

**THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED.**

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1380914 JIV report S/N: 00838

*(Note: As practicable as possible the JIV report is to be signed in the field by all the participating parties)*

**A. GENERAL INFORMATION:**

1. Spill incident Number: 1380914 2. Type of incident\* OIL SPILL  
 3. Name of Location KOLOCREEK MANIFOLD AT OTUASEGA  
 4. Name of nearest community OTUASEGA 5. State: BAYELSA 6. LGA OGBIA  
 7. Type of Production facility/Installation MANIFOLD 8. Asset owner/District \_\_\_\_\_

**B. INCIDENT INFORMATION:**

9. Details of incident

a. Date of incident: 15TH APRIL, 2015.  
 b. Start date/time of investigation: 16TH APRIL 2015  
 c. Investigation End date: 16TH APRIL 2015 Actual investigation duration, days: ONE (1) DAY  
 d. Description of spill point environment

- |   |                                     |  |
|---|-------------------------------------|--|
| <input type="checkbox"/> Firmed soil              | <input type="checkbox"/> Loose soil | <input type="checkbox"/> Recently excavated area |
| <input type="checkbox"/> Under water              | <input type="checkbox"/> Swampy     | <input type="checkbox"/> Exposed pipe surface    |
| <input type="checkbox"/> Well Platform (on Water) |                                     | <input type="checkbox"/> Drill Rig               |

Additional observations around the spill point: THE TEAM OBSERVED THAT 2" CORK VALVE WAS REMOVED FROM 8" ETELOBU DELIVERY LINE AND 2" CORK VALVE GAUGE WAS ALSO REMOVED FROM 18" GBARAN-KOLOCREEK TRUNK LINE. THE JIV OBSERVED ALSO THAT THE BURGLARY PROOF AT THE PERIMETRE DRAIN WAS FRESHLY CUT.

e. Description of leak point (tick as applicable);

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Drilled hole                               | <input type="checkbox"/> Hack saw cut   | <input type="checkbox"/> Tear (_____).                              |
| <input type="checkbox"/> Complete Rupture                           | <input type="checkbox"/> Inward dent,   | <input type="checkbox"/> Well head tampering                        |
| <input type="checkbox"/> Failed Weld-on illegal hot tap valve,      | <input type="checkbox"/> Failed Clamp   | <input type="checkbox"/> Missing Pipeline/Flowline                  |
| <input type="checkbox"/> Crude oil theft (illegal bunkering) point, |   | <input type="checkbox"/> Third party tampering with Clamp           |
| <input type="checkbox"/> Third party tampering with valve setting,  |   | <input type="checkbox"/> Third party tampering with flange,         |
| <input type="checkbox"/> Corrosion                                  | <input type="checkbox"/> Saver-pit over flow,   | <input type="checkbox"/> Surge vessel overflow,                     |
| <input type="checkbox"/> Bulging Outward                            | <input type="checkbox"/> Flare System/Bund wall failure                                 | <input type="checkbox"/> Accidental 3 <sup>rd</sup> party equipment |
| impact <input type="checkbox"/> Valve Failure                       | <input type="checkbox"/> com unit failure   | <input type="checkbox"/> Cold vent                                  |
| <input type="checkbox"/> Relief valve failure                       | <input checked="" type="checkbox"/> Others (specify) <u>REMOVAL OF CORK VALVE GAUGE</u> |   |

f. Incident caused by:

- ☒ Third party interference (Sabotage ☒; crude theft ☐; Line theft ☐; Accidental 3<sup>rd</sup> party damage ☐  
☐ Operational ☐ Others (including Mystery spills) \_\_\_\_\_

*\*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire,*

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g. Spill point coordinates

Measuring unit	
Northings:	Easting:
(LATITUDE)	(LONGITUDE)
4.90292	6.35792
4.90302	6.35767

**C. RISK ASSESSMENT**

10. Type of environment:

☒ Land ☐ Swamp ☐ Water ☐ Seasonal swamp ☐ Shoreline/Waterfront

i. Type of environment to which oil has spread:

☒ Land ☐ Swamp ☐ Water ☐ River (identify) \_\_\_\_\_

ii. Weather condition

☐ Rain ☒ Sunny ☒ Dry ☐ Wet ☐ Windy ☐ Hot ☐ Cool

11. Distance from the nearest sensitive habitat

- ☐ Government reserved and designated protected area
  - ☐ Drinking water source
  - ☐ Built up area
  - ☐ Farmlands
  - ☐ Fish Farm/Pond
  - ☐ Fishing net
  - ☐ Others (specify): TARRED ROAD WAS IMPACTED
- [NONE SEEN]  
 [NONE SEEN]  
 [NONE SEEN]  
 [50.m]  
 [NONE SEEN]  
 [NONE SEEN]

12. Containment measures put in place;

☒ Booms ☐ Trench ☐ Dyke ☒ Natural depression ☐ Pit ☐ None  
☐ Others: \_\_\_\_\_

13. Any pictures or video coverage?

☒ [N]

14. Further response/repair initiated as at the time of JIV?

☒ [N]

If yes to item 14, give brief description:

THE CORK VALVE WAS REPLACED

15. Was there any disruption to the investigation?

[Y] ☒ [N]

If yes to item 15 give brief description:

NOT APPLICABLE

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D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL

16. Structures / Properties

S/N	Type of Structures	Description	Size	Number	Comments
	NONE WITHIN AREA OF IMPACT				

17. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
	PLANTAIN	MANY	MANY	MANY	/	IMPACTED
	PAWM TREES	FEW	FEW	FEW		IMPACTED
	PAWPAW	MANY	MANY	MANY		IMPACTED

18. Fish/Nets/Ponds

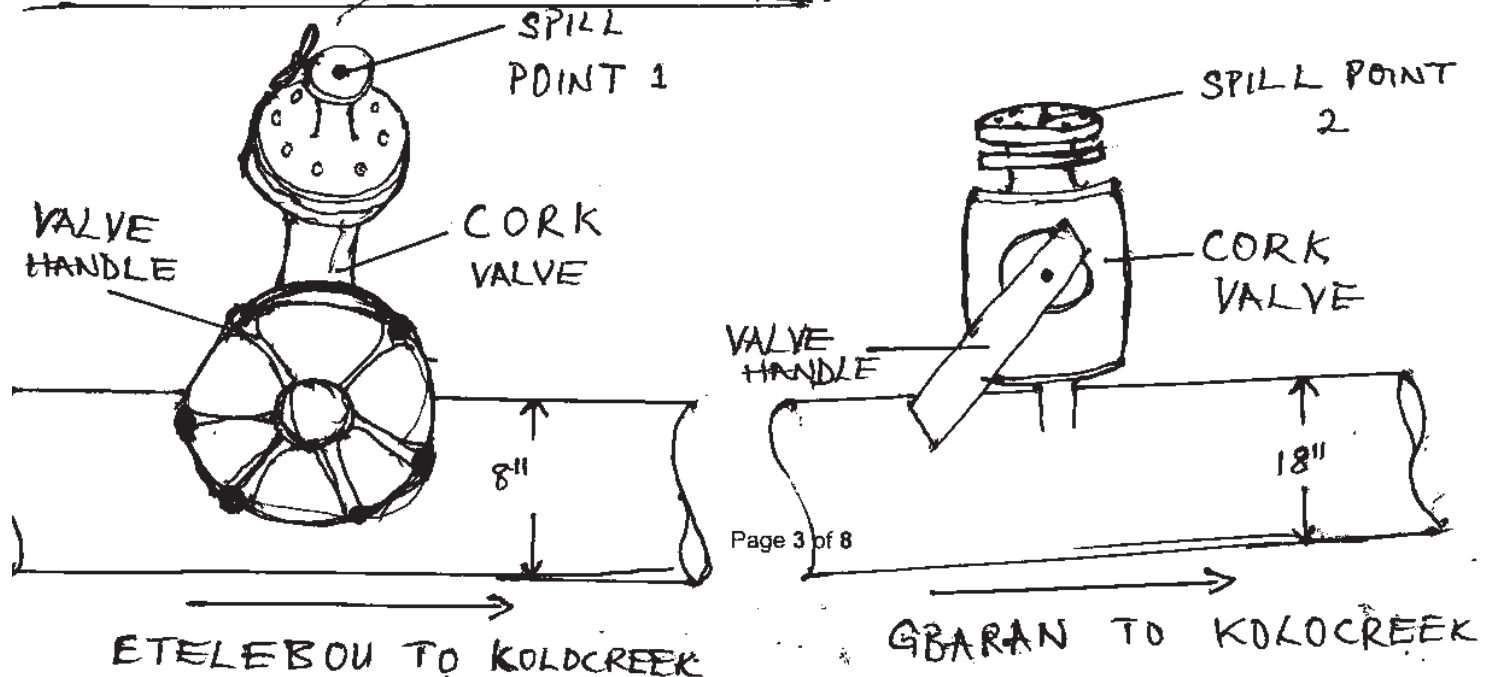
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
	NONE WITHIN AREA OF IMPACT			

19. Others (Specify) i.e. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
	NONE WITHIN AREA OF IMPACT			

E. GRAPHIC DESCRIPTION OF LEAK POINT (while detail report of the leak point should be contained in the leak report, overview sketch of the site should be added as an appendix 1)

CREEK MANIFOLD SHOWING TWO CORK VALVES, TAMPERED BY REMOVING THE CORK VALVE GUAGES. TWO SECTIONS OF KOLO





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**G. INCIDENT INFORMATION:**

20. Impacted Area Details

- Total calculated area of impact 1.91 Ha
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W YES

21. Volume of oil recovered before completion of JIV ( $V_{rec}$ ):

Recovered oil $V_{rec}$ :	<u>NIL</u>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
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22. Net Estimated Spilled Volume  $V_{Est}$  (bbls)\* =

**26.62 BARRELS**

Estimated Reported Volume\*\*  $V_{rep}$  (bbls) =

**27 BARRELS**

**\*Notes:**

- Volume estimation was done using an excel based tool. (see attached for details on the calculation)
- Reported spilled volume is an estimate

Write other relevant notes taken into consideration for estimating the spilled in the box below:

**BULK OF THE OIL SPILLED WITHIN THE  
MANIFOLD. OUTSIDE THE MANIFOLD THE OIL  
IMPACT WAS SUPERFICIAL MOSTLY.**

Calculation of the respective estimated volume is to be done on site as far as practicable using the new spill volume estimation software on site; Conversion of m<sup>3</sup> to barrels is Volume (m<sup>3</sup>) x 6.29; \*\*Round up estimated volume to next whole number using the following rules:

- Any spill volume in excess of 1 bbl is rounded up to the next whole number.
- Any spill volume in less than 1 bbl is rounded up to the next 0.1 bbl.

Examples: Calculated volume = 15.3 bbl ----- Reported volume = 16 bbl  
Calculated volume = 0.35 bbl ----- Reported volume = 0.4 bbl  
Calculated volume = 0.01 bbl ----- Reported volume = 0.1 bbl.

Wherever this estimation tool is not applicable please refer to paragraph 6c (Deviations) of the JIV procedure to use appropriate steps for column estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

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**23. GENERAL STATUS OF THE SITE**

A. Joint investigation of the incident site found that there is no residual impact after the initial response and JIT therefore recommend that the site be closed out <input type="checkbox"/>
B. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/>

**24. REPRESENTATIVES**

<p>This report was filled, agreed and signed by the following joint investigation representatives:</p> <ul style="list-style-type: none"><li>• Host Community <input checked="" type="checkbox"/></li><li>• Department of Petroleum Resources (DPR) <input checked="" type="checkbox"/></li><li>• National Oil Spill Detection and Response Agency (NOSDRA) <input checked="" type="checkbox"/></li><li>• State Ministry of Environment (SME) <input checked="" type="checkbox"/></li><li>• Nigeria Police Force (NPF) <input checked="" type="checkbox"/></li><li>• Shell Petroleum Development Company (SPDC) <input checked="" type="checkbox"/></li><li>• Signatories agree with reported findings <input checked="" type="checkbox"/></li><li>• Separate DPR form has been filled out with same finding <input checked="" type="checkbox"/></li></ul> <p style="text-align: right;"><i>Tick as applicable</i></p>
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25. Appendix 1: Overview sketch of the site

