

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2482402 JIV report S/N: 1030154

(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: 2482402 2. Type of incident\* OIL SPILL  
3. Name of Location 12" IMO RIVER 2 - OGALE TIL ROW AT OGALE  
4. Name of nearest community KOM-KOM 5. State: RIVERS 6. LGA ELEME  
7. Type of Production facility/Installation PIPELINE  
8. Asset owner/District SHELL PETROLEUM DEVELOPMENT COMPANYCY NIGERIA LIMITED PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date Reported: 16TH OCTOBER 2019  
b. Start date/time of investigation: 18TH OCTOBER 2019/13:40hrs  
c. Investigation End date: 18TH OCTOBER 2019 Actual investigation duration, days: ONE (DAY)  
d. Description of spill point environment

- |   |                                     |  |
|---|-------------------------------------|--|
| <input checked="" type="checkbox"/> Firm 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:

NOT APPLICABLE

### 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 checked="" 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: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.83105</u>	<u>7.15545</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 to Sensitive habitat within 100m radius

- |  |           |
|--|-----------|
| <input type="checkbox"/> Government reserved and designated protected area | [ NIL ,m] |
| <input type="checkbox"/> Drinking water source                             | [ NIL ,m] |
| <input type="checkbox"/> Built up area                                     | [ NIL ,m] |
| <input type="checkbox"/> Farmlands   | [ NIL ,m] |
| <input type="checkbox"/> Fish Farm/Pond                                    | [ NIL ,m] |
| <input type="checkbox"/> Fishing net                                       | [ NIL ,m] |
| <input type="checkbox"/> Others (specify)                                  | NIL       |

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:

CRUDE OIL RECOVERY / REPAIRS ACTIVITIES

15. Was there any disruption to the investigation?       [N]       [X]

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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
NONE WITHIN AREA OF IMPACT					

**18. Crops/Economic Trees**

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

**19. Fish/Nets/Ponds**

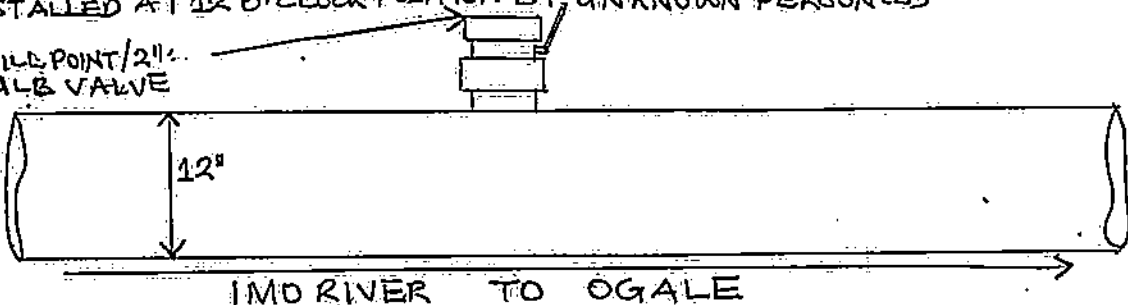
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

**20. 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) A SECTION OF 12" IMO RIVER 2-OGALE PIPELINE AT OGALE SHOWING 2" BALL VALVE CRUDE OIL THEFT POINT INSTALLED AT 12 O'CLOCK POSITION BY UNKNOWN PERSON(S)

SPILL POINT/2" BALL VALVE





**LIST OF COORDINATES FOR JIV ALONG 12" IMO  
RIVER TO OGALE T/L SPILL @ OGALE  
INC . NO. 2019 2482402 (CRS : WGS 84)**

PT_ID	LONGITUDE	LATITUDE
SP	7.15545	4.83105
P1	7.15543	4.83066
P2	7.15535	4.83064
P3	7.15537	4.83073
P4	7.15533	4.8308
P5	7.15538	4.83095
P6	7.15535	4.83101
P7	7.15507	4.83115
P8	7.15495	4.83124
P9	7.15492	4.8313
P10	7.15498	4.83142
P11	7.15495	4.83164
P12	7.15498	4.83175
P13	7.15484	4.83175
P14	7.15488	4.83194
P15	7.15495	4.8321
P16	7.15489	4.83246
P17	7.15502	4.83378
P18	7.15518	4.83462
P19	7.15516	4.83475
P20	7.15416	4.83461
P21	7.1533	4.83461
P22	7.15323	4.83486
P23	7.15424	4.83481
P24	7.15513	4.83493
P25	7.15543	4.83487
P26	7.15545	4.83453
P27	7.15533	4.8336
P28	7.15522	4.83279
P29	7.15498	4.8321
P30	7.15492	4.83179
P31	7.15506	4.8318
P32	7.15503	4.83169
P33	7.15503	4.8314
P34	7.15502	4.83124
P35	7.15504	4.83126
P36	7.15514	4.83118
P37	7.15539	4.83105
P38	7.15544	4.8312
P39	7.1555	4.83163
P40	7.15553	4.83166
P41	7.15556	4.83183
P42	7.15556	4.83204
P43	7.15557	4.83251
P44	7.15563	4.83313

*[Handwritten Signature]*  
18-10-2019

LIST OF COORDINATES FOR JIV ALONG 12" IMO  
RIVER TO OGALE T/L SPILL @ OGALE  
INC . NO. 2019\_2482402 (CRS : WGS 84)

P45	7.15557	4.83314
P46	7.15562	4.83322
P47	7.15571	4.83321
P48	7.15575	4.83326
P49	7.15578	4.83325
P50	7.15568	4.83301
P51	7.15566	4.83274
P52	7.15559	4.83249
P53	7.15556	4.83243
P54	7.15556	4.83235
P55	7.15557	4.83174
P56	7.15553	4.83153
P57	7.15549	4.83131
P58	7.15548	4.83121
P59	7.15557	4.83118
P60	7.15557	4.83094
P61	7.15549	4.83092

~~Jefferson~~  
18-10-2019

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 1.84 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
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Controlled recovery/evacuation from source with no impact to environment:

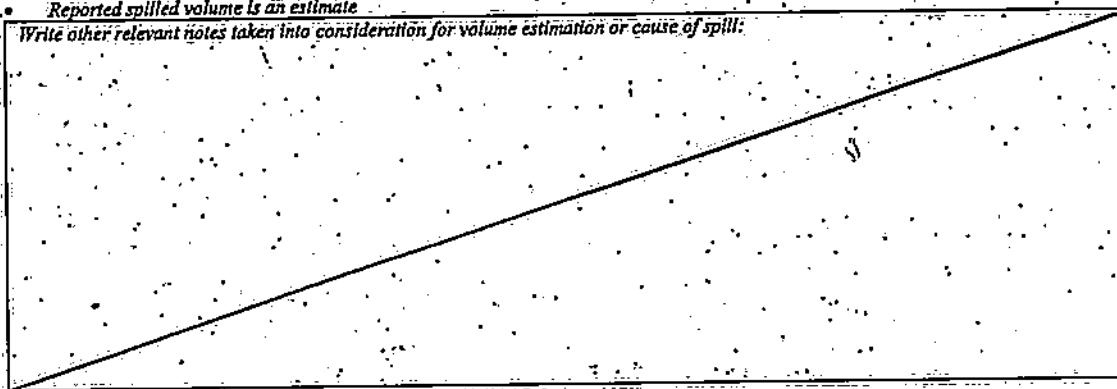
<u>NIL</u>	Barrels
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<b>c. Net Estimated Spilled Volume <math>V_{est}</math> (bbls)* =</b>	<b><u>37.39 BARRELS</u></b>
<b>Estimated Reported Volume** <math>V_{rep}</math> (bbls) =</b>	<b><u>38 BARRELS</u></b>

**\*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  $m^3$  to barrels is Volume ( $m^3$ ) 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

ii. Investigation of the incident site showed that there is residual impact on site requiring further works

## 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*

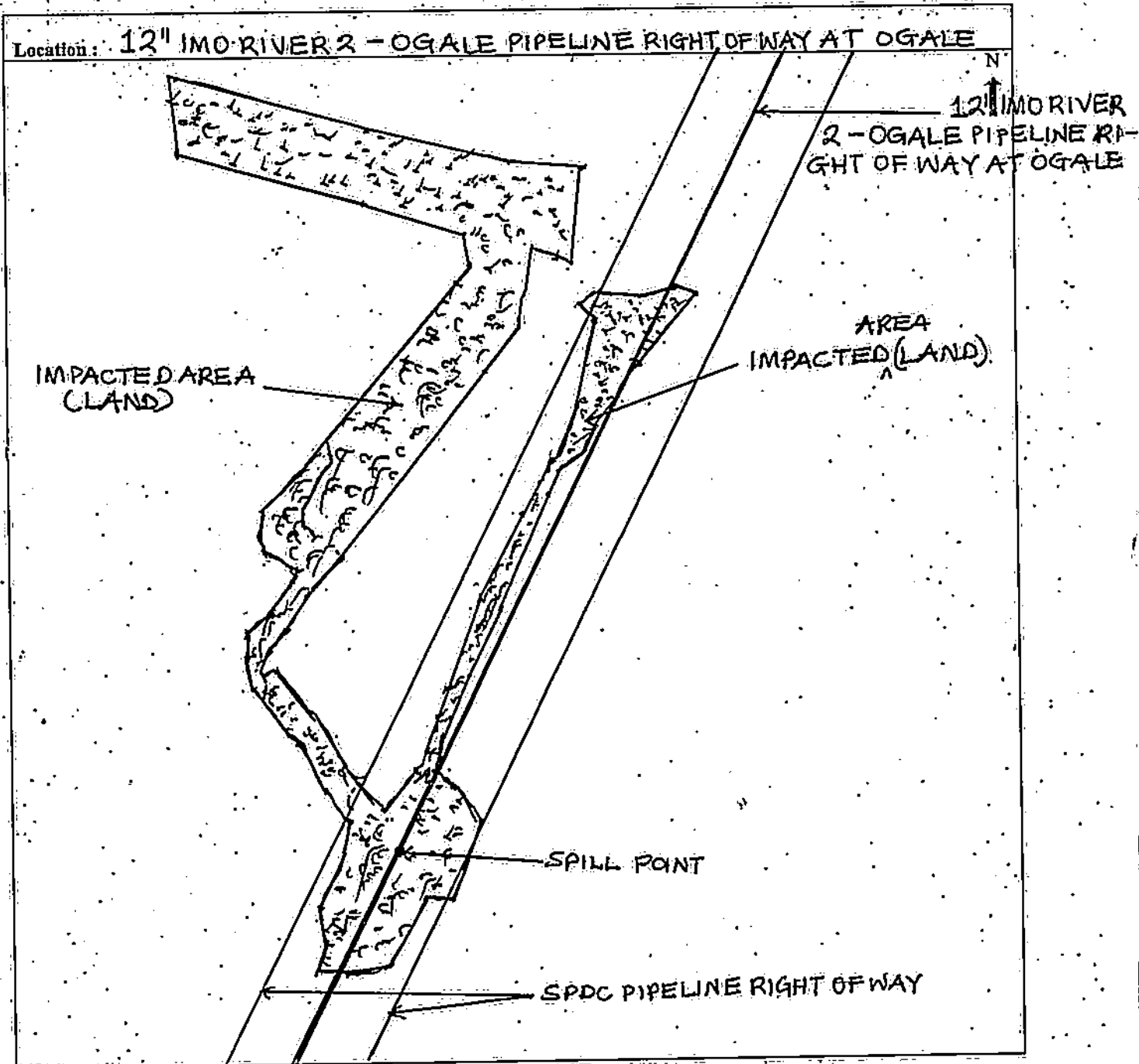
*Tick as applicable*



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f. Appendix 1: Overview sketch of the site



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