

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2510377 JIV report S/N: 1030166

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

## A. GENERAL INFORMATION:

1. Fountain Incident Number: 2510377 2. Type of incident\* OIL SPILL  
3. Name of Location 2.8" BOMU - BONNY PIPELINE  
(PATRICK WATER SIDE)  
4. Name of nearest community BODO WEST 5. State: RIVERS 6. LGA GOKANA  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD (SPDC) / PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date Reported: 20TH NOVEMBER 2019  
b. Start date/time of investigation: 21ST NOVEMBER 2019 / 11 55 HRS  
c. Investigation End date: 21ST NOVEMBER 2019 Actual investigation duration, days: ONE (1) DAY  
d. Description of spill point environment

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Firm soil                | <input type="checkbox"/> Loose soil        | <input 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"/> Drill Rig         |  |

Additional observations 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"/> Wellhead 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) \_\_\_\_\_

\*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire, g) non leaking Theft point removal  
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g. Spill point coordinates

h. Measuring unit

WGS 84

Northing: <b>LATITUDE</b>	Easting: <b>LONGITUDE</b>
4.58026	7.25536

## 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 to Sensitive habitat within 100m radius

- Government reserved and designated protected area
- Drinking water source
- Built up area
- Farmlands
- Fish Farm/Pond
- Fishing net
- Others (specify): \_\_\_\_\_

}

[ ,m]  
 [ ,m]  
 [ ,m]  
 [ ,m]  
 [ ,m]  
 [ ,m]

NONE SEEN  
 WITHIN  
 VICINITY

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:

SPILL RESPONSE / LEAK REPAIR

15. Was there any disruption to the investigation?

[Y]

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If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed?

[Y]  [N]

If yes to item 16 give brief description: NOT APPLICABLE

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

17. Structures / Properties

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

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
<u>NONE WITHIN AREA OF IMPACT</u>						

19. Fish/Nets/Ponds

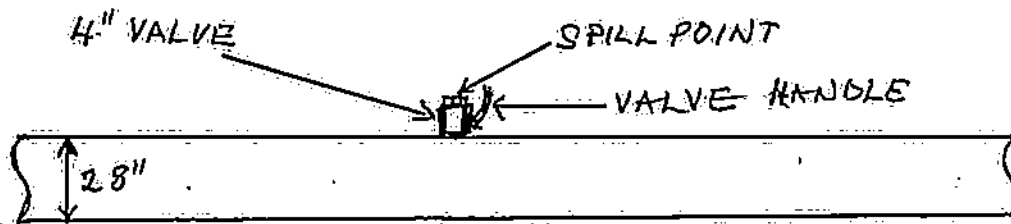
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

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

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

**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)

A SECTION OF 28" BOMU - BONNY PIPELINE AT BDD WEST SHOWING 4" VALVE CRUDE THEFT POINT INSTALLED AT 12 O'CLOCK POSITION BY UNKNOWN PERSON(S)





**28" BOMU-BONNY TNP @ BODO-WEST****FID: 2510377**

<b>PT_ID</b>	<b>LAT_Y</b>	<b>LONG_X</b>
SP	4.58026	7.25536
149	4.580222	7.25506
150	4.57999	7.255201
151	4.579953	7.255419
152	4.580066	7.255588
153	4.580302	7.255623
154	4.580341	7.255368
155	4.580526	7.255492
156	4.580453	7.254984
157	4.580746	7.255283
158	4.580317	7.255465
159	4.580093	7.255417
160	4.580118	7.255307
161	4.581131	7.254767
162	4.5808	7.254719
163	4.580788	7.254283
164	4.581041	7.254263
165	4.580629	7.253397
166	4.580456	7.253424



21.11.2019

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 1.03 Ha
- Impact within SPDC R.O.W. YES
- Impact outside SPDC R.O.W. YES

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

Recovered oil $V_{rec}$ :	<u>NIL</u>	Barrels
---------------------------	------------	---------

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

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

29.95 BARRELS

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

30 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 volume estimation or cause of spill:

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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## 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

This report was filled, agreed and signed by the following joint investigation team representatives:

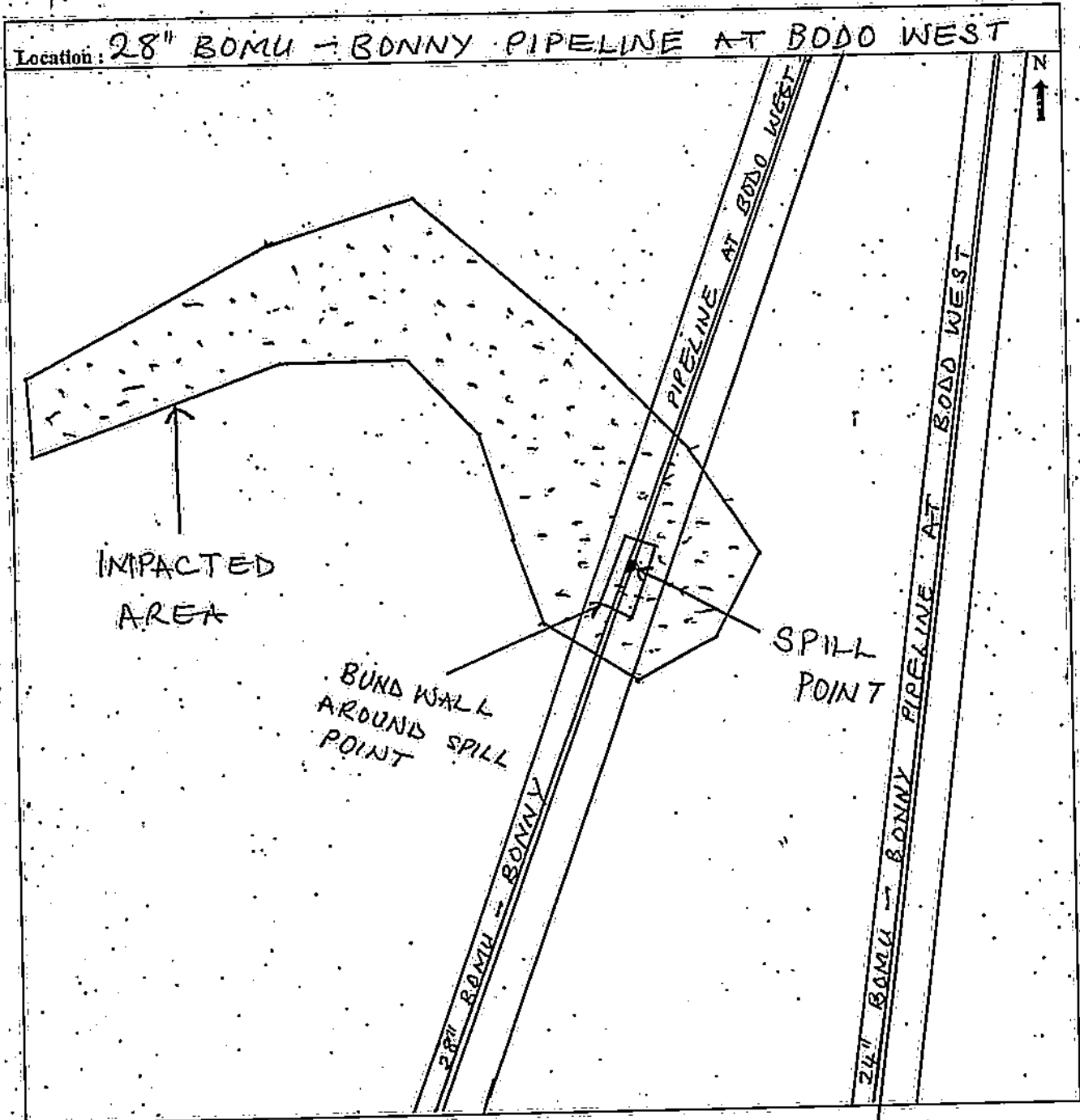
- Host Community:
- Department of Petroleum Resources [DPR]:
- National Oil Spill Detection and Response Agency [NOSDRA]:
- State Ministry of Environment [SME]:
- Shell Petroleum Development Company [SPDC]:
- *Separate DPR form has been filled out with same findings*

*Tick as applicable*

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f. Appendix I: Overview sketch of the site



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