

The Shell Petroleum Development Company of Nigeria Limited

Internal Investment Proposal

Summary Information

Directorate	Technical Directorate		
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	US\$ 3.1 Shell share, MOD, 50/50 (US\$10.24 mln 100% JV)		
Project	Provision of Subsurface & Wells Software, Workflow Support Services, and Technical Computing Hardware Maintenance		
Main commitments		US\$Mln	
		Shell Share cost	100% JV
	3RD Party Software Maintenance	0.27	0.91
	PMI - Software Usage & Maintenance	1.63	5.42
	System Mgt, Consultancy, Consumables & Projects	0.72	2.40
	Hardware Maintenance	0.45	1.50
	TOTAL	3.07	10.24
Source and form of financing	This investment will be financed with Joint Venture funding and Shell share capital expenditure will be met by SPDC's own cash flow. Formal Joint Venture partners' approval will therefore be obtained.		
Summary cash flow	Not Applicable		
Summary economics	The project returns an NPV 7% \$-0.76 mln (Shell share) and VIR 7% -0.25 with an associated maximum exposure of \$2.4mln in 2010.		

Section 1: The Proposal

Management Summary

Subsurface & Wells Information Technology Team (SS&W IT) Provides information technology and data management services for engineers across the full spectrum of Subsurface EP Activities, covering eight primary disciplines (Geomatics, Geology, Geophysics, Petrophysics, Well Engineering, Production Technology, Reservoir Engineering and Exploration).

Budget available to this team used to support Development and Exploration in the following ways:

First, by securing access to a portfolio of software tools for SS&W user community. This involves license charges, maintenance & support charges. It also involves continuously benchmarking cost with available competition.

Secondly, for providing workflow support and consultancy for software users.

Lastly, for maintaining workstations, server hardware and specific collaboration/integration facilities (Real-Time Operations Center, Virtual Reality Center)

Project Assumptions

- Not more than 5% increase in total user community in Exploration and Development between 2009 and 2010. This has impact on services being provided and the investment in licenses and infrastructure.
- No increase in number of Personal Computers running Shell GI-D on the network of Sub-Saharan Africa Operating Units. This number is referred to as the DTK for an Operating Unit, and it is key in computing the OU's share of Group Charges.
- Availability of enabling contracts with Shell International Exploration & Production Co. (SIEP), Local Software & Service Vendors.

Section 2: Value proposition and strategic and financial context

All data types used for subsurface development studies are stored electronically in databases. Integrity and accessibility to these databases are maintained from the budget made available under this activity. Analysis and interpretation of the data is also carried out using software that is made available to subsurface users through the activity being proposed in this document. Without the continuous use of these software tools and the associated data, painstakingly acquired by Shell over many years of operation in Nigeria, none of the exploration and field development projects ongoing/planned will be viable.

Subsurface and Wells IT strategy to ensure that the portfolio of software, data and related services are provided at optimum cost is to:

1. Continuously rationalized functionalities to reduce duplication and ensure that they are fit-for-purpose
2. Continuously benchmark the costs of these solutions with competing solutions in the open market
3. Ensure that volume of software licenses and service are aligned with the number of staff (demand).

Table1: Project Costs (100% JV US\$Mln MOD)

Activity	2010 (\$ mln)
3 rd Party Software Maintenance	0.91
PMI Licenses Maintenance	5.42
System Management, Consultancy, Consumables and Deployment Projects	2.40
Hardware Maintenance	1.50
TOTALS	10.23

Summary of Economics

The project was evaluated as a cost only Non-Oil infrastructure project using 50/50 cost estimate. The project returns an NPV7% RT10 and VIR 7% of US\$-0.76 mln and -0.25 respectively. See table 1 below for further details.

Table 2: Summary Economics Results

PV Reference Date: 1/7/2010	NPV (S/S \$ mln)		VIR	RTEP	UTC (RT \$/bbl or \$/mln btu)		Payout-Time (RT)	Maximum Exposure (S/S \$ mln)
Cash flow forward from: 1/1/2010	0%	7%	7%	%	0%	7%		AT
Base Case								
SV (\$50/bbl RT10)	-0.47	-0.76	-0.25	NA	NA	NA		
RV (\$60/bbl RT10)	-0.47	-0.76	-0.25	NA	NA	NA	NA	2.4 (2010)
HV (\$80/bbl RT10)	-0.47	-0.76	-0.25	NA	NA	NA		
BEP (RT \$/bbl)					NA	NA		
PIB v4.2		-1.1	-0.37					

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	Bus Plan (BP09)	Low	Mid	High	Comments
CAPEX (MOD)	US\$ mln	3.07	NA	3.07	NA	
Investment OPEX (MOD)	US\$ mln	NA	NA	NA	NA	
Production Volume	mln boe	NA	NA	NA	NA	
Start Up Date	mm/yyyy	NA	NA	NA	NA	
Production in first 12 months	mln boe			NA		

Economic Assumptions:

- Expenditure treated as Non-Oil infrastructure Capex.
- NDDC Levy of 3%

Section 3: Risks & Controls

Significant and unanticipated price changes: As software vendors reserve the right to change the price of their software without consulting their clients, a significant and unanticipated change in the cost of the software packages will affect Subsurface & Wells ability to deliver this activity successfully. In this event only some of the software packages will be available to users. Additional funds may be required. This also applies to workflow consultancy / application support services being provided through Third Parties.

The control against this risk is to be pro-active in monitoring happenings in the industry. Contracts for the software licenses and vendor services should also be built to ensure that payments guarantee access to the application/service for an agreed period that will enable SPDC make alternative arrangements in the event of unacceptable change in license or service charges.

Technology failure: Information Management relies heavily on an efficient and stable IT infrastructure. Failures in basic IT infrastructure will erode confidence in solutions being deployed. Significant failure of the IT Infrastructure on which the software are made available to users will affect the successful delivery of this activity.

The control against this risk is to develop service-level-agreements with Infrastructure Management Team that will guarantee a minimum level of availability that has been agreed with the customers. In addition, IT has disaster recovery procedures in place to restore services in the event of serious failures.

Adherence to guiding processes/procedures: Subsurface & Wells IT has guidelines that govern the behaviour of people who use the information systems. These guidelines are to ensure information security and optimum performance of the systems. If software users and support staff fail to adhere to the guidelines, this can have significant effects on delivery of this activity.

The controls against this risk are as follows:

First, ensure clear information sharing on rules and guidelines (DOs & DON'Ts) among software users and support staff. Secondly, implement in-built system controls to prevent contravention of the rules and guidelines. This applies to software access, user identification, data access and modification, and sharing SS&W data with third-parties etc.

Thirdly, monitor usage of software applications and databases to identify violations in a timely manner. This is carried out by a combination of IT systems and SS&W IM/IT support staff. Lastly, ensure prompt corrective action and consequence management if/when violations occur.

Section 4: Corporate structure, and governance

The existing corporate structure and arrangements of SPDC JV with SPDC as operator will be used as the vehicle for the investment and operations.

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

All activities are in line with Group Business Principles and Standards.

Section 6: Project management, monitoring and review

Execution of this activity will be monitored by the Planner for Subsurface & Wells IT Team, who will provide quarterly reports on progress against plan to all stakeholders. This includes among others, ensuring compliance to activity/project work-scope & schedule; this is to ensure adherence to Contract Work Scope and ensuring that all the required quality tests and associated quality control requirements for this activity is satisfied. The Contractor shall therefore be required to make necessary provision to ensure compliance with all the functional/technical specification in the course of delivering their services.

Section 7: Budget Provision

There is a provision of USD \$10.24 mln in 2010 budget for the implementation of this activity

Section 8: Group Financial Reporting Impact

This activity has no direct impact on Group Financial Statements.

Section 9: Disclosure

Media Relations Protocol, Investor Relations Protocol and Market Abuse Directive Guidelines will follow approved SPDC procedures.

Section 10: Financing

This investment will be financed with JV funding and Shell share capital expenditure will be met by SPDC's own cash flow. Formal JV partners' approval has therefore been obtained.

Section 11: Taxation

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

Section 12: Key Parameters

Consideration is required of the soundness of the expenditure commitments for the following;

- The Provision of Subsurface & Wells Software, Workflow Support Services, and Technical Computing Hardware Maintenance for SPDC for a sum of \$10.24 mln.

Section 13: Signatures

This Proposal is submitted to SPDC Technical Director for approval.

For Business approval:

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Bart Lismont

VP Technical

Date / /

Initiator: Osasu Ogbeide

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