

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\$21.6mln Shell Share MOD 50/50 being requested for approval is funded by Shell Equity CAPEX US\$15.6 mln Shell Share MOD and OPEX is US\$6.0 mln Shell Share.

Project	OGBOTOBO Re-entry project.			
Main commitments		Description	Current IP Request (\$'mln)_100% JV	Current IP Request (\$'mln)_Shell Share
		a) CAPEX		
		Flowlines & Hookups	11.0	3.3
		Oil Facilities	41.1	12.3
		Total CAPEX	52.1	15.6
		b) OPEX		
		Community Support, Repairs, Re-entry Support, Dredging & Shore Protection	20.0	6.0
		Total OPEX	20.0	6.0
		GRAND TOTAL (CAPEX + OPEX)	72.1	21.6

Source and form of financing	This investment will be financed by JV funding arrangement.
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Summary cash flow	<p>Ogbotogbo Re-entry Project IP Cashflow (Shell Share PSV RV-RT)</p> <p>Legend: RT Annual Cash Flow 0%, RT CAPEX, Cum Cashflow 0%, Cum Cashflow 7%</p>
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Summary economics	Summary economics*	NPV (USD)	RTEP (%)	VIR
	Project title: Ogbotogbo Re-entry IP			
	RV (\$70bbl RT11)			
	SV (\$50/bbl RT11)			
	HV (\$90/bbl RT11)			

Section 1: The Proposal (Management summary)

This proposal is an Investment Proposal that seeks business support/approval for the funding of **US\$21.6mln** (Shell share, 50/50 MOD) for Ogbotobo Re-entry Project activities in SPDC-West. These activities include rehabilitation and restoration of the concrete-barge mounted 45Mbd Ogbotobo flowstation facilities which were vandalized in SPDC-Western Division during the security crisis that commenced 11/01/2006.

It would be recalled that SPDC West Production facilities were forcefully de-manned in early 2006 following violent attacks on her infrastructure 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: use of competent community based contractors, a dedicated West Re-entry Tender Board, implementation of sustainable community development projects and spill clean-ups before damaged facilities repair) the Re-entry project team has restored 31 facilities with average gross production of about 246 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 (\$mln Shell share MOD)

Year	2011	2012	Total
CAPEX	5.47	10.15	15.62
OPEX	2.33	3.65	5.98
Total	7.8	13.8	21.6

The project involves structural integrity works on the concrete barge, revamp of the flowstation process piping, replacement/upgrading of the instrumentation and electrical systems, replacement of about 33km 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 in 4Q2012 pending the implementation of the SSAGG project by end 2014. 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 beaned-back if required for flaring control. In addition, and perhaps more importantly, Ogbotobo will only contribute 1mmscfd to the 2012 flaring volume. Post 2012, on-going improvements in ACTIVE AGG performance, and the completion of the rehabilitation programme for currently INACTIVE AGG's and some of the new AGG projects (AGS1) would result in significant reduction in SPDC flare volumes to lower than 150mmscfd, 110mmscfd, and 70mmscfd in 2013, 2014, and 2015, respectively – including the 5-7mmscfd Ogbotobo contribution and with no (20-30mmscfd) adjustment for any asset sales.

Section 2: Value proposition and strategic and financial context

The proposal is consistent with Shell EP Priorities of having a production of between 3.5 – 3.8 mln boe/d. Out of this target, SPDC Western Division can deliver 0.104 mln bopd (Shell share) of which ca 0.0678 mln bopd (Shell share) has since been delivered by the West Re-entry project. Prior to the Niger Delta security crisis, the average production capacity of Ogbotobo Barge Flowstation was circa 45Mbopd (13.5Mbopd Shell share). Prior to the crisis, average daily production was about 13 bopd (4.33Mbopd Shell share).

Successful completion of the West Re-entry Project will improve SPDC's Cash flow and make possible further development and growth activities in the Division. The completion of Ogbotobo facilities (and associated pipelines/flowlines networks) is critical to the continued production of oil from the Western Division, continued building of community contractors' capacity and development of local content.

The Project will serve to foster greater partnership with host communities thereby minimizing potential for Niger Delta crises. Furthermore, it would contribute to the realization of the Federal Government's aspiration of increased production, make SPDC and the Group be viewed favourably by Stakeholders as being able to manage her Community challenges and benefit from the positive impact in Shareholder Value.

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 no-further activity (NFA) production forecast. Forecast used was for a period of 2+ years (August 2012 to 2014) after which the SSAGS project comes on stream with the AG solutions. The project activity as currently scoped and scheduled will complement and enable achievement of the SSAGS+ project schedule. However, if there is no AG solution in place (i.e. SSAGS+ project is delayed), oil production from the Ogbotobo field will have to be shut in by end 2014. Funding for this request is to be provided via the JV funding.

Without AG solution and the inevitability of flaring associated gas the project value is impacted significantly hence sensitivities were carried out to show the impact of different flare penalty rates on the project. Rates evaluated include: N10/mscf and \$2/mscf as requested, N10/mscf till 2012 & HH price post 2012 per mscf, and Aggregate domgas price till 2012 & HH price post 2012 per mscf. The Project returns a positive NPV7 %.

Additional sensitivity of sharing the re-entry costs on boe basis between Ogbotogbo re-entry project (2012 to 2014) and the SSAGS project (2015 to EOFI). This is in consideration that SSAGS would have to carry the re-entry costs to continue production if the field isn't re-entered earlier, hence the matching of enabling investment with the production benefit. However, the risk of SSAGS project being discontinued should be considered with this sensitivity. Details are shown in table 1 below.

Other sensitivities carried out include:

- high CAPEX,
- high and low reserves,
- 1-year production schedule delay
- concession expiration in 2019 (Shell JV)
- Shut in by end 2012 option, if waiver to produce post 2012 isn't received
- Cost-only scenario where re-entry fails
- Domgas price sensitivity at 80%
- Produce and pay flare penalty without AG solution till End Of Field Life (EOFI)
- 1.5% cost mark up as provision for costs dispute by NNPC and
- PIB Impact: House version.

Details of the results are in table 1 below. The Tornado plot is shown in figure 2 below.

The project team should be mindful of the fact that the base assumption of achieving production till end 2014 without AG solution is dependent upon receiving necessary approvals from Shell management and DPR, in alignment with the flares down policy and philosophy of both authorities. Without these approvals and the possibility of production shut in by end 2014, the project returns a negative NPV7%.

Table 1: Economics Grid of Ogbotobo re-Entry Project (Shell Share, RT11)

PV Reference Date: 1/7/2011	NPV (\$/S \$ mln)		VIR	RTEP	UTC (RT \$/boe)		Payout-Time (RT)_0%	Maximum Exposure (RT)
Cash flow forward from: 1/1/2011	0%	7%	7%	%	0%	7%		
Base Case								
SV (\$50/bbl RT11)	2.5	0.5	0.03	9	18	19		
RV (\$70bbl RT11)	6.7	4.1	0.28	23	18	19	2014	\$14.2mln in 2012**
HV (\$90/bbl RT11)	10.9	7.6	0.52	37	18	19		
Oil BEP (RT \$/bbl)					38.6	48.0		
Sensitivities (using RV)								
High CAPEX (+10%)		3.7	0.23				2014	\$15.6mln in 2012
High Reserves (+20)		5.8	0.39				2014	\$14.1mln in 2012
Low Reserves (-20%)		2.3	0.16				2014	\$14.1mln in 2012
1-Yr Production Schedule Delay		3.7	0.25				2015	\$14.2mln in 2012
Concession Expiration (2019)		4.0	0.27				2014	\$14.2mln in 2012
Shut in_end 2012		-4.6	-0.31				N/A	\$14.2mln in 2012
Flare Penalty @ N10/Mscf		7.1	0.48				2014	\$14.3mln in 2012
Flare Penalty @ N10/Mscf & HH_post 2012		2.8	0.19				2014	\$14.2mln in 2012
Flare Penalty @ Aggregate price & HH_post 2012		2.8	0.19				2014	\$14.2mln in 2012
Flare Penalty @ \$2.00/Mscf		5.4	0.37				2014	\$14.2mln in 2012
Cost only (Non-Revenue Generating)_Rentry Failure		-4.8	-0.32				N/A	\$14.2mln in 2012
80% of Domgas Price		4.1	0.28				2014	\$14.2mln in 2012
Apportioned Re-entry cost with SSAGS (on boe basis: Ogbotogbo_38% / SSAGS_62%)		6.9	1.23				2013	\$5.4mln in 2012
Produce & pay Penalty till EOFL		10.6	0.72				2015	\$17.3mln in 2012
1.5% cost markup due to BVA issues		2.8	0.18					
PIB House_v12		4.5	0.31					

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	BP10 Provision	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	-	14.84	15.62	17.19	Not a stand alone project in BP10
Investment Opex (MOD)_Project	US\$ mln	-	5.70	6.00	6.60	SCD (Electrical Interdependency)
Production Volume	mln boe	-	1.39	1.74	2.09	
Start Up Date	mm/yy	-	Aug-13	Aug-12	Aug-12	Base re-start Up
Production in first 12 months	mln boe			0.6		Production volume from Aug '12 to July '13

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

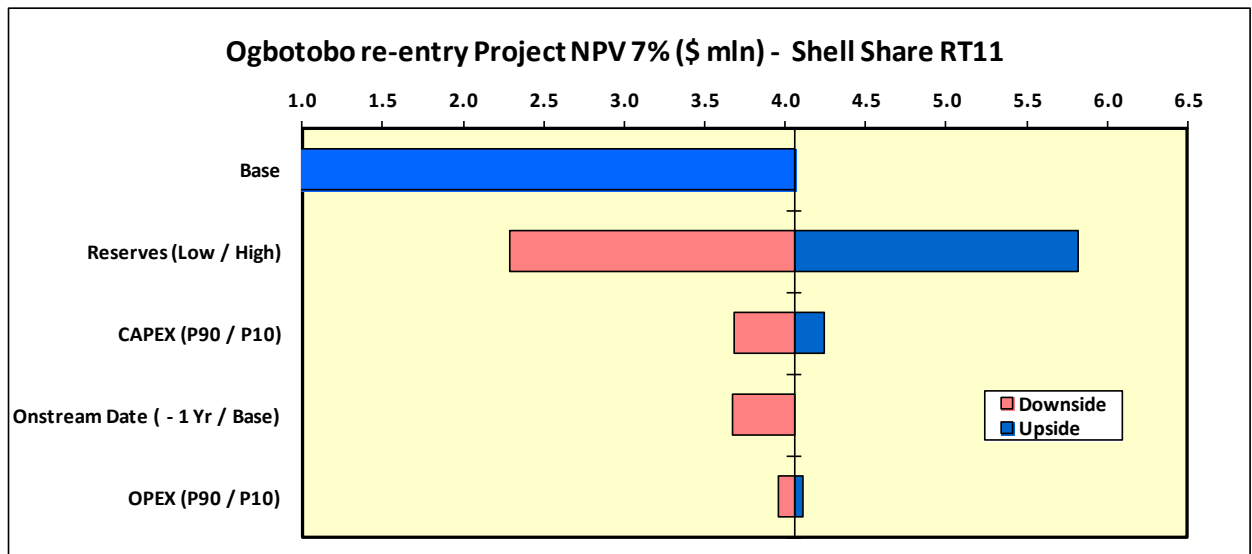
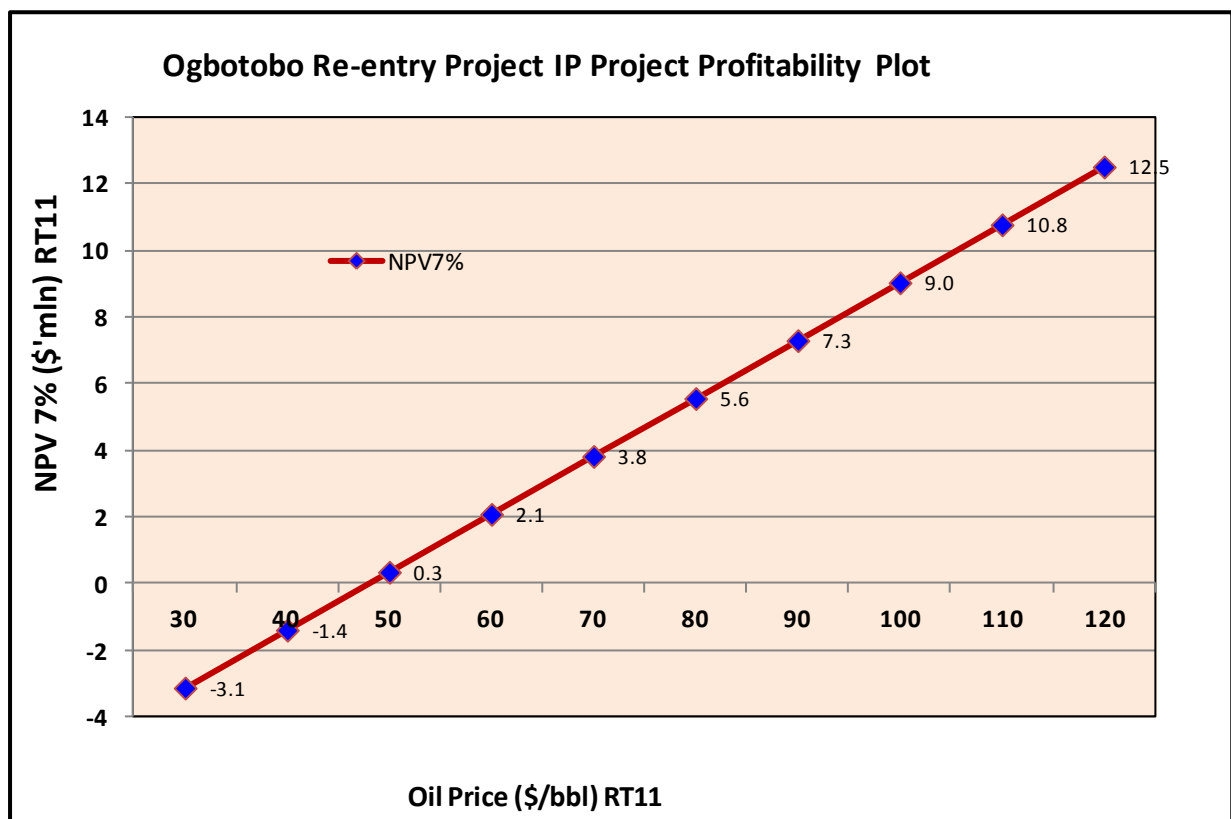


Figure 2: Profitability Plot for Ogbotogbo Re-entry Project IP (Shell Share)



Economics Assumptions:

- Oil PSV of \$70/bbl RT11 (RV-RT) and Domgas RV PSV Aggregate Price (NGMP) was used
- Oil is assumed to be taxed under PPT
- Gas (AG) taxed under CITA with AGFA fiscal treatment (incentive) applied
- All re-entry costs (CAPEX/OPEX) were treated as oil and gas costs as relevant, and treated under JV funding

- SPDC 31/12/2010 ARPR (Annual Review of Petroleum Resources) fixed and variable OPEX for Ogbotobo FS were used.
- SCD costs and other project OPEX were provided by project team
- NDDC Levy of 3% of total expenditure excluding flare penalty.
- Education tax of 2% assessable profit.
- Water treatment cost at \$0.50/bbl applied
- Flare penalty of \$3.5/Mscf.
- GHV of 1000btu/scf
- Abandonment cost is estimated at 10% of total project RT CAPEX

PIB assumptions:

- Overseas_Capex_Fraction_Assumed at 30%
- 70\$/bbl – oil , and 1.73\$/mmbtu – gas (export) at PSV – RT 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 of 3% of total expenditure excluding flare penalty.
- Withholding tax is applicable at a rate of 7.5% for IAT version but not for the alternate version
- 20% of overseas cost is non-deductible for determination of NHT taxable income
- NHT rate is 50% for onshore and shallow water, and 30% for frontier acreages and Deep Water.
- CIT is 30% of taxable income and is not deductible from NHT
- Ogbotogbo is an existing field hence no production allowance is applicable.

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 restores the option to strive to achieve targeted and aspired growth in reserves and production.

Throughout the Re-Entry activities, continuous optimization has been pursued and will continue for Ogbotogbo flowstation facilities and associated pipeline/flowline networks in the following areas:

- **Economics:** To provide a more rational basis for allocating the expenditure at field/well level, the individual facility and well repairs will be executed on the basis of forward looking economics, taking into account production capacity, developed and undeveloped reserves, flares-out considerations and re-entry cost per field/wells.
- **Well open-up sequence:** Well repairs will be prioritized to deliver maximum production at minimum effort and cost. Focus will initially be on wells capable of natural production, followed by wells that can be kicked-off with gaslift and thereafter wells that require rig-less re-entry. A detailed bean-up sequence will be prepared to ensure wells to reach their full potentials.
- **Data gathering:** The opportunity will be taken to obtain static and dynamic performance data of the wells for proper well and reservoir management. Adequate provisions will be made for well testing and fluid sampling, ensuring shortest possible Production Chemistry laboratory turn around times.

- **Pipelines:** Along the main trunk line systems, the design of every single Block Valve Station (BVS), whether damaged or not, has been reviewed with the aim to simplify, increase flexibility and reduce the sensitivity to sabotage.
- **New Ways of Working:** Relationship between the communities and SPDC has been very cordial over the years and awareness of SPDC operations is very high among the communities.

The goal of the Social Performance is to ensure zero community disruption to project execution while also providing opportunities for communities for economic and social benefits. A key success factor to an enhanced enabling operating environment is community participation in SPDC business.

The project life cycle will take into cognisance the participation of the host community(s) and other relevant stakeholders. The Nigerian Content Development policy will provide the needed guidelines in the involvement of communities in a mutually beneficial relationship.

Deliberate move will be taken to encourage the locals in the implementation of projects that are within their capability. Legacy issues/projects will be documented and addressed proactively, and where GMoU exists, its philosophy would be deployed as a community interface model to enhance projects/programmes sustainability.

Stakeholders Sensitization Forum will be conducted, prior to project start up to enhance awareness creation as well as shared-vision sharing with a view to generating Stakeholders' buy-in for sustainable relationship building.

Risks:

S/N	Risk Description	Mitigation/Remedial Effort
1	Non acceptance as JV cost	Top-level engagements with JV Partners including NAPIMS have been done and are on going to secure Partners' approval for the total Re-entry budget based on 90/10 estimates of the cost of repairing damages identified to date.
2	Delay in obtaining NAPIMS approval to Award	Constant engagement with NAPIMS ongoing, and to continue throughout contracting process.
3	Inadequate budget to meet the project execution phasing	Total IP budget is F\$72.1mln (100% JV), to be phased and funded as follows: 2011: F\$ 26.1 mln 2012: F\$ 46.0 mln ----- Total: F\$72.1 mln
4	The deliverables do not ensure LTO from communities	Re-entry activities / contracts using SPDC contracting process were and are still awarded largely to Local Community based Contractors who have influence within the communities to secure LTO during execution.
5	Lack of local contractors' capacity to deliver.	Capacity to deliver was and will continue to be assured through training and adequate site supervision by SPDC. Contracts have also been limited to manageable sizes that can be executed by community contractors.
6	Lack of adequate performance monitoring	Expenditure and Projects are constantly subjected to continuous onsite QA/QC.
7	Delays in procurement / delivery of long lead items.	Contracting process in progress – NAPIMS engagement ongoing, to ensure quick contract approvals.
8	Security Issues	- Re-entry security strategy/plan, which aligns with SPDC's corporate security strategy, has been developed to reduce risks

		<p>to personnel and guarantee LTO during and after Re-entry.</p> <ul style="list-style-type: none"> - A multi-disciplinary and independent Security Risk Management Team (RMT) to support the re-entry activities was set up to provide objective risk assessment at every stage of the project.
9	HSE Risk due to high number of contractors	<ul style="list-style-type: none"> - Detailed HSE Re-entry strategies and Plan/Risk Assessment were developed and used to mitigate associated risks to ALARP. This will continue to be deployed for Ogbotobo works - Re-entry site HSE implementation strategies and compliance monitoring Matrix also developed for each activity.
10	Risk of cost overrun and schedule slippages for outstanding works	<ul style="list-style-type: none"> - The Re-entry Project cannot be compared to a "normal" project where scope can be fully defined before work starts. At inception of this project, SPDC did not have full access to all damaged sites; hence the earlier approved IP was 50/50 estimate based on assessment of 70% sites. This Ogbotobo IP is based on assessment of the damaged facilities and therefore cost overrun is seen as unlikely. The multi-disciplinary and independent Security Risk Management Team (RMT) would continue to provide the necessary support for security issues timely resolution and consequently reduce security impact on the project schedule.

Alternatives Considered:

Discontinuation of Re-entry program in Ogbotobo facilities and associated pipelines/flowlines network. This is not considered a responsible or economically viable solution as the geographical axis for the Ogbotobo work is home to a major source of LTO/FTO. This is not considered a viable option.

No Further Investment:

- NFI means SPDC would be unable to unlock ca 45Mbopd from Ogbotobo facilities which may become subjected to further vandalization forcing SPDC to carry out proper abandonment and possible de-booking of associated reserves.
- Sustaining restored production of ca 226Mbopd 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) – Stephen Oruerio, 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 provided for 2011. For 2012 and 2013, internal offsets will be identified for the shortfall between the required CAPEX for this proposal and the provisions in BP10.
- Top-level engagements with JV Partners including NAPIMS have been done and are still on going to secure Partners' approval for the total Re-entry budget based on 90/10 estimates of the cost of repairing damages identified to date. Of the total Re-entry budget of USD 804.5 mln (100% JV) NAPIMS have approved and funded their equity of \$220 mln expended between 2006 and 2010. They have also indicated willingness to fund the balance of their equity (ca \$222.4 mln).
- Total IP budget is F\$72.1mln (100% JV), to be phased and funded as follows:
2011: F\$ 26.1 mln
2012: F\$ 46.0 mln

Total: F\$72.1 mln

- For the 2011 budget, USD 40.15mln has been allocated to the West Re-entry.

Section 8: Group financial reporting impact

The financial impact of this proposal on Shell Group Financials is as indicated in the table below:

US\$ Million	2011	2012	2013	2014	2015	2016
Total Commitment	7.83	13.80				
Cash Flow						
Independent OPEX (Community & Re-entry supports, Repairs, etc)	2.36	3.65				
Operating Expenditure	0.23	0.98	4.14	4.23		
Cash flow From Operations	(0.87)	1.01	6.89	7.34	4.66	
Cash Surplus/(Deficit)	(6.34)	(9.14)	6.89	7.34	4.66	
Profit and Loss						
NIBIAT +/-	(0.12)	0.08	5.94	4.84		
Balance Sheet						
Avg Capital Employed	3.11	10.83	14.97	13.24	9.66	7.33

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\$21.6 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:

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Bernard Bos, FUI/F

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

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Ian Craig, UIG

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

Initiator: Muhammed Shittu, UIG/P/F

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

APPENDIX 1 (DETAILED BREAKDOWN OF THE COMMITMENTS)

ACTIVITY DESCRIPTION	100% JV			Shell Share		
	Initial IP (USD m ln)	Current IP Request (USD m ln)	Revised IP (USD m ln)	Initial IP (USD m ln)	Current IP Request (USD m ln)	Revised IP (USD m ln)
TOTAL COST (CAPEX + OPEX) incl 10% CONTINGENCY		72.1			21.6	
					-	
TOTAL COST (CAPEX + OPEX) excl CONTINGENCY		67.0			20.1	
					-	
CAPEX		52.1			15.6	
Flow line Replacement (33km)		11.00			3.30	
Pipeline Replacement (Oil)					-	
Barge Repair / Equipment Replacement		21.58			6.47	
ROCI and Instruments Costs		1.00			0.30	
Water Logistics		6.00			1.80	
Helicopter Logistics		2.54			0.76	
Security		5.12			1.54	
Staff Salaries		4.86			1.46	
					-	
OPEX		14.9			4.5	
					-	
Community Support		7.7			2.3	
SPDC-West Interdependency/ Electrification Project (NG01003404)		7.70			2.31	
Package 1.0: Aghoro Agge Community - 2 Nos 1219KVA Gas Gensets		1.29			0.39	
Package 2.0: Aghoro Agge Community - Main Electrical materials		0.88			0.26	
Package 3.0: Aghoro I, II, Famous Zion communities - HV Trans, LV Distrn netw orks		1.65			0.50	
Package 4.0: Agge & Palm Bush Communities - HV Trans, LV Distrn netw orks		1.25			0.38	
Package 5.0: Ogbotobo FS - HV Generation & Trans syst		1.89			0.57	
PM (Staff Salaries, Allow ances, Security etc)		0.74			0.22	
					-	
Repairs		1.5			0.5	
WELLHEAD REPAIRS & BHP SURVEY		1.50			0.45	
					-	
Support		0.8			0.2	
IT		0.20			0.06	
Media & Publicity		0.10			0.03	
HSE		0.50			0.15	
					-	
Dredging Piling and Shore Protection		4.9			1.5	
Wellhead Slot Dredging in Ogbotobo area		3.90			1.17	
Piling and Shore Protection		1.00			0.30	
					-	
Contingency		5.1			1.5	