

JOINT INVESTIGATION REPORT

INCIDENT NO: 1997178 JIV report S/N: 0979

(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: 1997178 2. Type of incident* OIL SPILL
3. Name of Location 6" OBIGBO NORTH - OGALE (D/L) PIPELINE
4. Name of nearest community OGALE 5. State: RIVERS 6. LGA ELEME
7. Type of Production facility/Installation OIL PIPELINE
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY NIGERIA LIMITED

B. INCIDENT INFORMATION:

9. Details of incident
a. Date of incident: 5TH JANUARY, 2018
b. Start date/time of investigation: 10TH JANUARY, 2018
c. Investigation End date: 11TH JANUARY, 2018 Actual investigation duration, days: TWO DAYS
d. Description of spill point environment
☐ Firm soil ☐ Loose soil ☒ Recently excavated area
☐ Under water ☐ Swampy ☐ Exposed pipe surface
☐ Well Platform (on Water) ☐ Drill Rig

Additional observations around the spill point:

NOT APPLICABLE

- e. Description of leak point (tick as applicable):
☒ Drilled hole ☐ Hack saw cut ☐ Tear (_____)
☐ Complete Rupture ☐ Inward dent, ☐ Well head tampering
☐ Failed Weld-on illegal hot tap valve ☐ Failed Clamp, ☐ Missing Pipeline/Flowline
☐ Crude oil theft (illegal bunkering) point, ☐ Saver-pit over flow ☐ Third party tampering with Clamp
☐ Third party tampering with valve setting ☐ Bulging Outward ☐ Third party tampering with flange,
☐ Flare System/Bund wall failure ☐ Cold vent ☐ Surge vessel overflow,
☐ Valve Failure ☐ Relief valve failure ☐ Accidental 3rd party equipment impact
☐ Corrosion ☐ Others(specify) _____
- f. Incident caused by:
☒ Third party interference (Sabotage ☒; crude theft ☐; Line theft ☐; Accidental 3rd party damage ☐
☐ Operational ☐ Mystery spills ☐ Others(specify) _____

*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire,

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g. Spill point coordinates

h. Measuring unit

WGS 84

Northings:	Easting:
4.82008	7.15419

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
- ☐ Drinking water source
- ☐ Built up area
- ☐ Farmlands
- ☐ Fish Farm/pond
- ☐ Fishing net
- ☐ Others (specify).

[,m] } NONE SEEN
[,m] } WITHIN
[,m] } VICINITY
[,m] }
[,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 WORK AND REPAIR WORK BY CLAMPING
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
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

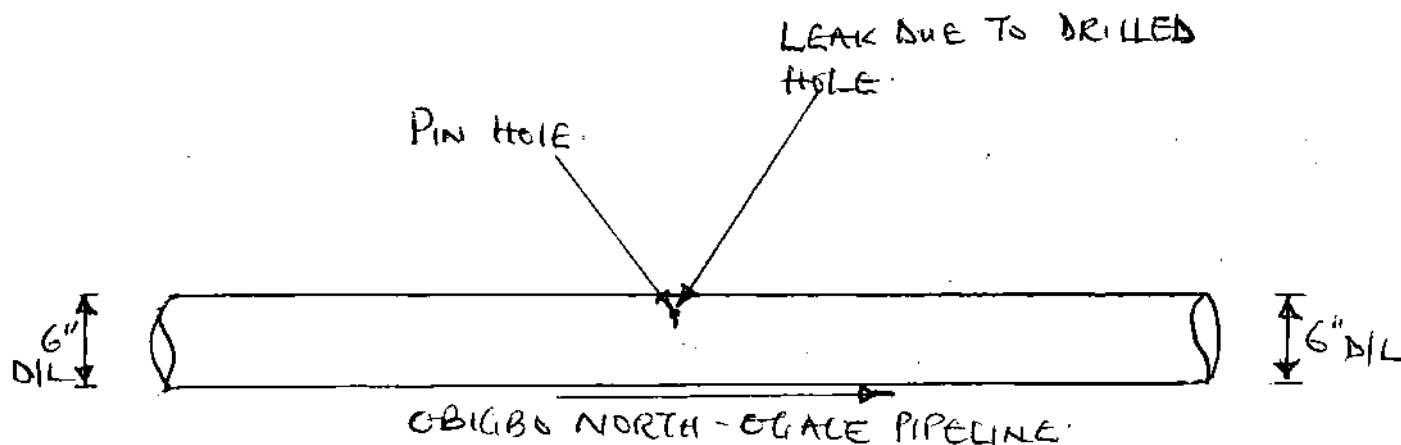
[illegible]

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 I)*

SECTIONAL VIEW OF 6" OBGBO NORTH - OGALE (DELIVERY LINE) PIPELINE
AT OGALE SHOWING 1" CRUDE OIL LEAK DUE TO DRILLED HOLE.



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

20. Impacted area boundary Coordinates (If more than one, attach as an appendix)

[illegible]

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.03 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} :	<u>15</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 $V_{Est}(bbls)^* =$

17.50 BARRELS

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

18 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 6e (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 1: Overview sketch of the site

