



**NOTE FOR DECISION**  
**SPDC PILOT DECOMMISSIONING AND LOCATION**  
**RESTORATION PROJECT**

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The Shell Petroleum Development Company (Nigeria) LTD

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## NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

### The Shell Petroleum Development Company of Nigeria Limited

#### Summary Information

Business unit and company	The 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	Nigeria National Petroleum Company (NNPC: 55%), Total: 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV.			
Business or Function	Exploration & Production (EP)			
Amount	US\$ 6.3 mln Shell share (i.e. US\$ 21.1 mln 100% JV), 50/50, MOD.			
Project	Apara & Akpor Wells Decommissioning and Location Restoration Project			
2012 commitments \$ mln (MOD)		Description	JVUS \$mln (100%)	US \$mln (Shell Share)
See Table 1 for expenditure phasing.	1	EIA Studies	133,000.00	39,900.00
	2	Borrow Pit Decommissioning studies	337,000.00	101,100.00
	3	Apara 1 Decommissioning and Restoration	2,658,009.90	797,402.97
	4	Apara 2 Decommissioning and Restoration	2,852,259.90	855,677.97
	5	Apara 4 Decommissioning and Restoration	2,852,259.90	855,677.97
	6	Apara 7 Decommissioning and Restoration	2,658,009.90	797,402.97
	7	Akpor 2 Decommissioning and Restoration	3,195,043.95	1,069,877.97
	8	Akpor 1 Decommissioning and Restoration	3,114,958.35	934,487.51
	9	Akpor 3 Decommissioning and Restoration	1,087,962	215,023.94
	10	GMOU	569,000.00	170,700.00
	11	VAT & NCD	1,649,378.14	494,813.44
		21,106,882.44	6,332,064.73	
Source and form of financing	This investment will be financed from JV funding. Shell share Opex expenditure will be met by SPDC’s own cash flow and/or the existing shareholder facility.			
Summary cash flow				
Summary economics	Shell Share, RT-11	NPV7% (USD mln)	VIR7%	RTEP
	Base case	NA	NA	NA

## NOTE FOR DECISION

### SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

#### ***Section 1: The proposal (management summary)***

This Investment Proposal approval for funding of US\$ 6.3 mln Shell share (i.e. US\$ 21.1 mln 100% JV) is required for the decommissioning and restoration of Apará 1, Apará 2, Apará 4, Apará 7, Akpor 1, and Akpor 2 wells (6 wells).

In July 2011, a Front End Project team was set up to study and mature Wells Decommissioning and Restoration efforts in SPDC as part of sustainable development efforts for management of disused wellsites.

The Decommissioning and Restoration (D&R) of eleven wells in Apará and Akpor fields is being undertaken as a pilot and this pilot experience will be used to design long term strategy for Decommissioning and Restoration of some 400 disused wellsites in SPDC. These disused sites continue to create Health, safety, security, and environmental (HSSE) exposure and hence the need to properly Decommission and restore them.

The Akpor field came on stream in August 1974 and produced until December 1987 when the last well quit production. The Apará field on the other hand produced from December 1961 to February 1997 when production ceased. Akpor expectation oil and non associated gas reserves are 3.6MMstb and 5.2Bscf while Apará expectation oil and non associated gas reserves are 23.5MMstb and 97Bscf respectively as at 1/1/2011. The proposed Wellsite Decommissioning and Restoration pilot will be used to acquire data prior to decommissioning. These data will be used for further study of these fields and depending on the economics of such future study, strategic decisions will be made on these fields. These decisions could include the use of technology for development of the remaining hydrocarbon, where economic, from locations other than the existing wellsites which are now being decommissioned for HSSE reasons.

An Environmental Evaluation Report will be executed as part of the D&R activities with the objective of determining the condition of the environment, ascertaining likely impacts these facilities have had on the environment, assessing the severity of such impacts, mitigating measures for the identified adverse impacts, and developing a management plan for monitoring the effectiveness of designed mitigation measures.

The estimated D&R pilot project will cost \$47.6mln over the 2012 – 2013 business planning period.

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SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

Table 1: SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT Phasing (US \$ MOD JV 100%)

s/no	Activity	2012	2013	TOTAL
		F\$	F\$	F\$
1	EIA Studies	133,000.00	0	133,000.00
2	Borrow Pit Decommissioning studies	337,000.00	0	337,000.00
3	Apara 1 Decommissioning and Restoration	2,658,009.90	0	2,658,009.90
4	Apara 2 Decommissioning and Restoration	2,852,259.90	0	2,852,259.90
5	Apara 4 Decommissioning and Restoration	2,852,259.90	0	2,852,259.90
6	Apara 7 Decommissioning and Restoration	2,658,009.90	0	2,658,009.90
7	Apara 3 Decommissioning and Restoration	0	3,566,259.90	3,566,259.90
8	Apara 8 Decommissioning and Restoration	0	8,403,347.40	8,403,347.40
9	Apara 9 Decommissioning and Restoration	0	4,986,778.65	4,986,778.65
10	Apara 10 Decommissioning and Restoration	0	5,952,909.90	5,952,909.90
11	Akpor 1 Decommissioning and Restoration	3,114,958.35	0	3,114,958.35
12	Akpor 2 Decommissioning and Restoration	3,195,043.95	0	3,195,043.95
13	Akpor 3 Decommissioning and Restoration	1,087,962	2,028,326.46	3,116,288.91
14	GMOU	569,000.00	487,284.31	1,056,284.31
15	VAT & NCD	1,649,378.14	1,043,566.51	2,692,944.65
		<b>21,106,882.44</b>	<b>26,468,473.18</b>	<b>47,575,355.62</b>

### *Section 2: Value proposition and strategic and financial context*

About 41% (\$19.34mln) of the total project cost of \$47.6mln will be spent in Decommissioning and Restoration of Apara 8, Apara 9 and Apara10. These wells have large borrow pits that need to be properly decommissioned to forestall future liabilities to SPDC JV. It is therefore proposed to conduct further detailed studies on acceptable options for decommissioning of these wells. \$337,000 is budgeted for this study in 2012 and it is hoped that the outcome of proposed Borrow Pit remediation studies will reduce volume, content, and cost uncertainties for decommissioning and Restoration of associated Wellsite borrow pits. Also learning's from this pilot will aid in negotiating future long term contracts for management of huge portfolio of disused wells in SPDC.

### **Summary Economics**

The initial Apara and Akpor wells were drilled 1958 – 1962 and since then company ownership and structure has changed many times. Project team was unable to sight the initial Project Investment Proposals for Akpor and Apara fields. However, wells Decommissioning and Location Restoration costs have become a mandatory part of the required Investment proposals documentation since the formation of NAPPIMS. The operating philosophy being that the D&R costs are already part of the project economics during the field Operating Phase and SPDC JV make provisions for the final D&R of wells when they are no longer in use.

## NOTE FOR DECISION

### SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

#### Section 3a : Wells Decommissioning and Restoration Risks, opportunities and alternatives

Risks / Mitigation	The possibility of fire outbreak in these well locations is high. Most of the well heads have been tampered with and hence one cannot eliminate the presence of free hydrocarbon in the environment. With houses built around the area and occupants bringing all sorts of sources of ignition close to the well heads one would worry that there could be fire and explosion one day. This situation call for urgent action, hence the need to properly Decommission and restore these wellsites.
Risks / Mitigation	With high demand for land in Portharcourt, squatters started to use these disused sites for habitation. These unorganized settlement could lead to potential community problems especially if the occupants are not the original owners of the land. This situation call for urgent action, hence the need to properly Decommission wellsite location, receive D&R certificate from regulators, and dispose or return land to original owners.
Risks / Mitigation	Most of the borrow pits that were dug several years ago by SPDC have been turned to dumpsites for all sorts of waste materials (hazardous and nonhazardous) by the villagers. Looking at the depth of these pits it is possible that the ground water level has been reached. This situation call for urgent action, hence the need to urgently conduct studies to ascertain environmental impact and design acceptable means of borrow pit decommissioning and location remediation.
Risks / Mitigation	The situation around the well heads is that the entire perimeter fences are all broken down and people have built houses within and around the well head area. The well head cellars are filled with rain water and are potential drowning hazards especially for those that have houses around the well head area. This situation call for urgent action, hence the need to properly Decommission wellsite location or repair broken down perimeter fences.
Opportunity	This pilot project provides SPDC with a learning opportunity on Decommissioning and Location restoration. With over 500 disused wells in SPDC, this learning opportunity will help in long term D&R management in SPDC.

#### Section 3b : Pilot Wells Decommissioning and Restoration Risks, opportunities and alternatives

Risks / Mitigation	The possibility of FTO related community problems is considered high. Oil producing communities derive some community assistance during oil generation opportunities. Well decommission is a non oil generation activity and hence some of the sustainable development support from SPDC JV may not be available and this could create some FTO related issues. Community town hall sessions would be used to clarify project objective and expectations, and reduce the risk.
Risks / Mitigation	The possibility of budget overrun also exists as this is the first SPDC JV attempt at fully integrated Wells Decommissioning and Location Restoration project. Supervision and project management guidelines will be implemented to reduce this risk. Any overspend will be approved through the DRB and the respective budgeting team.

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### **SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT**

#### ***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. An SPDC Decision Review Board (DRB) will continue to advise.

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

This proposal complies with the Group Business Principles, policies and standards. This project has benefited from full functional support covering ESHIA, Well Engineering, Civil Engineering, HSE, Remediation and SCD. Besides contributing to SPDC's Goal Zero commitment, the project is part of SPDC JV Exploration and Production program which requires that Wells and Facilities are properly decommissioned after use. Additionally, there will be a focus on Nigerian Content Development (NCD). The Finance, Supply Chain Management, Legal, and Treasury/Tax functions will provide functional support for this proposal.

#### ***Section 6: Project management, monitoring and review***

The Pilot Wells Decommissioning and Restoration project was constituted as an integrated team of ten (10) staff. The FEPM is the single point accountable for driving execution, managing the budget, monitoring performance and achieving the promises associated with this Decision.

Key decisions have been reviewed and are supported by the Decision Review Board (DRB) at the Decision Gate 4 (DG4) of February 2010.

#### ***Section 7: Budget provision***

In BP11, the D&R project is in the base programme as SPDC incremental. Project feasibility, detailed Project Execution Plan and JV approval was also secured in 2011 and whilst awaiting final approval, a provision of F\$29.13mln was made in the 2011 JV Budget to cover the decommissioning and restoration of Apra 1, Apra 2, Apra 4, Apra 7, Apra 3, Apra 8, and Akpor 1 (7 wells) wells.

During the SPDC DRB FID engagement in February 2012, the decommissioning of Apra 8 well was phased to 2013 in order to benefit from the anticipated cost reduction based on 2012 borrow pit study.

An estimated cost of \$26.47mln will be provided as part of BP12 for project completion.

#### ***Section 8: Group financial reporting impact***

The post-tax expenditure related to this decision will have limited impact on group financial results.

#### ***Section 9: Disclosure***

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

#### ***Section 10: Financing***

The project will be funded with JV funding and Shell share capital expenditure will be met by SPDC's own cash call.

#### ***Section 11: Taxation***

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The income tax from the project will be in accordance with Petroleum Profit Tax Rate and relevant income tax applicable.

#### ***Section 12: Key Parameters***

This Note for Decision seeks approval for US\$ 6.3 mln Shell share (i.e. US\$ 21.1 mln 100% JV) for the decommissioning and restoration of Apará 1, Apará 2, Apará 4, Apará 7, Akpor 1, and Akpor 2 wells (6 wells).

#### ***Section 13: Signatures***

This note for decision is submitted to UIG Directors for approval.

Supported by:

For shareholder approval:

.....

Isaac, Iyamu (UIG/T/W)

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

.....

Ojulari, Bayo (UIG/T/D)

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

.....

Bos, Bernard (FUI/F)

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

*Initiator:*

*Nwankwo, Cosmas*

*Front End Project Manager (UIG/T/DET)*

APPENDIX : PROJECT PROPOSAL SHEETS



## NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF APARA1</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Rate	Qty	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	25	625000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting services	21500	5	107500
	5	Cementing Unit rentals	7800	20	156000
	6	Cement Chemicals	300	200	60000
	7	Bridge Plug	40000	1	40000
	8	Production Casing Cutter	40000	1	40000
	9	Intermediate Casing Cutter	40000	1	40000
	10	Surface Casing Cutter	40000	1	40000
	11	Logistic support - vaccum truck, trucks, crane etc	4000	25	100000
	12	Ancilliary equipments - tanks, office caravan, lightening etc	5000	25	125000
	13	WHM services	2000	10	20000
	14	Accommodation and catering	150	1350	202500
	15	Diesel (5000ltrs/d at \$1.1)	5500	25	137500
	16	Security cost for camp and site	8000	25	200000
	17	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2103500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>2531438</b>
		Overheads (5%)			126572
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>2658010</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>2,817,490.49</b>

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SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF APARA 2</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Rate	Qty	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	27	108000
	13	Ancilliary equipments - tanks, office caravan, lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accommodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>2716438</b>
		Overheads (5%)			135822
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>2852260</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,023,395.49</b>

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SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

COST ESTIMATES FOR D&R OF APARA 3					
	S.N.	Activity / Equipment / Consumables	Unit Rate	Qty	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	35	875000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	Cementing Unit	7800	20	156000
	6	Cement Chemicals	300	200	60000
	7	Bridge Plug and fishing equipment	340000	1	340000
	8	Production Casing Cutter	40000	1	40000
	9	Intermediate Casing Cutter	40000	1	40000
	10	Surface Casing Cutter	40000	1	40000
	11	Logistic support - vaccum truck, trucks, crane etc	4000	35	140000
	12	Ancilliary equipments - tanks, office caravan, lightening etc	5000	35	175000
	13	WHM / WL services	5000	10	50000
	14	Accommodation and catering	150	1750	262500
	15	Diesel (5000ltrs/d at \$1.1)	5500	35	192500
	16	Security cost for camp and site	8000	35	280000
	17	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2968500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>3396438</b>
		Overheads (5%)			169822
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>3566260</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,780,235.49</b>

# NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

COST ESTIMATES FOR D&R OF APARA 4					
	S.N.	Activity / Equipment / Consumables	Unit Rate	Qty	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	27	108000
	13	Ancillary equipments - tanks, office caravan, lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accommodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>2716438</b>
		Overheads (5%)			135822
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>2852260</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,023,395.49</b>

## NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

COST ESTIMATES FOR D&R OF APARA 7					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Days	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		Total Location Prep cost			148,937.00
WELL ENGINEERING	1	HWU	25000	25	625000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	Cementing Unit rentals	7800	20	156000
	6	Cement Chemicals Per Barrel	300	200	60000
	7	Bridge Plug	40000	1	40000
	8	Production Casing Cutter	40000	1	40000
	9	Intermediate Casing Cutter	40000	1	40000
	10	Surface Casing Cutter	40000	1	40000
	11	Logistic support - vaccum truck, trucks,crane etc	4000	25	100000
	12	Ancilliary equipments - tanks,office caravan,lightening etc	5000	25	125000
	13	WHM services	2000	10	20000
	14	Accomodation and catering	150	1350	202500
	15	Diesel (5000ltrs/d at \$1.1)	5500	25	137500
	16	Security cost for camp and site	8000	25	200000
	17	FTO	20000	1	20000
		Total Well Abandonment Cost			2103500
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		Total Location Decommissioning cost			157,960.00
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		Total Location Restoration cost			121,041.00
BORROW PIT DECOMMISSIONING					
		Total Decommissioning Cost			0
TOTAL		Total D&R Cost			2531438
		Overheads (5%)			126572
		Total Well Abandonment Cost (excl. VAT)			2658010
		Total Well Abandonment Cost (incl. VAT & NCD)			2,817,490.49

## NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF APARA 8</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Days	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	28	700000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	28	112000
	13	Ancilliary equipments - tanks, office caravan, lightening etc	5000	28	140000
	14	WHM services	2000	10	20000
	15	Accommodation and catering	150	1400	210000
	16	Diesel (5000ltrs/d at \$1.1)	5500	28	154000
	17	Security cost for camp and site	8000	28	224000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2253500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
	1	Estimated Borrow Pit Remediation costs			5,321,750.00
		<b>Total Decommissioning Cost</b>			<b>5,321,750</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>8003188</b>
		Overheads (5%)			400159
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>8403347</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>8,907,548.24</b>

## NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF APARA 9</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Ra	Qty	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	25	625000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	Cementing Unit	7800	20	156000
	6	Cement Chemicals	300	200	60000
	7	Bridge Plug	40000	1	40000
	8	Production Casing Cutter	40000	1	40000
	9	Intermediate Casing Cutter	40000	1	40000
	10	Surface Casing Cutter	40000	1	40000
	11	Logistic support - vaccum truck, trucks, crane etc	4000	25	100000
	12	Ancilliary equipments - tanks, office caravan, lightening etc	5000	25	125000
	13	WHM services	2000	10	20000
	14	Accommodation and catering	150	1350	202500
	15	Diesel (5000ltrs/d at \$1.1)	5500	25	137500
	16	Security cost for camp and site	8000	25	200000
	17	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2103500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
	1	Estimated Borrow Pit Remediation costs			2,217,875.00
		<b>Total Decommissioning Cost</b>			<b>2,217,875</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>4749313</b>
		Overheads (5%)			237466
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>4986779</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>5,285,985.37</b>

# NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF APARA 10</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Days	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	27	108000
	13	Ancilliary equipments - tanks, office caravan, lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accomodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
ASSOCIATED BORROW PIT DECOMMISSIONING					
	1	Estimated Borrow Pit Remediation costs			2,953,000.00
		<b>Total Decommissioning Cost</b>			<b>2,953,000</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>5669438</b>
		Overheads (5%)			283472
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>5952910</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>6,310,084.49</b>



# NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

COST ESTIMATES FOR D&R OF AKPOR 1					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Days	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	27	108000
	13	Ancilliary equipments - tanks, office caravan, lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accomodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
ACCESS ROAD RECONSTRUCTION	1	Mobilisation to site			89,848.00
	2	Earthworks			52,082.00
		Base Preparation			96,660.00
	3	Demobilisation			11,599.00
		<b>Total Access Road Prep cost</b>			<b>250,189.00</b>
LOCATION DECOM.	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOMMISSIONING					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>2966627</b>
		Overheads (5%)			148331
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>3114958</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,301,855.85</b>

**NOTE FOR DECISION**  
SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

<b><u>COST ESTIMATES FOR D&amp;R OF AKPOR 2</u></b>					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Day	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks, crane etc	4000	27	108000
	13	Ancilliary equipments - tanks, office caravan, lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accommodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
ACCESS ROAD RECONSTRUCTION	1	Mobilisation to site			89,848.00
	2	Earthworks			65,525.00
		Base Preparation			159,489.00
	3	Demobilisation			11,599.00
		<b>Total Access Road Prep cost</b>			<b>326,461.00</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOM.					
		<b>Total Decommissioning Cost</b>			0
TOTAL		<b>Total D&amp;R Cost</b>			<b>3042899</b>
		Overheads (5%)			152145
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>3195044</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,386,746.59</b>

# NOTE FOR DECISION

SPDC PILOT DECOMMISSIONING AND LOCATION RESTORATION PROJECT

COST ESTIMATES FOR D&R OF AKPOR 3					
	S.N.	Activity / Equipment / Consumables	Unit Rate	No of Days / C	Total Cost
LOCATION PREPARATION	1	Mobilisation to site			92,263.00
	2	Earthworks			9,932.00
	3	Install/Recover Durabase mats at Location			35,143.00
	4	Demobilisation			11,599.00
		<b>Total Location Prep cost</b>			<b>148,937.00</b>
WELL ENGINEERING	1	HWU	25000	27	675000
	2	Brine services	120000	1	120000
	3	E-Line unit & PC and tools rental	7000	10	70000
	4	E-Line service charges - cutting	21500	5	107500
	5	E-Line service charges - CBL	60000	1	60000
	6	Cementing Unit	7800	20	156000
	7	Cement Chemicals	300	200	60000
	8	Bridge Plug	40000	1	40000
	9	Production Casing Cutter	40000	1	40000
	10	Intermediate Casing Cutter	40000	1	40000
	11	Surface Casing Cutter	40000	1	40000
	12	Logistic support - vaccum truck, trucks,crane etc	4000	27	108000
	13	Ancilliary equipments - tanks,office caravan,lightening etc	5000	27	135000
	14	WHM / WL services	5000	10	50000
	15	Accomodation and catering	150	1350	202500
	16	Diesel (5000ltrs/d at \$1.1)	5500	27	148500
	17	Security cost for camp and site	8000	27	216000
	18	FTO	20000	1	20000
		<b>Total Well Abandonment Cost</b>			<b>2288500</b>
ACCESS ROAD RECONSTRUCTION	1	Mobilisation to site			89,848.00
	2	Earthworks			43,683.20
		Base Preparation			106,326.00
	3	Demobilisation			11,599.00
		<b>Total Access Road Prep cost</b>			<b>251,456.20</b>
LOCATION DECOMMISSIONING	1	Mobilisation to site			92,262.00
	2	Earthworks			54,099.00
	3	Demobilisation			11,599.00
		<b>Total Location Decommissioning cost</b>			<b>157,960.00</b>
LOCATION RESTORATION	1	Mobilisation to site			92,262.00
	2	Earthworks			17,180.00
	3	Demobilisation			11,599.00
		<b>Total Location Restoration cost</b>			<b>121,041.00</b>
BORROW PIT DECOM.					
		<b>Total Decommissioning Cost</b>			<b>0</b>
TOTAL		<b>Total D&amp;R Cost</b>			<b>2967894</b>
		Overheads (5%)			148395
		<b>Total Well Abandonment Cost (excl. VAT)</b>			<b>3116289</b>
		<b>Total Well Abandonment Cost (incl. VAT &amp; NCD)</b>			<b>3,303,266.24</b>