Group Investment Proposal

Business unit	Upstream International (UI)
Shareholders / partners	Shell 30%, Total; 10%, Nigeria Agip Oil Company (NAOC: 5%, Nigeria National Petroleum Company (NNPC: 55%)
Amount (Shell Share) MOD, 50/50	Capex USD10.5 Mln (JV 100% USD35.1 Mln)
Project	Forcados Water Disposal Line Repair and Rehabilitation.

0	NPV (USD mln)	RTEP (%)	VIR
Project title			
Base case	-2.8	>50	-0.28
Low case			
High case			

Proposal Management Summary

This proposal seeks approval for the repair and rehabilitation of the offshore section of the 36" Forcados Water Disposal Line, thereby restoring it to its integral state, in order to guarantee and sustain continuous production of oil, condensate and associated gas from all SPDC Western fields in line with statutory and regulatory requirements.

The Water Disposal pipeline was commissioned in 1997 to dispose formation water at approximately 5.5km offshore Forcados waters after crude oil from the entire Western fields and other third party producers is dehydrated at Forcados Oil Terminal (FOT). During statutory underwater inspection survey, the pipeline was discovered to have been severed thereby hampering the diffusion process and therefore worsened the non-compliance with Department of Petroleum Regulations (DPR's) minimum requirement for formation water disposal. It has become expedient to restore the pipeline water disposal functionality and forestall the risk of shut down of the entire production of Western fields by Regulators.

Though the repair of the Water Disposal line to its original length and functionality as proposed does not meet the revised EGASPIN requirement set out by the DPR in 2002, the DPR in a letter have indicated they would not entertain any waiver discussion until this condition precedent is met.

The project aims to fully rehabilitate the damaged offshore section of the pipeline to as-built condition to guarantee/secure continuous production of oil & associated gas from all the Western fields.

Total Shell share Capex is USD 10.5 mln (50/50, MOD) with a 16% contingency employed in the estimate. Variance exists with BP but approval shall be sought to accelerate work completion in Q1, 2015 due to the sensitivity.

Capex ($MOD, 100% JV)	2014	2015	2016	2017
Commitment Phasing	7.3	27.8	0.0	0.0
OP'14 Capex Phasing	5.0	8.5	12.7	11.7

Value Proposition and Economics Summary

Economics Summary

The economics was done as a "Cost Only" evaluation on a forward looking basis using level 3 costs and OP14 production forecasts provided by the project team.

The project value is -$2.8mln (SS RV RT14).

Sensitivities were done to assess the following:

1. The impact of High CAPEX (+15%),
2. Low CAPEX (-10%) and
3. The value at risk.

The value at risk if the project is not executed is $4.3bln.

PV Reference Date: 1/7/2014	NPV (S/S $ mln)		VIR	RTEP	Maximum Exposure (RT) ($mln)
Cash flow forward from: 1/1/2014	**0%**	**7%**	**7%**	**%**	
Base Case					
RV ($90/bbl)	-2.0	-2.8	-0.28	>50	-13.4
Sensitivities (using RV)					
High Capex (+15%)		-3.2	-0.28		
Low Capex (-10%)		-2.5	-0.28		
Value @ Risk		4,330	NA		

SV and HV not evaluated as the have same value as the RV. Cost Only evaluation

<u>Economics Assumptions</u>

- Oil Price of $90/bbl (with applicable Forcados Offsets) was used for both oil and Condensate
- Gas sales to domestic market Aggregate Domgas PSV-RT14 based on Nigeria Gas Market Plan (NGMP) price profile.
- Condensate was treated as Oil and taxed under PPT (PPT tax rate of 85%).
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- Flare fees of $3.5Mscf

- SDPC Generic fixed Opex used as follows (for the Base Case):
    - Oil fixed of 3.0% of cum. Oil CAPEX
    - Variable Opex of $2.80/boe
- SDPC Dec 2014 ARPR fixed and variable Opex applied to respective facilities (for the value at risk evaluation) except for Uzere East FS.
- NDDC levy of 3% total expenditure.
- Education tax of 2% assessable profit.
- Abandonment cost is estimated at 10% of RT CAPEX
- Social Performance cost is estimated at 2.5% of total project MOD CAPEX
- Crude handling charge of $2.50/bbl MOD applied for Uzere East Facility

Risks and Alternatives

Key risks and alternatives

Funding constraint	Funding requirement is planned to be met through JV funding arrangements. The budget provided for this work in 2014 was reduced to $2.3m as a consequence of the squeeze in the JV budget. An additional offset of $5m is being sought via the BCC. The provision made in OP14 for 2015 was spread across 2015 – 2017, again as a consequence of the squeeze on the JV budget. The Business/NAPIMS will be engaged to restore the budget into 2015 only, as the work will be completed on or before 31 March 2015 in order to secure license to produce circa 100,000b/d from Forcados Terminal. DRB supports this position.
Contracting	NAPIMS has shown willingness to support increase in contract ACV to accommodate Forcados Water Disposal Line repairs under IPRS Call Off Contract with OIS/Gredor.
Technical/Asset Integrity	Fast track of the rehabilitation works will restore integrity of the pipeline and stop company's exposure to possible environmental & reputational risks.
Security Challenges	Security challenges shall be managed by deploying a robust security provision/plan based on current reality in the Forcados area to forestall negative impact on overall project schedule. Furthermore, the security cost build up is robust to cater for the estimated duration.
Community Issues	Effective SP Management strategy shall be deployed to address this risk and minimise attendant delays which may lead to cost escalations for the offshore resources.

Cost escalation	Though contract cost escalation due to offshore resources being deployed is a key risk due to attendant standby costs of the resources, works is planned for execution during the calm weather window period of November 2014 – March 2015 to minimise downtime due to unfavourable weather. Strict Project Management practices shall be deployed to maximise uptime of resources.
Nigerian Content	NCD risk in this proposal is very minimal; the Contractor approved by NAPIMS is a fully owned Nigerian company engaged in emergency pipeline repairs works in line with local content requirement.

Carbon Management

The proposal will not add appreciable amounts of flare gas hence Carbon Management effects have not been considered.

Corporate Structure and Governance

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

Group and Business Standards

This proposal complies with Group Business Principles, policies and standards. Functional support for this proposal is provided by Finance, Social Performance, Supply Chain Management, HSE, Operations, Legal, Treasury and Tax functions.

Project Management, Monitoring and Review

There is an identified Decision Executive, Business Opportunity Manager, Project Manager and Operations Manager. The existing Project Decision Review Board will control any major change proposals and will monitor value delivery based on reviews. Projects & Technology oversight will be exercised through membership of the technical DRB.

Budget Provision

The project was included in the OP’14 base plan with a 50/50 Capex estimate of USD 37.9 Mln (JV) from 2014 – 2017 but budget required for accelerated execution between Q4 2014 – Q1 2015 is USD 35.1Mln. Approvals shall be obtained for budget to accelerate works.

Group Financial Reporting Impact

No material finance reporting impact.

Disclosure

Materials disclosures, if any, will be done in line with the Group and SPDC Disclosure policies and guidelines.

Financing

Shell share of the capital expenditure will be met by SPDC's own cash flow and JV funding. Expenditure related to this project will be accounted for in line with Group Policy.

Taxation

There are no unusual Taxation features.

Functional Support

Signatures

Supported by:

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Janssens, Guy SEPA-FUI/OG

FM, Nigeria & Gabon

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

Approved by:

....

Droll, Markus SEPA-UIO/G

VP Nigeria & Gabon

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

Appendix A - Detailed Project Parameter Data

Project Focal Point / Indicator	Niyi Salami PTP/O/NP
DRB: Decision Executive if applicable	Bayo Ojulari UIO/G/D
DRB: Members if applicable	Ajayi Rotimi PTP/O/NE; Bos Bernard B UIO/G/C; van Bunnik Jan FUI/OG; Kent Guy FUI/C/OG; Kulawski Grzegorz UIO/G/PN; Munster Robert UIO/G/S; Ezugworie Chibogwu UIO/G/DG

Performance Parameters	Unit	OP'14	GIP	Variance details
Total GIP Capex (Shell Share)	USD Mln	11.4	10.5	*16% contingency employed.*
FID Date	Nov/14			*Requirement for accelerated project execution.*
First Oil/Gas Date	MMM/YY			

Performance Parameters	Unit	BP'11	GIP	Variance details
Proved Developed Reserves (GES(1) @ RV-RT)	MMboe			
Expectation Developed Reserves (GES or SWIS(2))	MMboe			
UDC (3) (MOD)	USD/boe			
Oil - Initial Rate (100%)(4) Gas - Capacity (100%)(4)	b/d – Oil MMscf/d- Gas			

NOTES: Conversion of gas volumes to boe: use SIEP standard conversion of 1 Bcf = 0.1724 MMboe

(1) GES: Group Entitlement Share

(2) In PSC environment quote SWIS.

(3) UDC: SS Project Capex/GES Developed Expectation Reserves (or SWIS in PSC environment)

(4) Initial stable oil flow or first 3 months average production rate.

Major Milestones

Date	Description
Jan '15	Contract Mobilisation
Mar '15	Mobilisation of Contractor to site
Apr '15	Complete Rehabilitation works
May '15	Re-commission rehabilitated pipeline
May '15	Complete site restoration/demobilisation