9.75 MMstb of oil and 0.14 bln sm3 of gas (SS) from PUD to Proved Developed in 2012 with positive impact on SPDC DD&A (This includes economic truncated 2P and proved oil reserves of 2.18 MMstb and 1.85MMstb (SS) respectively for the SBAR-10T well re-categorized as NFA, Ref Page 3 & HCM table attached). In addition, 0.23 MMstb PUD associated with the MCA had been booked in 2010 (Ref 31.12.2010). |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |
| Production                    | Incremental annualized oil production, peaking at 8.8 Mbopd with associated gas production of 2.8 MMscf/d (2.64 Mbopd and 0.84 MMscf/d SS) by 2013 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 through the agreed MCA funding (Santa Barbara FOD phase 1 project is part of the Nembe Creek project bundle under MCA) ref GFP approved by the RDS Board on 22.07.2008. Total Shell commitments including NNPC carry under the MCA will be financed with SPDC limited own generated funds. The MCA terms do not include PMT CAPEX and all OPEX related expenditures.  |                                      |                                      |                                   |                                    |          |                                      |                            |                    |                 |                   |



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

This revised Group Investment Proposal (GIP) seeks support/approval for the headline size of \$114.84 mln being the required funding level to fully execute Santa Barbara Further Oil Development FOD Project Phase 1 (also known as Early Oil Development, EOD) and the refurbishment of the Mobile Production Facility, MPF. This funding level is composed of US\$64.59 mln Shell Equity Share MOD and additional contribution of US\$50.25 million as NNPC carry under MCA. The sum of \$42.06 had been approved in the previous proposal with \$72.78 mln to be approved in this revised proposal.

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

Santa Barbara and Santa Barbara South fields are located in OML 25 and 29, about 60 km South-West of Port Harcourt. The fields have expectation STOIIP of 1084.1 MMstb, Expectation Ultimate Recovery (100%) of 445.2 MMstb (reference NNS ARPR 31/12/2010). The cumulative production as at 31/12/2010 was 32.3 MMstb from 8 wells. Undeveloped Expectation oil Reserves of 83.3 MMstb and 61.03 Bscf of gas (nipRes ARPR 31/12/2010) exist in the field which are made up of Santa Barbara EOD project and existing conduits closed-in because of facility unavailability.

Phased development of Santa Barbara field was approved in 2005 FDP. Phase 1 is the Santa Barbara Early Oil Development (EOD) project whereas phase 2 is Later Oil Development (LOD). The first phase will in addition gather data for further optimization of the second phase. This GIP covers only the EOD project. The Santa Barbara EOD project aims to drill and complete 5 wells (4 horizontal, 1 conventional well), install flowlines, hookup wells to flowstations, facility refurbishment and upgrade. The original objective of the EOD project (ref 2007 GIP) was to develop 52 MMstb (100%) expectation oil reserves. However, based on the BP10 HCM forecast, the project will develop economic truncated 2P reserves of 38.6 MMstb of oil (100%) having drilled, hooked-up and produced SBAR-10T before now.

Santa Barbara field has an AG infrastructure in-place which delivers produced gas to Soku Gas Plant via an existing gas export pipeline. The produced water will be disposed of at the Bonny terminal. The total liquid processing capacity of existing Santa Barbara Mobile Production Facility (MPF) is 30 Mbpd. Crude will be evacuated from the field via the new Nembe Creek Trunkline (NCTL). However, the Santa Barbara Flowstation will not be available until Q1 2012 as it is currently undergoing refurbishment.

In April 2007, approval was sought and obtained for US\$21.3 mln CAPEX Shell Share (with US\$ 4.6 approved in 2006 pre FID-IP) bringing the total Shell Share to US\$25.9 to drill 5 Oil producers (4 horizontal and 1 Conventional wells) and to carry out minor facility upgrade in Santa Barbara field in 2007. As at June 2008, 3 horizontal wells out of the 5 new wells planned, were drilled and completed. Well results were generally within prognosis. The 3 new wells developed economic truncated 2P reserves of 18.92 MMstb (100%, BP10). In February 2008, 1 well (SBAR-10) was hooked up and came on stream and produced in line within expectation at 1600 bopd on choke 24 (BS&W 0%). The well is yet to be beamed up to potential due to Flowstation outage since July 2008. The other 2 wells (SBAR-11 & 12) have been hooked-up awaiting Flowstation availability to open up to production. The actual spend (Shell Share) prior to MCA, for the facility is US\$0.4mln, while that of the 3 wells already drilled was US\$26.2 mln (including US\$0.7 location preparation). This spend is already above 2007 approved budget for the project (US\$25.9 mln SS).

The increase in the project cost is attributed to:

- Increased rig maintenance cost as against the number planned and executed.
- Higher than anticipated Rig and materials cost, Drilling Contractor (Lonestar) internal management problems leading to high NPT, as well as escalating security challenges in the Niger Delta.

Drilling is planned to start in October 2011 with MCA pickup rig, based on the signed June 2011 Short-Term Drilling and Workover Sequence. The first oil is expected in April 2012 when SBAR MPF will come on stream.

The Santa Barbara MPF facility refurbishment comprises of re-entry activities which seek to restore the integrity of the facility in order to produce current locked-in oil potential of 20.7 Mbopd at the shortest possible time. Re-entry activities will involve refurbishment of all major equipment like generators, pumps, compressors, replacement of control system, electrical/instrument cables, UPS systems and transformers and procurement/ replacement of 25 km of flowlines. The re-entry activities commenced in September 2010.

The facility upgrade scope of Santa Barbara EOD will entail installation of new facilities such as pumps, generators, platform extension, control systems, de-bottlenecking etc to accommodate the increased production from the new wells. Detailed design and procurement is planned to start in Q3 2012.

The 2007 IP economics returned a life cycle project NPV of US\$28.5 mln at a Project Screening Value (PSV) of \$30/bbl, compared to the full lifecycle evaluation of this updated IP at US\$47 mln NPV (7%) at a higher PSV of \$50/bbl based on different cost premises (ref. Summary Economics section Table 1).

## ***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 11.58 MMstb of oil and 0.18 bln sm<sup>3</sup> of gas (SS) to production and transferring equivalent SEC Proved reserves of 9.75 MMstb of oil and 0.14 bln sm<sup>3</sup> of gas (SS) from PUD to Proved Developed in 2012 with positive impact on SPDC DD&A. The reserves of SBAR-10T was excluded in the HCM forecast attached since the well is categorised as NFA having been drilled, completed, hooked-up and produced shortly before the flowstation outage. Though the HCM forecast includes the Santa Barbara Appraisal well (SBAR-ABNB1) 2C Oil resources of 3.5 MMstb (SS), the current GIP update does not include the appraisal well as there is already a separate approved IP for the well.
- Increasing oil production from the field, peaking at 8.8 Mbopd from this project by 2013 thus increasing the effective utilization of the new NCTL pipeline and contributing associated gas production of 2.8 MMscf/d to SPDC gas supply to NLNG
- Optimising the use of existing Right of Way (RoW) and facilities thereby lowering Unit Technical Cost (UTC) of development and minimising the footprint.

The additional oil will partly arrest the production decline in Santa Barbara 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 due to increased volume of dry oil being produced.

### **Summary Economics**

The basecase economics is a forward-look evaluation and assumes that Shell will fund its NNPC share of the Carry (MCA) component of the costs and its Equity share of the project cost. This evaluation considered the Shell Equity forward-look spend of US\$64.59 mln (including US\$1.29 mln OPEX) and MCA Shell Share of US\$50.25 mln (i.e. Total cost of \$114.84 mln out of \$215.3 mln MOD 100% JV). The Project Management (PMT) CAPEX and SCD OPEX are excluded from MCA funding (treated as JV cost) as they are not originally part of the agreed carry cost under the arrangement. Consistent with the terms of the MCA, the sensitivity assumes the extra cost will be recovered through cost oil only as SPDC may not be able to receive profit oil.

The headline number covers the 2007 - 2014 CAPEX required for the project execution, and the Shell share of the NNPC portion of the project cost, bringing Shell Share of the project cost, to approximately 53% of the SPDC JV 100% cost of \$215.3mln MOD.

Sensitivities evaluated include:

- |                      |   |
|----------------------|---|
| ▪ High CAPEX         | ▪ High & Low reserves                                       |
| ▪ 1yr schedule delay | ▪ Concession expiration in 2019                             |
| ▪ Full Life Cycle    | ▪ 1.5% cost mark up as provision for costs dispute by NNPC. |
| ▪ PIB House Version  |   |

The impact of earlier approved expenditure of \$86.25mln and additional expenditures of \$10.68mln (Wells - \$5.94mln, MPF - \$3.55mln, and OPEX – \$1.19mln), i.e. \$96.93mln 100% JV MOD on the basecase economics is shown under the Full Life Cycle sensitivity. Details are shown in Table 1 below. The tornado and the profitability plots are shown in Figures 1 and 2.

Table 1: Economic indicators for the full scope of Santa Barbara EOD Phase 1

| PV Reference Date: 1/7/2011        | NPV (\$/S \$ mln) |      | VIR  | RTEP | UTC (RT \$/boe) |     | Payout-Time (RT) | Maximum Exposure (RT) |
|------------------------------------|-------------------|------|------|------|-----------------|-----|------------------|-----------------------|
| Cash flow forward from: 1/1/2011   | 0%                | 7%   | 7%   | %    | 0%              | 7%  | 0%               | 0%                    |
| <b>Base Case + MCA</b>             |                   |      |      |      |                 |     |                  |                       |
| SV (\$50/bbl & \$1.30/mmbtu RT11)  | 110.3             | 47.0 | 0.73 | 40   | 6               | 9   |                  |                       |
| RV (\$70/bbl & \$1.73/mmbtu RT11)  | 161.6             | 70.9 | 1.10 | 54   | 6               | 9   | 2013             | \$22.1mln in 2011     |
| HV (\$90/bbl & \$2.27/mmbtu RT11)  | 210.8             | 95.1 | 1.48 | 68   | 6               | 9   |                  |                       |
| Oil BEP (RT \$/bbl)                |                   |      |      |      |                 | 6.2 |                  |                       |
| <b>Sensitivities (using RV)</b>    |                   |      |      |      |                 |     |                  |                       |
| High CAPEX (P90)                   |                   | 70.1 | 0.98 |      |                 |     | 2013             | \$24.5mln in 2011     |
| High Reserves                      |                   | 73.6 | 1.15 |      |                 |     | 2013             | \$17.3mln in 2011     |
| Low Reserves                       |                   | 57.5 | 0.89 |      |                 |     | 2014             | \$26.9mln in 2012     |
| 1-Yr Production Schedule Delay     |                   | 65.7 | 1.02 |      |                 |     | 2014             | \$26.9mln in 2012     |
| Concession Expiration (2019)       |                   | 46.8 | 0.73 |      |                 |     | 2013             | \$22.1mln in 2011     |
| Full Life Cycle                    |                   | 37.6 | 0.30 |      |                 |     | 2015             | \$51.3mln in 2011     |
| 1.5% cost markup due to BVA issues |                   | 68.2 | 1.03 |      |                 |     |                  |                       |
| PIB House_v12                      |                   | 82.7 | 1.29 |      |                 |     |                  |                       |

Key Project Parameter Data Ranges (Shell Share)

| Parameter                     | Unit     | BP10 Provision | Low    | Mid    | High   | Comments   |
|-------------------------------|----------|----------------|--------|--------|--------|--|
| Capex (MOD)                   | US\$ mln | 72.76          | 68.34  | 72.76  | 80.99  | Incremental CAPEX under MCA Funding of \$34.04mln and JV Funding of \$38.72mln. FLC CAPEX under MCA Funding is \$50.25mln and FLC JV Funding is \$64.59mln |
| Opex (MOD)_Project            | US\$ mln | 0.80           | 0.72   | 0.80   | 0.96   | Incremental project OPEX under JV Funding. FLC OPEX is \$1.29mln   |
| Production Volume             | mln boe  | 21.61          | 16.13  | 21.61  | 21.82  | Production volume forecast till end of fields' lives   |
| Start Up Date                 | mm/yy    | Apr-12         | Apr-13 | Apr-12 | Jul-11 | Base re-start Up production  |
| Production in first 12 months | mln boe  |                |        | 1.67   |        | Production volume from April, 2012 - March, 2013   |

Figure 1: Tornado Plot for Santa Barbara EOD Project GIP

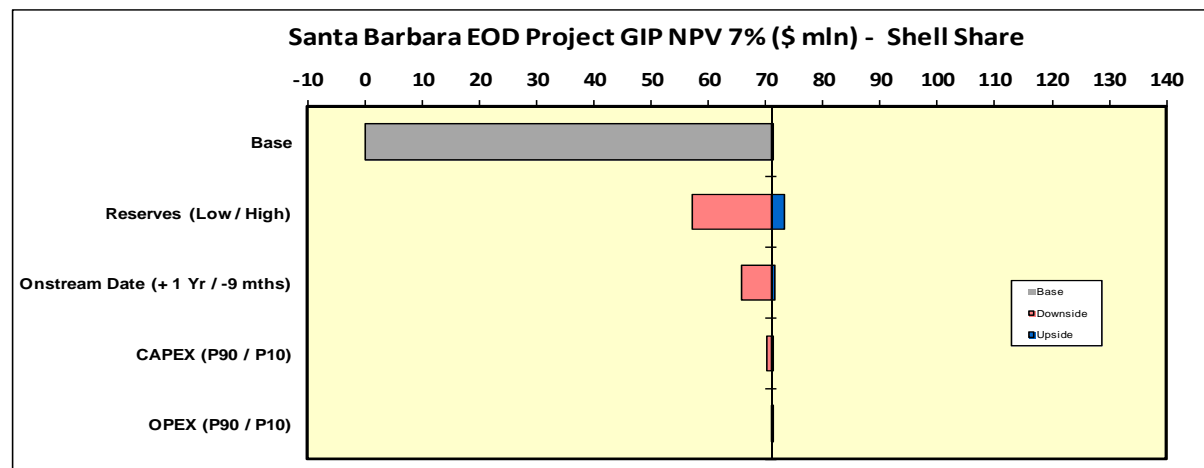
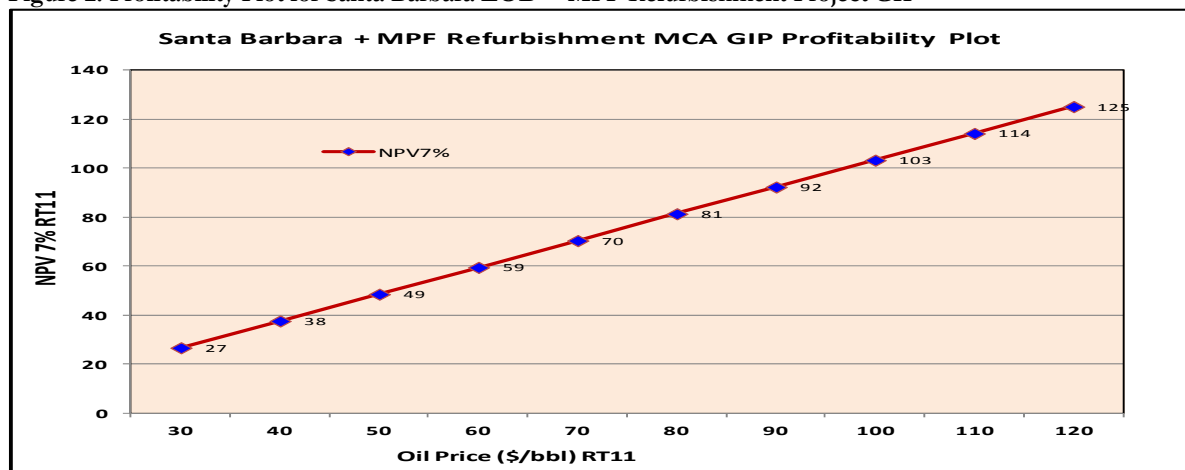


Figure 2: Profitability Plot for Santa Barbara EOD + MPF Refurbishment Project GIP



#### Key Economic Assumptions:

- Gas taxed under CITA with AGFA fiscal incentive 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 1150btu/scf applied.
- ARPR OPEX of 31/12/2010 was applied in addition to project SCD OPEX.
- 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.
- Profit oil ceiling of 8% IRR on carried costs
- Current agreement for recovery of carry costs is maintained

#### PIB assumptions:

- Overseas\_Capex\_Fraction\_Assumed at 30%
- 70\$/bbl – oil at PSV RV-RT in 2011
- 1.73\$/mmbtu – gas (export) at PSV RV-RT in 2011
- NHT depreciation schedule is 4x20%, 19% for qualifying expenditure.
- CIT depreciation schedule is 3x25%, 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
- Flaring penalty is calculated at \$3.5m/Btu MOD flat and it is not tax deductible for both CIT and NHT
- 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
- Santa Barbara is an existing field hence no production allowance is applicable.

### Section 3: Risks, opportunities and alternatives

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 will be executed strictly based on approved budget, Partners should 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 and 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 Amnesty programme, it is envisaged that there will be a reduction in community related NPT.

A safe and secure environment relies on the JTF presence. Existing Santa Barbara field project specific site security plan is in place. 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*

There will be site specific HSE adviser and existing HSE-MS culture will be sustained during the project.

- **Cost Overrun**

Increase in the rig cost as a result of shortage of suitable swamp rigs, Non-productive time while drilling, escalation of facility upgrade and material costs.

#### *Mitigation*

The well and facility costs 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.

- **Delayed Completion of Flowstation re-furbishment Project**

The vandalism of the Santa Barbara Flowstation and flowlines resulted in the inability to open up the station post NCTL repairs.

#### *Mitigation*

Currently, Flowstation re-furbishment is ongoing and Latest Estimated Completion (LEC) date is put at Q1 2012. A dedicated project team and DRB members are in place and it is expected that project will deliver on schedule.

- **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 off-take.

- **Facility Uptime Improvement**

Facility uptime improvement from 55% to 85%

#### *Mitigation*

As at June 2011, facility uptime is 0% (No recent data as station has been down since July 2008). Activities are currently ongoing to improve the uptime to expected minimum of 85%. These activities include Station power generator and control system change out and are expected to be delivered by end 2014.

### **3.2 Opportunities**

- **Resources**

All the critical positions required to deliver the project have been resourced.

Swamp East Asset Development (DSSE) Field Development and Execution Team will support the execution. Engineering support will be provided by both Major project Corporate Matrix 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 Santa Barbara Phase 2 wells and improve its value.

- **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 and implement current re-entry refurbishment activities for early production 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. Santa Barbara EOD project would raise the 10-year average Green House Gas (GHG) emissions by 8.9 KtCO<sub>2</sub>eq/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 3.6 KtCO<sub>2</sub>eq/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 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, Major project Corporate Matrix and Engineering Hub Teams in line with SPDC organizational model. Value delivery will be ensured through regular reviews and meetings with SGSI, performance review within Development and Major Projects Team organization in SPDC. There will also be regular reviews with JV Partners. Following successful completion, the wells will be handed back to the Swamp East Production Operations Team. 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:

- VAR2 (Nov. 2004) and DG2 (May. 2005)
- VAR3/DG3 completed in Oct. 2005/ Dec. 2005, respectively
- VAR4 /DG4 in Aug. 2006/ Nov 2006 respectively and comments have been closed out.

#### **Section 8: Budget provision**

This revised Investment Proposal is in line with capital expenditure allocated to the Santa Barbara phase-1 project under the MCA of 2009 though there is shortfall of US\$55.42 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 the revised budget for realism (e.g. increased well and Facility costs, high Non Productive Time (NPT) and low equipment efficiency). The amount being requested for now is US\$113.55 mln MCA Shell Share Capex in addition to US\$1.29 mln Shell Share Opex, bringing the total headline size to US\$114.84 mln MCA Shell Share. The 100 % Capex phasing (including SCD Opex of US\$4.29 mln) at 50/50 MOD estimate is shown in Table 2:

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

P50 Estimate & Expenditure Phasing.

|                                      | JV Funded |      |      |      |       |       |      |      |  | MCA Funded |      |      |       |       |      |      | PROJECT TOTAL |
|--------------------------------------|-----------|------|------|------|-------|-------|------|------|--|------------|------|------|-------|-------|------|------|---------------|
|                                      | 2007      | 2008 | 2009 | 2010 | 2011  | 2012  | 2013 | 2014 |  | 2008       | 2009 | 2010 | 2011  | 2012  | 2013 | 2014 |               |
| Facilities                           | 1.84      | 0    |      | 3.55 | 20.15 | 4.80  | -    | -    |  | 5.03       | -    | -    | 15.50 | 7.71  | 5.00 | 3.00 | 66.58         |
| PMT                                  |           |      |      |      | 0.11  | 1.20  | 2.40 | 1.32 |  | -          | -    | -    | -     | -     | -    | -    | 5.03          |
| Wells                                | 38.6      |      |      | -    | -     | -     | -    | -    |  | 45.10      | -    | -    | 33.47 | 16.73 |      |      | 133.90        |
| Contingency                          |           |      |      |      |       |       |      |      |  | -          | -    | -    | 5.50  | -     | -    | -    | 5.50          |
| OPEX (SCD)                           | 1.62      | 1.19 | -    | -    | 1     | 0.28  | 0.1  | 0.1  |  | -          | -    | -    | -     | -     | -    | -    | 4.29          |
| 100% CAPEX Phasing                   | 40.44     | 0.00 | 0.00 | 3.55 | 20.26 | 6.00  | 2.40 | 1.32 |  | 50.13      | 0.00 | 0.00 | 54.47 | 24.44 | 5.00 | 3.00 | 211.01        |
| 100% Cost Phasing                    | 42.06     | 1.19 | 0    | 3.55 | 21.26 | 6.28  | 2.5  | 1.42 |  | 51.32      | -    | -    | 55.47 | 24.72 | 5.10 | 3.10 | 215.30        |
| 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  | 12.13     | 0.00 | 0.00 | 1.07 | 6.08  | 1.80  | 0.72 | 0.40 |  | 15.04      | -    | -    | 16.34 | 7.33  | 1.50 | 0.90 | 63.30         |
| JV_Cost Phasing (Shell Share)_OPEX   | 0.486     | 0.36 |      |      | 0.30  | 0.08  | 0.03 | 0.03 |  |            |      |      |       |       |      |      | 1.29          |
| Total JV_Cost Phasing                | 12.618    | 0.36 | 0.00 | 1.07 | 6.378 | 1.884 | 0.75 | 0.43 |  | 15.04      | -    | -    | 16.34 | 7.33  | 1.50 | 0.90 | 64.59         |
|                                      |           |      |      |      |       |       |      |      |  |            |      |      |       |       |      |      |               |
| MCA_Cost Phasing (Shell Share)_CAPEX |           |      |      |      |       |       |      |      |  | 18.38      | -    | -    | 19.97 | 8.96  | 1.83 | 1.10 | 50.25         |
| Total Shell Share_JV & MCA           | 12.62     | 0.36 | 0.00 | 1.07 | 6.38  | 1.88  | 0.75 | 0.43 |  | 33.42      | 0.00 | 0.00 | 36.31 | 16.29 | 3.33 | 2.00 | 114.84        |

### 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                  | Prior Years | 2011    | 2012   | 2013   | 2014   | 2015   | Post 2015 |
|---------------------------|-------------|---------|--------|--------|--------|--------|-----------|
| <b>Total Commitment</b>   | 47.46       | 42.69   | 18.18  | 4.08   | 2.43   | 0.00   | 0.00      |
| <b>Cash Flow</b>          |             |         |        |        |        |        |           |
| SCD Expenditure           | 0.84        | 0.30    | 0.08   | 0.03   | 0.03   | 0.00   | 0.00      |
| Capital Expenditure       | 46.62       | 42.39   | 18.09  | 4.05   | 2.40   | 0.00   | 0.00      |
| Operating Expenditure     | 0.00        | 1.72    | 2.83   | 4.28   | 2.76   | 2.26   | 62.79     |
| Cash Flow from Operations | 11.55       | 15.89   | 27.63  | 32.20  | 30.07  | 21.56  | 187.46    |
| Cash Surplus/(Deficit)    | (35.07)     | (26.51) | 9.54   | 28.15  | 27.67  | 21.56  | 187.46    |
| <b>Profit and Loss</b>    |             |         |        |        |        |        |           |
| NIBIAT +/-                | 2.13        | 2.74    | 12.59  | 14.74  | 10.84  | 7.24   | 178.73    |
| <b>Balance Sheet</b>      |             |         |        |        |        |        |           |
| Average Capital Employed  | 56.03       | 81.43   | 118.62 | 133.16 | 136.61 | 122.36 | 422.93    |

### 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

Carry expenditure not approved by NNPC is at risk of being non-deductible for tax purposes. The FIRS ruling for MCA's is restricted to MCA's concluded before the end of 2009 and future MCA's requiring prior engagement with FIRS.

### Section 13: Key Parameters

The following are the main aspects of this proposal:

Approval for the total revised headline size of US\$114.84 mln Shell Share 50/50 MOD. This is made up of US\$42.08 mln (SS MCA) previously approved in 2007 GIP and US\$72.76 mln (SS MCA) in this revised GIP (incremental IP). The Shell only Equity contribution is US\$64.59 mln while Shell MCA contribution is US\$50.25 mln.

### Section 14: Signatures

This Proposal is submitted to ECMB for approval.

Supported by:

For Business approval:

.....

.....

Maarten Wetselaar (FUI)

Malcolm Brinded (ECMB)

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

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

Initiator:

Ime Uyouko (UIG/T/DSSE)

Date: 31/07/2011



| Santa Barbara FOD                     |  |
|---------------------------------------|--|
| <b>Project Location &amp; Country</b> |  |

Confidential

Project No.: SPDC-11-2581

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<br>[mln bbl]       | Date    | 2U<br>Prospective<br>Resources | 2C Contingent<br>Resources Additions |                             | PRMS 2P Reserves<br>Additions |          | SEC Proved<br>Reserves Additions |       |           |
|----------------------------|---------|--------------------------------|--------------------------------------|-----------------------------|-------------------------------|----------|----------------------------------|-------|-----------|
|                            | (mm)-yy | Prospect                       | Dev.<br>Pending<br>Post-DG1          | Dev.<br>Pending<br>Post-DG2 | Undeveloped                   |          | Developed                        | Undev | Developed |
|                            |         |                                |                                      |                             | Post DG3                      | Post-DG4 |                                  |       |           |
| DG 2                       | Sep-05  |                                |                                      | 12.8                        |                               |          |                                  |       |           |
| DG 3                       | Sep-05  |                                |                                      | -9.4                        | 9.4                           |          |                                  |       |           |
| FID                        | Apr 07  |                                |                                      |                             | -9.4                          | 9.4      |                                  | 7.9   |           |
|                            |         |                                |                                      |                             |                               |          |                                  |       |           |
|                            |         |                                |                                      |                             |                               |          |                                  |       |           |
|                            | 2010    |                                |                                      |                             |                               |          |                                  |       |           |
| Appraisal Well Drilling    | 2011    |                                |                                      | -3.4                        |                               | 3.4      |                                  |       |           |
| First HC                   | 2012    |                                |                                      |                             |                               | -12.8    | 12.8                             | -7.9  | 7.9       |
|                            | 2013    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2014    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2015    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2016    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2017    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
| Perf Update                | 2018    |                                |                                      |                             |                               |          |                                  |       | 2.0       |
|                            | 2019    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2020    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
| Perf Update                | 2021    |                                |                                      |                             |                               |          |                                  |       | 1.8       |
|                            | 2022    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2023    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
| Perf Update                | 2024    |                                |                                      |                             |                               |          |                                  |       | 0.7       |
|                            | 2025    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
|                            | 2026    |                                |                                      |                             |                               |          |                                  |       | 0.0       |
| Perf Update<br>later years | 2027    |                                |                                      |                             |                               |          |                                  |       | 0.5       |
|                            |         |                                |                                      |                             |                               |          |                                  |       | 0.0       |
| Total                      |         | 0.0                            | 0.0                                  | 0.0                         | 0.0                           | 0.0      | 12.8                             | 0.0   | 12.8      |

| OIL/NGL<br>[mln bbl] |             | 2U          | 2C Contingent               |                             | PRMS 2P Reserves |          |           | SEC Proved |           |
|----------------------|-------------|-------------|-----------------------------|-----------------------------|------------------|----------|-----------|------------|-----------|
|                      |             | Prospective | Resources                   |                             | Undeveloped      |          | Developed | Undev      | Developed |
|                      |             | Prospect    | Dev.<br>Pending<br>Post-DG1 | Dev.<br>Pending<br>Post-DG2 | Post DG3         | Post-DG4 |           |            |           |
| ARPR 31.12.2009      | before last |             |                             |                             |                  | 16.5     |           | 9.8        |           |
| ARPR 31.12.2010      | last        |             |                             |                             |                  | 12.4     |           | 7.7        |           |

| GAS<br>[bln sm3]        | Date    | 2U<br>Prospective | 2C Contingent<br>Resources Additions |                             | PRMS 2P Reserves<br>Additions |          |           | SEC Proved<br>Reserves Additions |           |
|-------------------------|---------|-------------------|--------------------------------------|-----------------------------|-------------------------------|----------|-----------|----------------------------------|-----------|
|                         | (mm)-yy | Prospect          | Dev.<br>Pending<br>Post-DG1          | Dev.<br>Pending<br>Post-DG2 | Undeveloped                   |          | Developed | Undev                            | Developed |
|                         |         |                   |                                      |                             | Post DG3                      | Post-DG4 |           |                                  |           |
| DG 2                    | Sep-05  |                   |                                      | 0.19                        |                               |          |           |                                  |           |
| DG 3                    | Sep-05  |                   |                                      | -0.16                       | 0.16                          |          |           |                                  |           |
| FID                     | Apr-07  |                   |                                      |                             | -0.16                         | 0.16     |           | 0.12                             |           |
|                         |         |                   |                                      |                             |                               |          |           |                                  |           |
|                         |         |                   |                                      |                             |                               |          |           |                                  |           |
|                         | 2010    |                   |                                      |                             |                               |          |           |                                  |           |
| Appraisal Well Drilling | 2011    |                   |                                      | 0.04                        |                               | 0.04     |           |                                  |           |
| First HC                | 2012    |                   |                                      |                             |                               | -0.20    | 0.20      | -0.12                            | 0.12      |
|                         | 2013    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2014    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2015    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2016    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2017    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2018    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2019    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
| Perf Update             | 2020    |                   |                                      |                             |                               |          |           |                                  | 0.03      |
|                         | 2021    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
| Perf Update             | 2022    |                   |                                      |                             |                               |          |           |                                  | 0.03      |
|                         | 2023    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2024    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2025    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2026    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
|                         | 2027    |                   |                                      |                             |                               |          |           |                                  | 0.00      |
| later years             |         |                   |                                      |                             |                               |          |           |                                  | 0.02      |
| Total                   |         | 0.0               | 0.0                                  | -0.0                        | 0.0                           | 0.0      | 0.195     | 0.0                              | 0.195     |

| Gas<br>[bin sm3] |             | 2U Prospective |                       | 2C Contingent Resources |             | PRMS 2P Reserves |           |       | SEC Proved Reserves Additions |  |
|------------------|-------------|----------------|-----------------------|-------------------------|-------------|------------------|-----------|-------|-------------------------------|--|
|                  |             | Prospect       | Dev. Pending Post-DG1 | Dev. Pending Post-DG2   | Undeveloped |                  | Developed | Undev | Developed                     |  |
|                  |             |                |                       |                         | Post DG3    | Post-DG4         |           |       |                               |  |
|                  |             |                |                       |                         |             |                  |           |       |                               |  |
| ARPR 31.12.2009  | before last |                |                       |                         |             | 0.24             |           |       | 0.14                          |  |
| ARPR 31.12.2010  | last        |                |                       |                         |             | 0.16             |           |       | 0.09                          |  |

Name :

Lismont, Bart

Signature :

Bar

Name :

Emelle, Chima

**Signature :**

NGCEM3 Digitally signed by NGCEM3  
DN: cn=NGCEM3  
Date: 2011.06.09 17:28:06  
+01'00'

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

| CHECK   |                         |
|---|-------------------------|
| developed reserves<br>additions minus cum<br>production |                         |
| 2P Reserves<br>Developed                                | SEC Proved<br>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                     |
| 0.0   | 0.0                     |
| 12.0  | 7.1                     |
| 10.9  | 6.0                     |
| 10.2  | 5.3                     |
| 9.5   | 4.6                     |
| 8.8   | 3.9                     |
| 8.1   | 3.2                     |
| 7.3   | 4.4                     |
| 6.7   | 3.7                     |
| 6.0   | 3.0                     |
| 5.3   | 4.1                     |
| 4.8   | 3.6                     |
| 4.4   | 3.2                     |
| 4.1   | 3.6                     |
| 4.0   | 3.5                     |
| 3.8   | 3.3                     |
| 3.6   | 3.6                     |
| 0.0   | 0.0                     |

negative numbers are incorrect

| CHECK   |                         |
|---|-------------------------|
| developed reserves<br>additions minus cum<br>production |                         |
| 2P Reserves<br>Developed                                | SEC Proved<br>Developed |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.00  | 0.00                    |
| 0.19  | 0.11                    |
| 0.17  | 0.10                    |
| 0.16  | 0.09                    |
| 0.15  | 0.08                    |
| 0.14  | 0.07                    |
| 0.13  | 0.06                    |
| 0.13  | 0.05                    |
| 0.12  | 0.04                    |
| 0.11  | 0.06                    |
| 0.10  | 0.05                    |
| 0.09  | 0.07                    |
| 0.08  | 0.06                    |
| 0.08  | 0.06                    |
| 0.07  | 0.05                    |
| 0.07  | 0.05                    |
| 0.07  | 0.05                    |
| 0.00  | -0.00                   |

negative numbers are incorrect

**ESTIMATE FACT SHEET** to be included in GIP and PCN submissions  
**Santa Barbara FOD Phase 1 (Early Oil Development)**  
 <Please enter Project Location>

Version 2.4

Confidential

Approved Cost & Schedule Estimate

Project No.:

C11043

Estimator:

Olaribigbe, Elias

Planner:

Dadi, Musa

Case:

Base

Rates of Exchange are as per SI-SX Data Set

Cost are in: USD Millions

Market Scenario: RV

Estimate Type: 3

EDM Date: 1-Jul-10

Estimate Start / End: FID Apr-2007 / RFSU Oct-2014

**Category**

Facilities

<Wells>

Owners cost (incl. insurance, pre-FID, Capitalized Interest)

Market Escalation, EPC Premium & Taxes

Contingency

Facilities: 18%

<Wells>: 0%

Inflation

**Total Costs**

48

135

14

7

8

3

P10

P50

P90

Approved Total Project Estimate, MOD

189

215

258

-12%

20%

OK

**Assumptions:**

**Est. and Schedule Premise**

About 25% of total Surface Facilities cost estimate is based on actual costs. The outstanding estimates are based on awarded contracts/POs and other recent/ongoing contracts. Wells cost estimate includes wells contingency included by Well Engineering in line with agreed methodology in-house SPDC Surface Facilities P50 and P90 contingencies are deterministically determined using the TECOP tool - they have not been applied on the actual parts of the overall estimate. The schedule is based on early drill to fill using three wells that will back out other high GOR and water cut wells. When the facility is upgraded in 2014, the backout wells will be reproduced.

**Execution Strategy Premise**

The Concrete Barge refurbishment and flowlines construction part of the project are in execution based on a DIY strategy involving award of multiple POs and installation contracts, mostly using existing callout contracts. EPC strategy is proposed for the Off-barge facilities part of the project for which detailed design is being carried out.

**Contract Strategy**

Use of existing callout contracts, award of Pos for procurement and proposed EPC for Off Barge facilities

**Key Project Risks**

Security/community issues, Poor contractor quality, HSE Risks, Internal and external interface management

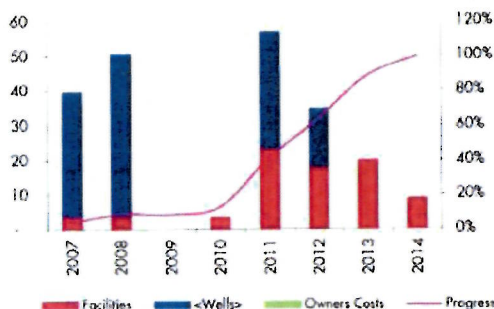
**Exclusions**

SPDC financing of interest during construction

**Benchmarking & Metrics**

Estimate is largely based on awarded contracts/Pos and existing callout contracts for similar activities

**Capex Phasing and Planned Progress:**



**Key Schedule Dates:**

| Phase              | Finish (P50) | Finish (P90) |
|--------------------|--------------|--------------|
| FID                | Apr-2007     |              |
| Detailed Eng.      | Dec-2011     | Jan-2012     |
| Procurement        | Sep-2011     | Sep-2011     |
| Proc. of Bulk Mat. | Sep-2013     | Dec-2013     |
| Construction       | Aug-2014     | Nov-2014     |
| Commissioning      | Oct-2014     | Jan-2015     |
| RFSU               | Oct-2014     | Jan-2015     |

DCAFTA 1

Date:  
Name:  
Signature:

5/7/2011

Bensley Andrew

VP Project Services

Date:  
Name:  
Signature:

5/7/2011

Hans Mes

Project Manager

Date:  
Name:  
Signature:

22-06-2011

Uyauko Ime

Business Opportunity Manager

Date:  
Name:  
Signature:

22-06-2011

Nwabueze Vincent