

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1813384 JIV report S/N: Nº 0000249

(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: 1813384 2. Type of incident\* OIL SPILL  
3. Name of Location 12" IMO RIVER - OGALE PIPELINE  
4. Name of nearest community KOM-KOM 5. State: RIVERS 6. LGA OYIGBO  
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: 3RD MARCH, 2017  
b. Start date/time of investigation: 7TH MARCH, 2017 / 15:11 HOURS  
c. Investigation End date: 15TH MARCH, 2017 Actual investigation duration, days: NINE (9) DAYS  
d. Description of spill point environment 2017

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Firm soil               | <input checked="" type="checkbox"/> Loose soil | <input checked="" 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 OBSERVED CRUDE OIL THEFT POINTS INCLUDING THE SPILL POINT WERE PARTLY CONCEALED IN CONCRETE. THESE SECTIONS OF THE PIPELINE POLYKENE TAPE COATING SURROUNDING THE THEFT POINTS WERE OBSERVED TO HAVE BEEN REMOVED BY UNKNOWN PERSON(S).**

### 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) \_\_\_\_\_

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

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1813384 JIV report S/N: N° 0000249

g. Spill point coordinates

h. Measuring unit WLAS 84

Northing: <b>LATITUDE</b> 4.88005	Easting: <b>LONGITUDE</b> 7.17246

### 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  
(CONFINED)     
  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). **PALM TREES**      **3 m**

12. Containment measures put in place:

- Booms     
  Trench     
  Dyke     
  Natural depression     
  Pit     
  None  
 Others: \_\_\_\_\_

13. Any pictures or video coverage?

[ Y✓ ] [ N ]

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

[ Y✓ ] [ N ]

If yes to item 14, give brief description:

**RECOVERY OF FREE-PHASE OIL WAS BEING DONE AND REPAIRS WERE CARRIED OUT ON THE AFFECTED PIPELINE SECTION BY CLAMPING.**

15. Was there any disruption to the investigation?

[ Y ] [ N✓ ]

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1813384 JIV report S/N: Nº 0000249

If yes to item 15 give brief description:

NOT APPLICABLE

**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
NONE WITHIN AREA OF IMPACT						

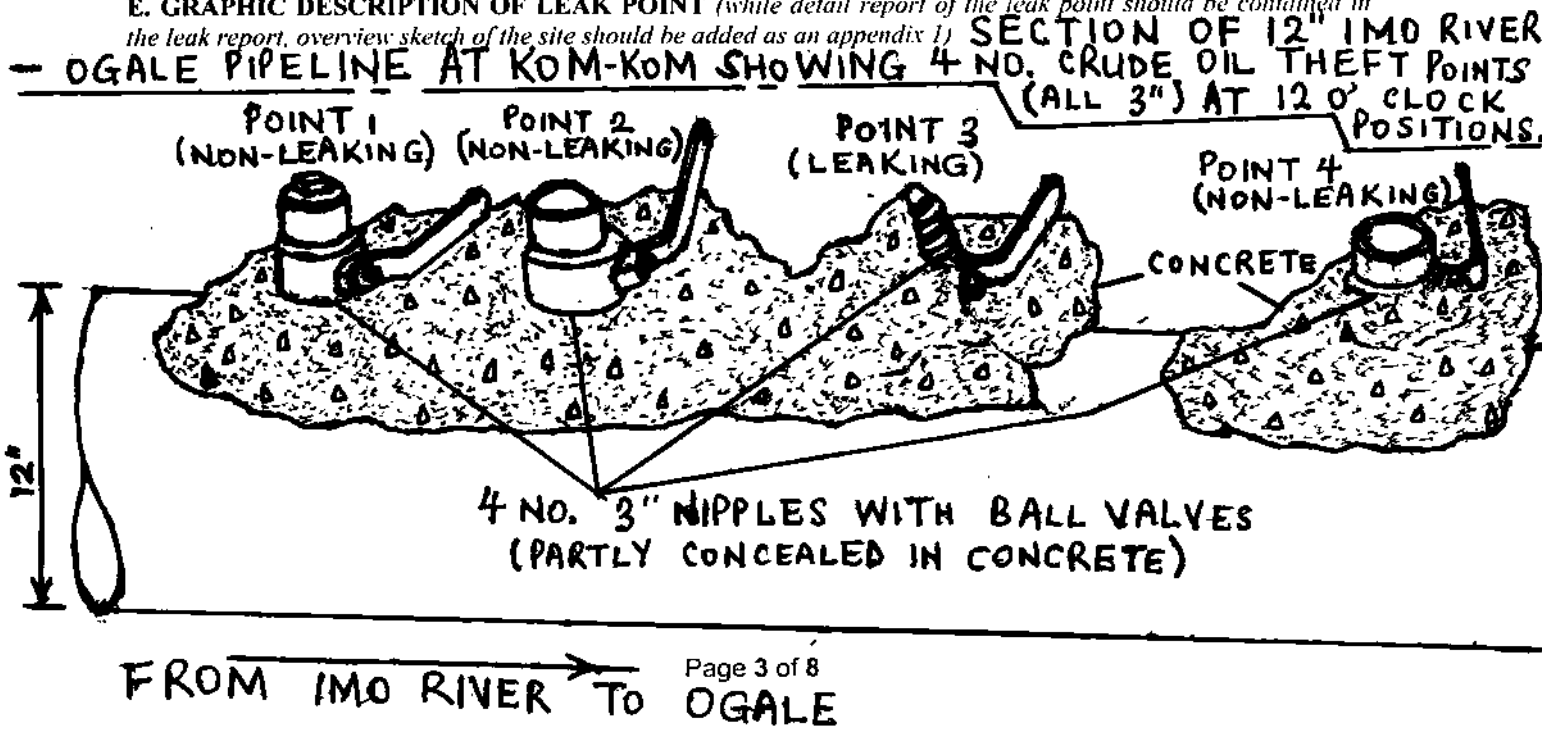
18. Fishing Nets/Fish Ponds

S/N	Nets/Ponds	Description	Quantity/Size	Comments
1	FISH	TILAPIA	7 NO.	IMPACTED WITHIN CONFINED WATER BODY

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)



# JOINT INVESTIGATION REPORT

INCIDENT NO: 1813384 JIV report S/N: Nº 0000249

F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

20. Impacted area boundary Coordinates (If more, Print and attach as an appendix)

*was 84*

S/N	Northing	LATITUDE	Easting	LONGITUDE
1		4.87956		7.17290
2		4.87925		7.17267
3		4.87922		7.17258
4		4.87920		7.17250
5		4.87925		7.17239
6		4.87968		7.17240
7		4.87981		7.17254
8		4.87989		7.17254
9		4.88018		7.17252
10		4.88009		7.17258
11		4.88007		7.17261
12		4.88003		7.17260
13		4.88001		7.17256
14		4.87982		7.17256
15		4.87982		7.17265
16		4.87985		7.17262
17		4.87989		7.17265
18		4.87987		7.17266
19		4.87984		7.17266
20		4.87988		7.17268
21		4.87986		7.17270
22		4.87983		7.17268
23		4.87982		7.17273
24		4.87974		7.17275
25		4.87967		7.17277
26		4.87962		7.17292
27		4.88045		7.17249
28		4.88045		7.17236

# JOINT INVESTIGATION REPORT

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.41Ha
- 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 $V_{rec}$ :	<b>277</b>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<b>187</b>	Barrels
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**c. Net Estimated Spilled Volume  $V_{Est}(bbls)^* = 538.62$**

**Estimated Reported Volume  $V_{rep}(bbls) = 539$  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 ( $m^3$ )  $\times$  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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INCIDENT NO: 1813384 JIV report S/N: N<sup>o</sup> 0000249

## 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]:
- Asset Owner:
- Signatories agree with reported findings:
- Separate DPR form has been filled out with same findings:

*Tick as applicable*

# JOINT INVESTIGATION REPORT

Nº 0000249

INCIDENT NO: 1813384 JIV report S/N:

f. Appendix 1: Overview sketch of the site

