

The Shell Petroleum Development Company of Nigeria Limited

Internal Investment Proposal

Summary Information

Business unit and company	The Shell Petroleum Development Company of Nigeria Limited (SPDC)																																											
Group equity interest	100% in SPDC. SPDC is the JV operator of an unincorporated Joint Venture with a 30% interest.																																											
Other shareholders / partners	Nigerian National Petroleum Corporation (NNPC: 55%); TotalFinaElf (10%); and Nigeria Agip Oil Company (NAOC: 5%).																																											
Business or Function	Upstream International																																											
Amount	The headline size of US\$23.1mln Shell Share MOD 50/50 being requested for approval is funded by Shell Equity CAPEX of US\$13.8mln Shell Share MOD and OPEX of US\$9.3mln Shell Share .																																											
Project	OGBOTOBO Re-entry project.																																											
Main commitments	<table><thead><tr><th>Description</th><th>Current IP Request (\$'mln)_100% JV</th><th>Current IP Request (\$'mln)_Shell Share</th></tr></thead><tbody><tr><td colspan="3">a) CAPEX</td></tr><tr><td>Flowlines & Hookups</td><td>26.0</td><td>7.8</td></tr><tr><td>Oil Facilities</td><td>20.0</td><td>6.0</td></tr><tr><td>Total CAPEX</td><td>46.0</td><td>13.8</td></tr><tr><td colspan="3">b) OPEX</td></tr><tr><td>Community Support, Repairs, Re-entry Support, Dredging & Shore Protection</td><td>31.0</td><td>9.3</td></tr><tr><td>Total OPEX</td><td>31.0</td><td>9.3</td></tr><tr><td>GRAND TOTAL (CAPEX + OPEX)</td><td>77.0</td><td>23.1</td></tr></tbody></table>				Description	Current IP Request (\$'mln)_100% JV	Current IP Request (\$'mln)_Shell Share	a) CAPEX			Flowlines & Hookups	26.0	7.8	Oil Facilities	20.0	6.0	Total CAPEX	46.0	13.8	b) OPEX			Community Support, Repairs, Re-entry Support, Dredging & Shore Protection	31.0	9.3	Total OPEX	31.0	9.3	GRAND TOTAL (CAPEX + OPEX)	77.0	23.1													
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Source and form of financing	This investment will be financed by JV funding arrangement.																																											
Summary cash flow	<div><p>Ogbotobo Re-entry Forward looking Cashflow (Shell Share PSV RV-RT12)</p><table border="1"><caption>Estimated Data for Ogbotobo Re-entry Forward looking Cashflow</caption><thead><tr><th>Year</th><th>RT Annual Cash Flow 0% (\$ mln RT12)</th><th>RT CAPEX (\$ mln RT12)</th><th>Cum Cashflow 0% (\$ mln RT12)</th><th>Cum Cashflow 7% (\$ mln RT12)</th></tr></thead><tbody><tr><td>2012</td><td>-0.5</td><td>0.5</td><td>-0.5</td><td>-0.5</td></tr><tr><td>2013</td><td>-8.0</td><td>9.0</td><td>-8.5</td><td>-8.5</td></tr><tr><td>2014</td><td>-0.5</td><td>4.0</td><td>-9.0</td><td>-9.0</td></tr><tr><td>2015</td><td>13.0</td><td>0.0</td><td>4.0</td><td>2.0</td></tr><tr><td>2016</td><td>3.0</td><td>0.0</td><td>7.0</td><td>4.0</td></tr><tr><td>2017</td><td>2.5</td><td>0.0</td><td>9.5</td><td>5.0</td></tr><tr><td>2018</td><td>0.5</td><td>1.5</td><td>10.0</td><td>5.5</td></tr></tbody></table></div>				Year	RT Annual Cash Flow 0% (\$ mln RT12)	RT CAPEX (\$ mln RT12)	Cum Cashflow 0% (\$ mln RT12)	Cum Cashflow 7% (\$ mln RT12)	2012	-0.5	0.5	-0.5	-0.5	2013	-8.0	9.0	-8.5	-8.5	2014	-0.5	4.0	-9.0	-9.0	2015	13.0	0.0	4.0	2.0	2016	3.0	0.0	7.0	4.0	2017	2.5	0.0	9.5	5.0	2018	0.5	1.5	10.0	5.5
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Section 1: The Proposal (Management summary)

This Investment Proposal seeks business support/approval for funding of **US\$23.1mln** (Shell share, 50/50 MOD, phased as given in table below) for Ogbotobo Re-entry Project.

The activities include rehabilitation and restoration of the concrete-barge mounted 45Mbd Ogbotobo flowstation facilities which were vandalized in SPDC-Western Division during the Niger Delta security crisis from 2006 to 2009.

SPDC West Production facilities were forcefully de-manned in early 2006 following violent attacks by armed insurgents. A Re-entry IP for funding to the tune of \$99.0mm (Shell Share) based on the level of damage known then (2007) was subsequently sought and received. In line with the execution strategies laid out in the earlier IP (such as the use of competent community based contractors, a dedicated West Re-entry Tender Board, implementation of sustainable community development projects and spill clean-ups, and a logo which says No One Gets Hurt in West Re-entry) the Re-entry project has restored 31 facilities with average net production of over 200 Mbopd at a cost of \$120.1mln (Shell share) from 2006 to date, the latest being Batan Flowstation in February 2011, at a cost of \$25.1mln (Shell share).

Cost Phasing (US\$mln MOD)

		Cost Phasing (year)		
Activities	Cost (US\$ mln)	2012	2013	2014
Power Generation package	20.30	1.01	13.19	6.09
Flowlines and well head platforms	25.69	1.28	16.70	7.71
Total CAPEX (100% JV FUS\$ mln)	45.99	2.30	29.89	13.80
Shell Share CAPEX (30% equity FUS\$ mln)	13.80	0.69	8.97	4.14
Facilities extra ordinary maintenance	25.00	1.25	16.25	7.50
SCD project: Aghoro Agge interdependency project	6.07	0.30	3.95	1.82
Total OPEX (100% JV FUS\$ mln)	31.07	1.55	20.20	9.32
Shell Share OPEX (30% equity FUS\$ mln)	9.32	0.47	6.06	2.80
Total Cost (100% JV FUS\$ mln)	77.06	3.85	50.09	23.12
Shell Share Total (30% equity FUS\$ mln)	23.12	1.16	15.03	6.94

The project involves structural integrity works on the concrete barge, revamp of the flowstation process piping, replacement/upgrading of the electrical systems, replacement of about 52km of vandalized flow lines and wellhead platforms, and implementation of NAPIMS approved Interdependency Electrification project (legacy project). The project will accomplish production restoration safely with No Harm to People.

The Flares DRB approved the recommendation to proceed with the Ogbotobo works for production start-up prior to the AGG being in place. The decision was supported by REVP on the condition that the time between the re-entry and completion of the AGG scope should be less than a year in order to minimize the need (or temptation) to produce when AGG is still under construction.

The DRB decision was based on the low GOR of Ogbotobo oil (about 500scf/bbl) compared with other higher GOR (1500 scf/bbl) production which may be beamed-back if required for flaring control. In addition, on-going improvements in ACTIVE AGG performance, the completion of the

rehabilitation programme for INACTIVE AGG's, and the completion of new AGG projects (AGS1 and FYIP AGG in 2013) would result in significant reduction in SPDC flare volumes.

The condition imposed by REVP means the earliest OSD for Ogbotobo would be July 2014, by which time the SPDC flare volumes would be 50% lower than current flares volumes of about 200mmscf – including the 5-7mmscf Ogbotobo contribution.

Section 2: Value proposition and strategic and financial context

Prior to the Niger Delta security crisis, the average daily production of Ogbotobo was circa 13 Mbopd (4.33 Mbopd Shell share). Completion of Ogbotobo Re-entry activities will result in restoration of initial production of 8.8Mbopd. However for the economics only half of this production was used, i.e. 4.4 Mbopd (1.32 Mbopd Shell share) in order to allow ensure no flaring increase by beaming back production from higher GOR wells. This would ensure that the SPDC flares down targets and the continuous flare and flare intensity year on year reductions are not compromised.

Successful completion of Ogbotobo Re-entry Project will enable the SSAGS+ project for Ogbotobo, for which FID has already been taken. The completion of Ogbotobo facilities (and associated pipelines/flowlines networks) will also continue to support the building of community contractors' capacity and development of local content. The Project will serve to foster greater partnership with host communities particularly through the interdependency power project whilst contributing to the realization of the Federal Government's aspiration of increased oil and gas production by accelerating oil production from the field by one year.

Summary Economics

The Ogbotobo re-entry project economics was evaluated on a forward looking basis, using the 50/50 re-entry cost estimate of Ogbotobo facilities and the incremental no-further activity (NFA) production forecast. Forecast was based on 50% production to allow for bean-back of higher GOR wells, and for only a period of one year (August 2014 to July 2015) after which the SSAGS+ project comes on stream.

The project activities are currently scoped and scheduled to complement the SSAGS+ project, which is scheduled for completion in July/August 2015, and for which FID was taken in April 2012. Funding for this request is to be provided via the JV funding.

The following sensitivities were carried out on the base case:

- High CAPEX,
- High and Low Production Volumes,
- 1-year production schedule delay
- Flare Penalty at N10/Mscf
- Flare Penalty at \$2.00/Mscf
- 1.5% cost mark up for NNPC cost disputes on Benchmarked Verified and Approved issues

The project returns a positive NPV7 %. Details of the results are in Table 1 below.

The Tornado plot and Profitability Plot are shown in figure 1 and 2 respectively below.

Table 1: Economics Grid of Ogbotobo re-Entry Project (Shell Share, RT12)

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 RT12)	3.5	1.4	0.12	14	15.6	17.0		
RV (\$70/bbl RT12)	8.1	5.2	0.42	31	15.6	17.0	2015	<i>11.7 (2014)</i>
HV (\$90/bbl RT12)	12.7	8.9	0.72	48	15.6	17.0		
Oil BEP (RT \$/bbl)								
Sensitivities (using RV)								
High Capex		4.6	0.33				2015	<i>13.2 (2014)</i>
High Production (P10)		5.3	0.43				2015	<i>11.7 (2014)</i>
Low Production (P90)		4.8	0.39				2015	<i>11.7 (2014)</i>
1-Yr Production Schedule Delay		4.1	0.33				2016	<i>12.2 (2014)</i>
Flare Penalty @ N10/Mscf		8.3	0.67				2015	<i>11.7 (2014)</i>
Flare Penalty @ \$2.00/Mscf		6.5	0.53				2015	<i>11.7 (2014)</i>
1.5% Cost mark-up due to BVA issues		5.1	0.40					

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	BP11 Provision	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	-	12.6	13.8	15.6	Not a stand alone project in BP11
Opex (MOD)_Project	US\$ mln	-	8.5	9.3	10.5	SCD Opex and other project opex
Production Volume	mln boe	-	3.0	3.1	3.1	
Start Up Date	mm/yy	-		Jul-14		
Production in first 12 months	mln boe		3.0	3.1	3.1	Production volume from Aug'14 to Jul'15

Economics Assumptions:

- Oil PSVs of \$50/bbl @SV-RT12; \$70/bbl @RV-RT12 and \$90/bbl @HV-RT12 with applicable Forcado offsets applied.
- Oil is assumed to be taxed under PPT
- SPDC Domestic aggregate 2012 gas price based on the Nigeria Gas Master Plan (NGMP).
- Oil was taxed under PPT (PPT tax rate of 85%).
- Gas (AG) taxed under CITA with AGFA fiscal treatment (incentive) applied
- ARPR 31/12/2011 Variable Opex for Ogbotobo Flow Station is applied.
- SCD and other specific fixed project OPEX were provided by project team
- NDDC Levy of 3% of total expenditure.
- Education tax of 2% assessable profit.
- Gas Flare Penalty of US \$3.5/mscf was applied and is non-tax deductible.
- GHV of 1000btu/scf
- Abandonment cost is estimated at 10% of total project RT CAPEX

Figure 1: Ogbotobo Re-entry Project IP Tornado Plot (Shell Share)

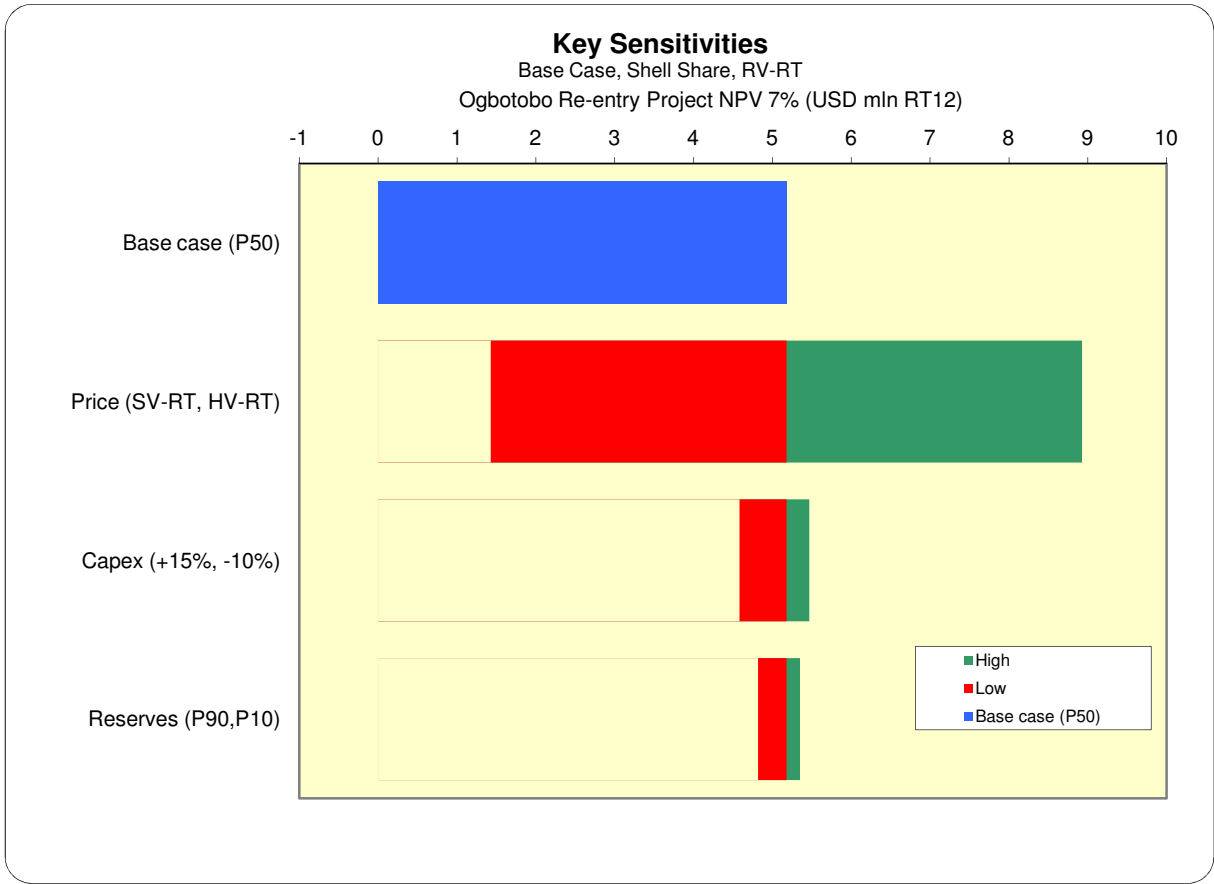
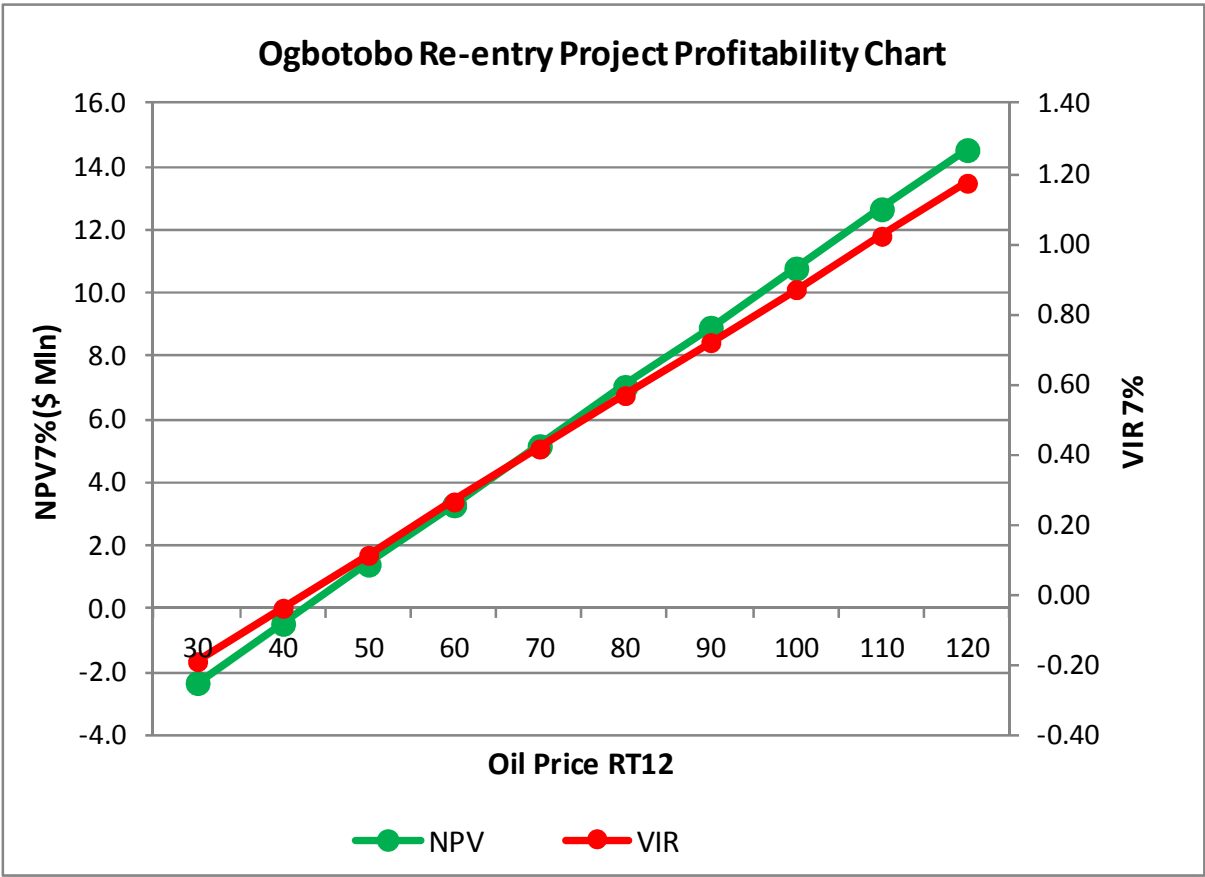


Figure 2: Profitability Plot for Ogbotogbo Re-entry Project IP (Shell Share)



Section 3: Opportunities, Risks and alternatives.

Opportunities:

The successful completion of this project creates the opportunity for SPDC to restore Ogbotogbo flowstation oil production shut-in due to the Niger Delta security crisis. It also enables SSAGS+ achieve its aspired growth in reserves and production from the field.

The following are other opportunities associated with this project:

S/N	Opportunity Description	Type	Realization Activities
1	Continuous optimization	E	<ul style="list-style-type: none">Well repairs and open up sequence will be prioritized to deliver maximum production at minimum effort and cost.Lean processes will be applied to improve performance on flowline laying.
2	Mature community contactors	P	<ul style="list-style-type: none">Award suitable contracts to community contractors. This is part of the re-entry philosophy, and it also support LTO

Risks:

The following are the identified risks associated with this project:

S/N	Risk Description	Type	Mitigation/Remedial Effort
1.	HSE Risk due to high number of contractors and interface with SSAGS+ project	T	<ul style="list-style-type: none">To mitigate the risk an integrated HSE plan would be developed to encompass all the contractors, and describe how interface risks will be managed.A resource plan which provides for adequate on site HSE and activity supervisors will be developed and implemented.
2.	Barge hull/ foundation integrity issues renders the barge unusable	T, E	<ul style="list-style-type: none">A detailed assessment of the barge foundation and hull carried out by the corporate civil team found that the hull and foundation are fit for purpose, but also suggests remedial actions to prevent future risks and mitigate seasonal flooding. The findings and recommendations were supported by the TA-1 and will be implemented
3.	Delays due to slippage in SSAGS	T	<ul style="list-style-type: none">Activities in SSAGS that would impact on the re-entry project have been identified and document. An integrated schedule would be used to ensure that potential slippages are identified early and managedBoth projects are managed by the same team, so this reduced the potential for friction between the teams.
4.	Pipeline risk	T	<ul style="list-style-type: none">The integrity of the delivery line which ties into the Trans Ramos line will need to be ascertained. The SSAGS project will have a pipeline contractor on site, thus they can provide rapid response if requiredThe risk of the Trans Ramos line failing is being managed by the SSAGS project
5.	License expiration	E	<ul style="list-style-type: none">This risk will be managed by the SSAGS project.
6.	Delay in obtaining NAPIMS approval of contracts and funding	C	<ul style="list-style-type: none">Constant engagement with NAPIMS ongoing, and to continue throughout the project lifecycleSSAGS+ contracts and previous approvals present and opportunity to reduce the approval times.Budgets have been approved by JV, and are part of in BP'12

S/N	Risk Description	Type	Mitigation/Remedial Effort
7.	Local contractors Lack the capacity to deliver.	C, T	<ul style="list-style-type: none"> Capacity to deliver will be assured through training and adequate site supervision by SPDC. Contracts will be limited to manageable sizes that can be executed by community contractors.
8.	Legacy contracts	C	<ul style="list-style-type: none"> Flowline replacement contracts had been awarded previously. These would be maintained unless the contractor no longer has the capacity to deliver the full scope.
9.	Competition for resources with SSAGS	C	<ul style="list-style-type: none"> The presence of the larger SSAGS project might drive up the cost of resources community provided e.g. unskilled and semi skilled labour. Since both projects are managed by the same team, effort would be made to prevent competition, and where required additional resources can be sourced from nearby communities.
10.	Divestment from Warri	O	<ul style="list-style-type: none"> This risk would impact the logistics for SPDC supervisors and personnel and is being centrally managed by the SSAGS Project team
11.	Security Issues	P, E	<ul style="list-style-type: none"> A re-entry security strategy/plan would be developed, which aligns with SPDC's corporate security strategy will be developed to reduce risks to personnel and guarantee LTO during and after Re-entry. Operations maintain a presence on site, with security coverage, thus the novelty of SPDC's return to the field has been mitigated Security will be coordinated with the SSAGS project and contractors to ensure synergy and reduced risk of conflict in command structure.
12.	Delays in procurement / delivery of long lead items.	C	<ul style="list-style-type: none"> Approval has been received for the Part A for the power generation package; and this is a major long lead item.

Alternatives Considered:

An alternative considered was to discontinue the Re-entry program. This alternative was not considered viable for the following reasons:

- SPDC would be unable realize the value promised in the SSAGS+ GIP, because the production profile for Ogbotobo assumes that re-entry would have been completed
- SPDC would be unable to utilize the 45Mbopd Ogbotobo flowstation which may become subjected to further vandalization forcing SPDC to carry out proper abandonment and possible de-booking of associated reserves.
- Sustaining current SPDC production from the west will require additional fields being brought on stream especially in the light of divestment exercise.

Section 4: Corporate structure, and governance

The existing corporate structure and governance arrangements of SPDC-JV with SPDC as operator will subsist for this investment

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

This proposal complies with Group Business Principles, policies and standards. Functional support for this proposal has been provided by finance, sustainable development, supplies chain management, HSE, operations / maintenance, legal, treasury and tax functions.

Section 6: Project management, monitoring and review

Whereas a project normally identifies, develops and executes a new business opportunity, with the West Re-Entry Project, this is not the case. The Re-entry Project typically consists of numerous smaller restoration, replacement, repair, maintenance and community support activities that under normal conditions individually would not require a full project approach. The scope shall be packaged to engender outsourcing sections of the work to third party contractors with proven competencies and capabilities.

For the West Re-Entry Project, the Project Governance Structure as defined in the Shell EP Opportunity and Project management Guide (2006 OPMG) has been enforced and will continue to be applied for the outstanding works. The most significant Governance roles for this project have been as follows:

- **Decision Executive (DE) - Vincent Holtam, General Manager, Onshore Assets**
 - Single point accountable for the Re-Entry Project
- **Business Opportunity Mgr (BOM) - Muhammad Shittu, General Manager, Flared Gas and West Re-entry**
 - Responsible for protecting the business case,
 - Liaison with all relevant external stakeholders to secure and maintain “Green Light” in the West Operations areas.
- **Project Manager (PM) – Caroline Rockall Domgas/AGS Execution Mgr, West**
 - Responsible for the safe and effective technical execution of the Project
 - Generate Project Execution Plans and schedules
 - Lead the West Re-Entry Team consisting of all activity owners and disciplines required to successfully execute the Project
 - Responsible for continuous security risk assessment of all individual activities

Section 7: Budget provision

- The project is in the approved JV 2011 programme, and budget was provided for 2011. For 2012, 2013, and 2014, provisions have been made in BP'12, and any additional requirements would be funded from internal offsets.
- Total IP budget is F\$77 mln (100% JV), to be phased and funded as follows:
2012: F\$ 3.85 mln
2013: F\$ 50.09 mln
2014: F\$ 23.12 mln

Total: F\$77.06 mln

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	2012	2013	2014	2015	2016	Post 2016
Total Commitment	1.16	15.03	6.94			
Cash Flow						
SCD Expenditure	0.09	1.19	0.55			
proj Opex: Facilities extra ordinary maintenance	0.38	4.88	2.25			
Capital Expenditure	0.69	8.97	4.14			
Operating Expenditure	0.04	0.45	0.584	4.84		
Cash flow From Operations	-0.18	-2.02	4.2	8.14	9.81	2.98
Cash Surplus/(Deficit)	-0.87	-10.99	0.07	8.14	9.81	2.98
Profit and Loss						
NIBIAT +/-	-0.04	-0.52	1.22	11.12	0.08	0.15
Balance Sheet						
Avg Capital Employed	0.42	6.07	11.88	13.94	10.56	2.95

Section 9: Disclosure

Disclosures where required will be done in line with existing Group and SPDC policies and guidelines.

Section 10: Financing:

The project will be funded from SPDC's own generation of funds and existing shareholder facility.

Section 11: Taxation.

No specific Group, regional or country sensitivities exist. There are no unusual tax considerations.

Section 12: Key Parameters.

The following are the main aspects of this proposal for a funding of **F\$23.1 mln** for which approval is sought:

- The complete re-instatement of Ogbotobo facilities that were damaged during the security crisis which began in February 2006, with the aim of restoring hydrocarbon production to pre-crisis levels.
- Community Support activities to facilitate the restoration of SPDC's License to Operate in the Ogbotobo axis.

Section 13: Signatures

Supported By:

For shareholder approval:

.....

Bernard Bos, FUI/F

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

.....

Ian Craig, UIG

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

Initiator: *Muhammed Shittu, UIG/P/F*

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

APPENDIX 1 (DETAILED BREAKDOWN OF THE COMMITMENTS)

S/No.	Description		Cost	Remarks
1	Electrical Package		5.26	Based on existing contract rates
2	Mechanical Package		3.30	
3	51.6km Flowlines		24.83	
4	Well Head platform -10Nos Well heads		0.86	
5	Civil Package		0.13	
6	Additional Scope (By SLA with support Services)		21.54	
7	Concrete Barge Power Generation System		15.04	
8	Aghoro Agge interdependency project		6.07	
Total Base Estimate - (EDM 1/7/2011) Escalated to 2012			77.0	