

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1863621 JIV report S/N:

N<sup>o</sup> 0000290

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

## A. GENERAL INFORMATION:

1. Spill incident Number: 1863621 2. Type of incident\* OIL SPILL  
3. Name of Location 12" IMO RIVER - OGAE PIPELINE  
4. Name of nearest community LUZUAKU 5. State: ABIA 6. LGA LIKWA WEST  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD  
(SPDC)

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date of incident: 29TH MAY 2017  
b. Start date/time of investigation: 4TH JUNE 2017 / 1530HRS  
c. Investigation End date: 7TH JUNE 2017 Actual investigation duration, days: FOUR (4) DAYS  
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 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 JOINT INVESTIGATION TEAM SAW A DRILLED HOLE AT 12 O'CLOCK POSITION.

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

- |   |   |  |
|---|---|--|
| <input checked="" 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 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

Northing: LATITUDE	Easting: LONGITUDE
4.89462	7.17698
/	/
/	/

## 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 [ NIL .m]
- Drinking water source [ NIL .m]
- Built up area [ NIL .m]
- Farmlands [ 50 .m]
- Fish Farm/Pond [ NIL .m]
- Fishing net [ NIL .m]
- Others (specify): RAILWAY

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:

REPAIR BY CLAMPING

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

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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
NONE WITHIN AREA OF IMPACT					

**17. Crops/Economic Trees**

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

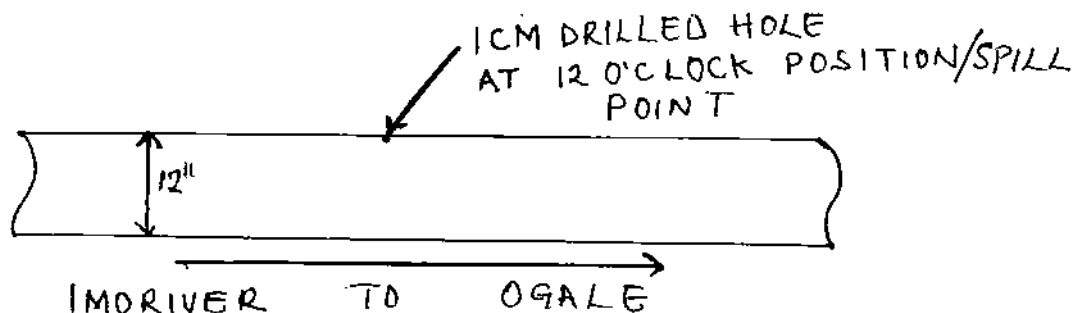
**18. Fishing Nets/Fish Ponds**

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

**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) A SECTION OF 12" IMORIVER - OGALE PIPELINE AT UZUAKU SHOWING A 1cm DRILLED HOLE AT 12 O'CLOCK POSITION BY UNKNOWN PERSONS.



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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)

WGS 84

S/N	Northing	LATITUDE	Easting	LONGITUDE
SP		4.89462		7.17698
549		4.89443		7.17698
550		4.89412		7.17657
551		4.89413		7.17655
552		4.89411		7.17649
553		4.89407		7.17649
554		4.89406		7.17652
555		4.89397		7.17647
556		4.89386		7.17641
557		4.89371		7.17631
558		4.89367		7.17635
559		4.89376		7.17646
560		4.89372		<del>7.17649</del> 7.17649
561		4.89387		7.17662
562		4.89409		7.17677
563		4.89437		7.17688
564		4.89434		7.17694
565		4.89442		7.17699
566		4.89440		7.17699
567		4.89457		7.17708
568		4.89464		7.17699
569		4.89460		7.17689

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.220 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 $V_{rec}$ :	373	Barrels
---------------------------	-----	---------

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

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

628.87 BBLs

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

629 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:

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 6 (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
- 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]:
- 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 I: Overview sketch of the site

