

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1692296 JIV report S/N:

No: 0000372

(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: 1692296 2. Type of incident\* OIL SPILL  
3. Name of Location 24" TRANS-RAMOS PIPELINE  
4. Name of nearest community ODIMODI 5. State: DELTA 6. LGA BURUTU  
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: 13<sup>TH</sup> AUGUST, 2016  
b. Start date/time of investigation: 21<sup>ST</sup> SEPTEMBER, 2016 AT 1309HRS  
c. Investigation End date: 22<sup>ND</sup> SEPT. 2016 Actual investigation duration, days: 2 DAYS  
d. Description of spill point environment

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Firm soil               | <input type="checkbox"/> Loose soil        | <input type="checkbox"/> Recently excavated area |
| <input checked="" 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: INCIDENT CAUSE WAS CONFIRMED AS THIRD PARTY INTERFERENCE, ESTABLISHED ON EXCAVATION OF THE LEAK POINTS. A MAJOR IN-WARD DENT AND TEAR (AT 12 O'CLOCK AND 6 O'CLOCK POSITIONS RESPECTIVELY) DUE TO EXTERNAL IMPACT WERE OBSERVED ON THE PIPELINE.

### c. Description of leak point (tick as applicable):

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Drilled hole                               | <input type="checkbox"/> Hack saw cut            | <input checked="" type="checkbox"/> Tear (_____).                          |
| <input type="checkbox"/> Complete Rupture                           | <input checked="" 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"/> 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.

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g. Spill point coordinates

h. Measuring unit

WGS 84

SP1  
SP2

Northing: (LATITUDE)	Easting: (LONGITUDE)
5.28507	5.37134
5.28513	5.37133
<del>5.28513</del>	<del>5.37133</del>
<del>5.28513</del>	<del>5.37133</del>

## 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

- |  |             |
|--|-------------|
| <input type="checkbox"/> Government reserved and designated protected area | [     , m ] |
| <input type="checkbox"/> Drinking water source                             | [ 0 , m ]   |
| <input type="checkbox"/> Built up area                                     | [     , m ] |
| <input type="checkbox"/> Farmlands   | [     , m ] |
| <input type="checkbox"/> Fish Farm/Pond                                    | [     , m ] |
| <input type="checkbox"/> Fishing net                                       | [     , m ] |
| <input type="checkbox"/> Others (specify): <u>MANGROVES</u>                | [ 0 , m ]   |

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:

RECOVERY OF FREE PHASE CRUDE OIL IS ONGOING

15. Was there any disruption to the investigation?

[ Y ]  [ N ]

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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
<b>NONE WITHIN AREA OF IMPACT</b>					

**17. Crops/Economic Trees**

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
1.	MANGROVES	FEW	FEW	FEW	FEW	STAINED WITH <i>crude oil</i>
<b>NONE WITHIN AREA OF IMPACT</b>						

**18. Fishing Nets/Fish Ponds**

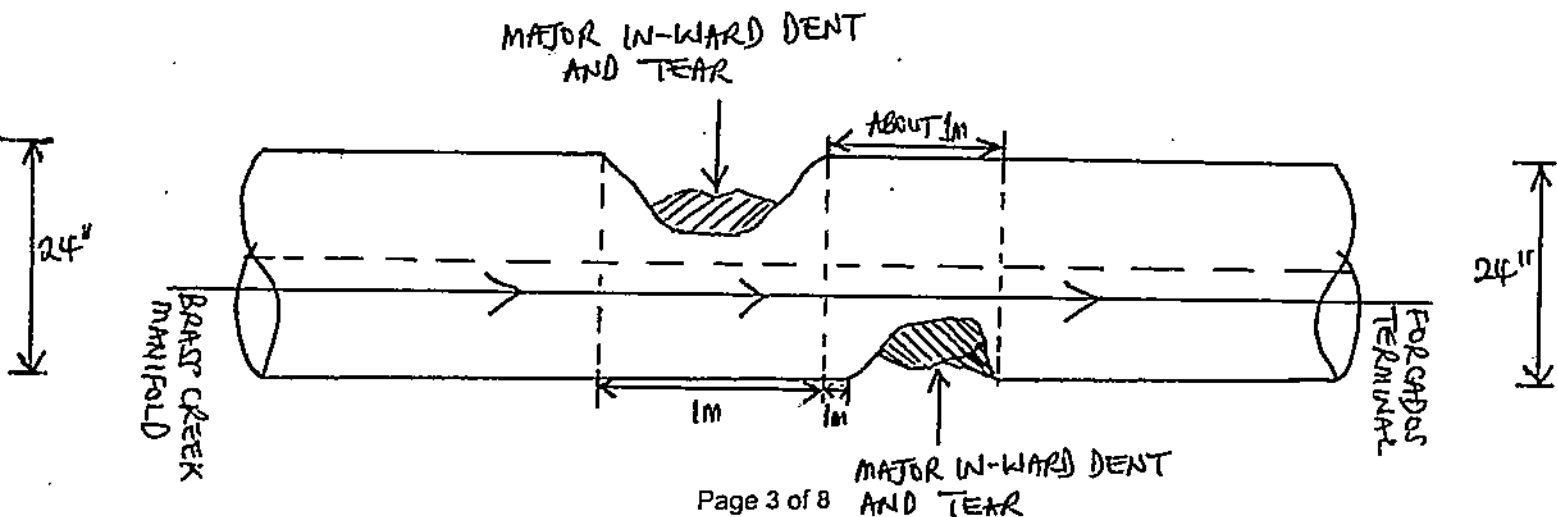
S/N	Nets/Ponds	Description	Quantity/Size	Comments
<b>NONE WITHIN AREA OF IMPACT</b>				

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

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

**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)

SECTION OF 24" TRANS - RAMOS PIPELINE AT ODIMODI AXIS, SHOWING MAJOR IN-WARD DENT AND TEAR AT 12 O'CLOCK AND 6 O'CLOCK POSITIONS RESPECTIVELY



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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)

S/N	Northing	Easting

*SAME AS INCIDENT - 1684151*

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact SAME AS INCIDENT - 1684151
- 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 $V_{rec}$ :	<u>SAME AS INCIDENT - 1684151</u> Barrels
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Controlled recovery/evacuation from source with no impact to environment:

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

VOLUME IS SAME AS INCIDENT - 1684151

Estimated Reported Volume\*\*  $V_{rep}$  (bbls) = SAME AS INCIDENT - 1684151

**\*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:

**BOTH INCIDENTS (1684151 AND 1692296) OCCURRED WITHIN THE SAME PERIOD AND AT A DISTANCE OF ABOUT 29M APART, THEIR IMPACT ARE COMPLETELY OVER-LAPPING. HENCE, AREA IMPACTED AND ESTIMATED QUANTITY SPILLED IS SAME FOR BOTH INCIDENTS.**

*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 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

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*

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f. Appendix 1: Overview sketch of the site

Location: 24" TRANS - RAMOS PIPELINE AT ODIMODI AXIS

OVERVIEW SKETCH IS SAME AS INCIDENT  
1684151