

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1526099 JIV report S/N: Nº 0000117

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

## A. GENERAL INFORMATION:

1. Spill incident Number: 1526099 2. Type of incident\* OIL SPILL  
3. Name of Location 28" BOMU - BONNY PIPELINE  
OTOKOLOMABIE  
4. Name of nearest community (OLOMA) 5. State: RIVERS 6. LGA BONNY  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY  
OF NIGERIA LIMITED / PIPELINE

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date of incident: 22ND NOVEMBER, 2015  
b. Start date/time of investigation: 30TH NOVEMBER, 2015 / 11:15 HOURS  
c. Investigation End date: 30TH NOVEMBER 2015 Actual investigation duration, days: ONE (1) DAY  
d. Description of spill point environment

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

Additional observations around the spill point: A COFFERDAM PREVIOUSLY INSTALLED BY THE SPDC ASSET OWNER WAS OBSERVED AROUND THE SPILL POINT.

### 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 checked="" type="checkbox"/> Crude oil theft (illegal bunkering) point, | <input type="checkbox"/> Saver-pit over flow  | <input type="checkbox"/> Third party tampering with Clamp                  |
| <input type="checkbox"/> Third party tampering with valve setting              | <input type="checkbox"/> Bulging Outward      | <input type="checkbox"/> Third party tampering with flange,                |
| <input type="checkbox"/> Flare System/Bund wall failure                        | <input type="checkbox"/> Cold vent            | <input type="checkbox"/> Surge vessel overflow,                            |
| <input type="checkbox"/> Valve Failure   | <input type="checkbox"/> Relief valve failure | <input type="checkbox"/> Accidental 3 <sup>rd</sup> party equipment impact |
| <input type="checkbox"/> Others(specify) _____                                 |   |  |

### f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3<sup>rd</sup> party damage   
 Operational  Others (including Mystery spills) SPILL INCIDENT OCCURRED DURING THE REPAIR OF CRUDE OIL THEFT POINT ON THE PIPELINE.

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

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g. Spill point coordinates

h. Measuring unit

WGS84

Northing: (LATITUDE)	Easting: (LONGITUDE)
<u>4.47775</u>	<u>7.19660</u>

**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 [     .m]
- Drinking water source [     .m]
- Built up area [     .m]
- Farmlands [     .m]
- Fish Farm/Pond [     .m]
- Fishing net [     .m]

Others (specify). MANGROVE VEGETATION                      IMPACTED BY SPILL

12. Containment measures put in place:

- Booms                     
  Trench    
  Dyke    
  Natural depression    
  Pit    
  None
- Others: CONSTRUCTED COFFERDAM AROUND SPILL POINT.

13. Any pictures or video coverage?

[Y]  [N]

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

[Y]  [N]

THE REGULATORS WERE  
NOT PRESENT DURING  
THE REPAIR OF THE PIPELINE.

If yes to item 14, give brief description:

RECOVERY OF FREE-PHASE OIL WITHIN EXISTING COFFERDAM  
AROUND SPILL POINT WAS DONE.

15. Was there any disruption to the investigation?

[Y]  [N]

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If yes to item 15 give brief description: JIV OF 30TH NOVEMBER 2015 WAS INCONCLUSIVE AS THE JOINT INVESTIGATION TEAM COULD NOT REACH A CONSENSUS ON THE CAUSE OF SPILL. FURTHER J.I.T. MEETINGS WERE HELD AND CONSEQUENTLY, THE CAUSE OF SPILL WAS AGREED AS 'OTHERS'.

**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
1	MANGROVE			✓	WITHIN AN IMPACTED AREA OF 0.1 Ha.	IMPACTED BY SPILL

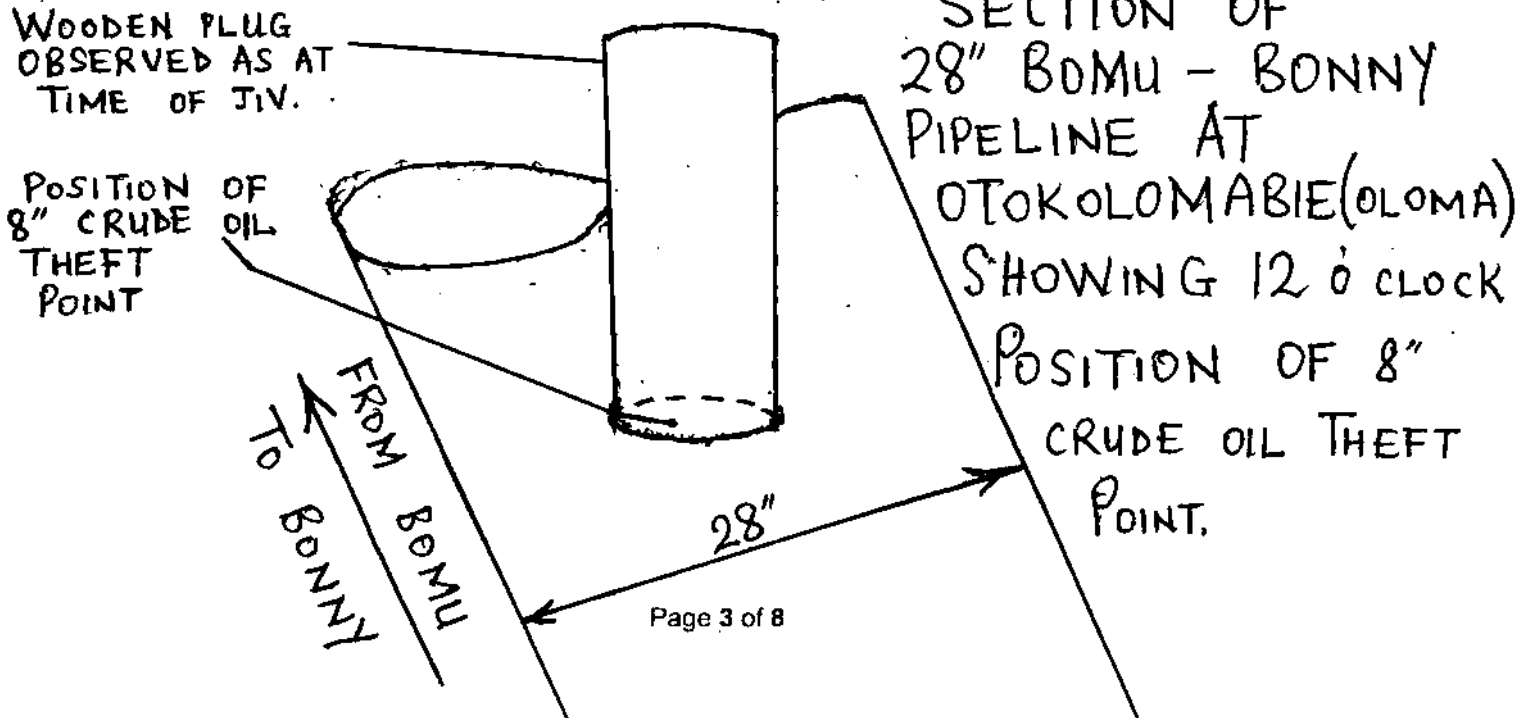
18. Fishing Nets/Fish Ponds

S/N	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
1	CRABS	DEAD	10 NO.	WITHIN SPILL-IMPACTED REGION.

**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)





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## G. INCIDENT INFORMATION:

### a. Impacted Area Details

- Total calculated area of impact 1.132 Ha
- Impact within R.O.W YES
- Impact outside R.O.W YES

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

Recovered oil  $V_{rec}$ : 105 Barrels

Controlled recovery/evacuation from source with no impact to environment:

NIL Barrels

(RECOVERED  
DIRECTLY  
FROM THE  
COFFERDAM  
TO THE  
BARGE.)

c. Net Estimated Spilled Volume  $V_{Est}(bbls)^* =$  269.51

Estimated Reported Volume  $V_{rep}(bbls) =$  270 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:

NOT APPLICABLE

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  $m^3$  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 volume estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

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## d. General Status of the site

i. 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"/>
ii. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/>

## e. Representatives

<p><b>This report was filled, agreed and signed by the following joint investigation team representatives:</b></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>• Asset Owner: <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 findings: <input checked="" type="checkbox"/></li></ul> <p style="text-align: right;"><i>Tick as applicable</i></p>
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f. Appendix 1: Overview sketch of the site

