

JOINT INVESTIGATION REPORT

INCIDENT NO: 2367018 JIV report S/N: 1030021

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

A. GENERAL INFORMATION:

- 1. Fountain Incident Number: 2367018 2. Type of incident* OIL SPILL
- 3. Name of Location 8" OBIGBO NORTH - NEW ELELENWA PIPELINE
- 4. Name of nearest community UMUSONYA 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 Reported: 5TH JUNE 2019
 - b. Start date/time of investigation: 8TH JUNE 2019/15:10
 - c. Investigation End date: 9TH JUNE 2019 Actual investigation duration, days: TWO (2) 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: THE SPILL POINT WAS NOTICED TO BE THE SAME LOCATION AS A PREVIOUSLY REPORTED NON-LEAKING INCIDENT POINT (INCIDENT NO. 2286262).

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

- f. Incident caused by:
 - Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3rd 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

WAS 84

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.85114</u>	<u>7.12039</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 | [| ,m] | |
| <input type="checkbox"/> Drinking water source | [| ,m] | |
| <input type="checkbox"/> Built up area | [| ,m] | |
| <input checked="" type="checkbox"/> Farmlands | [| ,m] | IMPACTED BY SPILL |
| <input type="checkbox"/> Fish Farm/Pond | [| ,m] | |
| <input type="checkbox"/> Fishing net | [| ,m] | |
| <input type="checkbox"/> Others (specify) | [| ,m] | |

12. Containment measures put in place;

- Booms
 Trench
 Dyke
 Natural depression
 Pit
 None
- Others: _____

13. Any pictures or video coverage?

[X] [N]

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

[X] [N]

If yes to item 14, give brief description:

RECOVERY OF FREE-PHASE OIL WAS DONE

AND REPAIR WAS EFFECTED ON THE AFFECTED PIPELINE SECTION BY CLAMPING.

15. Was there any disruption to the investigation?

[X] [N]

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If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed?

[X] [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
1	CASSAVA	<input checked="" type="checkbox"/>			WITHIN	WITHIN
2	COCUYAM	<input checked="" type="checkbox"/>			AN AREA	SPILL-
3	VEGETABLE	<input checked="" type="checkbox"/>			APPROXIMATE	IMPACTED
4	PEPPER		<input checked="" type="checkbox"/>		OF 34M ²	FARMLAND

19. Fish/Nets/Ponds

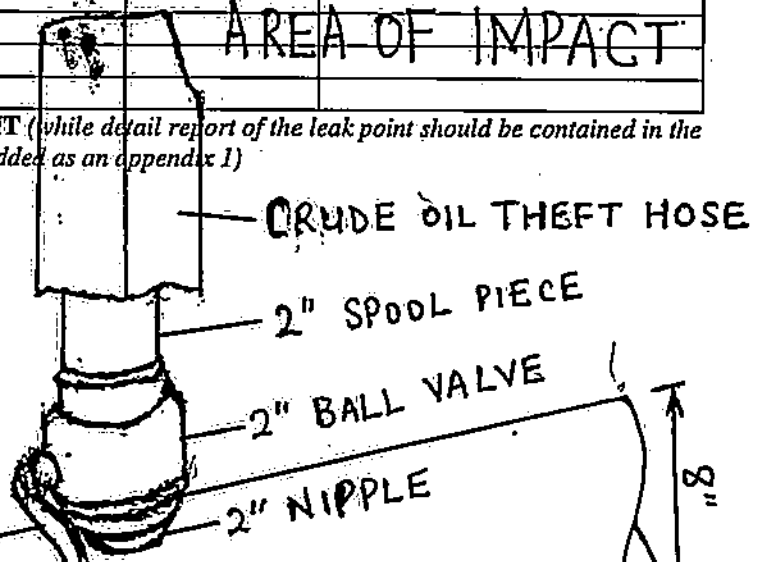
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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)

SECTION OF
8" OBIGBO NORTH -
NEW ELELENWA
PIPELINE AT
UMUSONYA SHOWING
ONE (1) NO. 2" CRUDE
OIL THEFT POINT



INSTALLED AT
12 O' CLOCK POSITION
BY UNKNOWN PERSON(S)

VALVE HANDLE

FROM OBIGBO NORTH FLOW STATION
TO NEW ELELENWA
MANIFOLD

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

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

WAS 84

S/N	Northing. LATITUDE	Easting. LONGITUDE
1.	4.85122	7.12042
2.	4.85108	7.12044
3.	4.85106	7.12031
4.	4.85112	7.12026
5.	4.85108	7.12012
6.	4.85110	7.12011
7.	4.85114	7.12032
8.	4.85118	7.12032
9.	4.85119	7.12036
10.	4.85117	7.12035

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.02 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>3</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 $V_{Est}(bbls)^*$ = <u>5.97</u>
Estimated Reported Volume** $V_{rep}(bbls)$ = <u>6 BARRELS</u>

*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:

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 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 <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]:
- Shell Petroleum Development Company [SPDC]:
- *Separate DPR form has been filled out with same findings*

Tick as applicable

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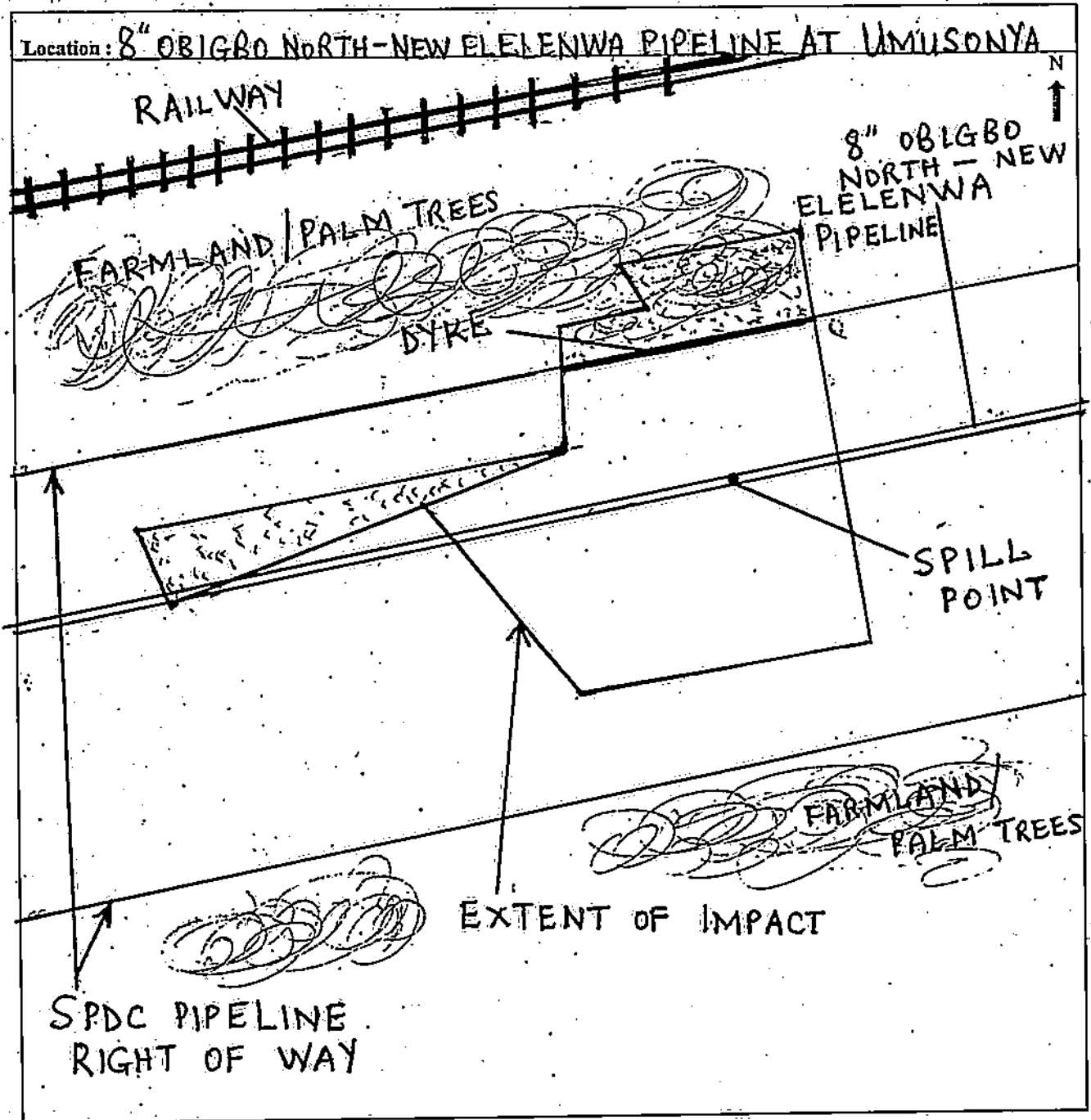
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f. Appendix 1: Overview sketch of the site

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