

JOINT INVESTIGATION REPORT

INCIDENT NO: 1728850 JIV report S/N: Nº 0000198

(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: 1728850 2. Type of incident* OIL SPILL
3. Name of Location AGBADA I WELL 13 AND 18 WELLHEADS
4. Name of nearest community OMUNIKE 5. State: RIVERS 6. LGA IKWERE
7. Type of Production facility/Installation ^{Spill:} ~~OIL PIPELINE~~ WELLHEAD
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD
SPDC/LAND I

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 8TH OCTOBER 2016
b. Start date/time of investigation: 13TH OCTOBER 2016 /1200HRS
c. Investigation End date: 13 OCTOBER 2016 Actual investigation duration, days: ONE (1) DAY
d. Description of spill point environment

- Firm soil Loose soil Recently excavated area
 Under water Swampy Exposed pipe surface
 Well Platform (on ~~Water~~ LAND) DrillRig

Additional observations around the spill point: THE JOINT INVESTIGATION TEAM OBSERVED: (1) VANDALIZED WELLHEADS (AGBADA I WELL 13 AND 18)

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
 Others(specify) _____

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) Situation d) construction e) Encroachment f) Fire.

JOINT INVESTIGATION REPORT

INCIDENT NO: 1728850 JIV report S/N: **Nº 0000198**

g. Spill point coordinates

h. Measuring unit

~~WGS 84~~ **WGS 84** ~~WGS 84~~

SPILL POINT 1
SPILL POINT 2

Northing: LONGITUDE	Easting: LATITUDE
6.98258	4.94002
6.98267	4.93994

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] | } | NONE SEEN
WITHIN VICINITY |
| <input type="checkbox"/> Drinking water source | [| .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). | [| .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:

STOPPED THE LEAK

15. Was there any disruption to the investigation?

[Y] **[X]**

JOINT INVESTIGATION REPORT

INCIDENT NO: 1728850 JIV report S/N: Nº 0000198

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

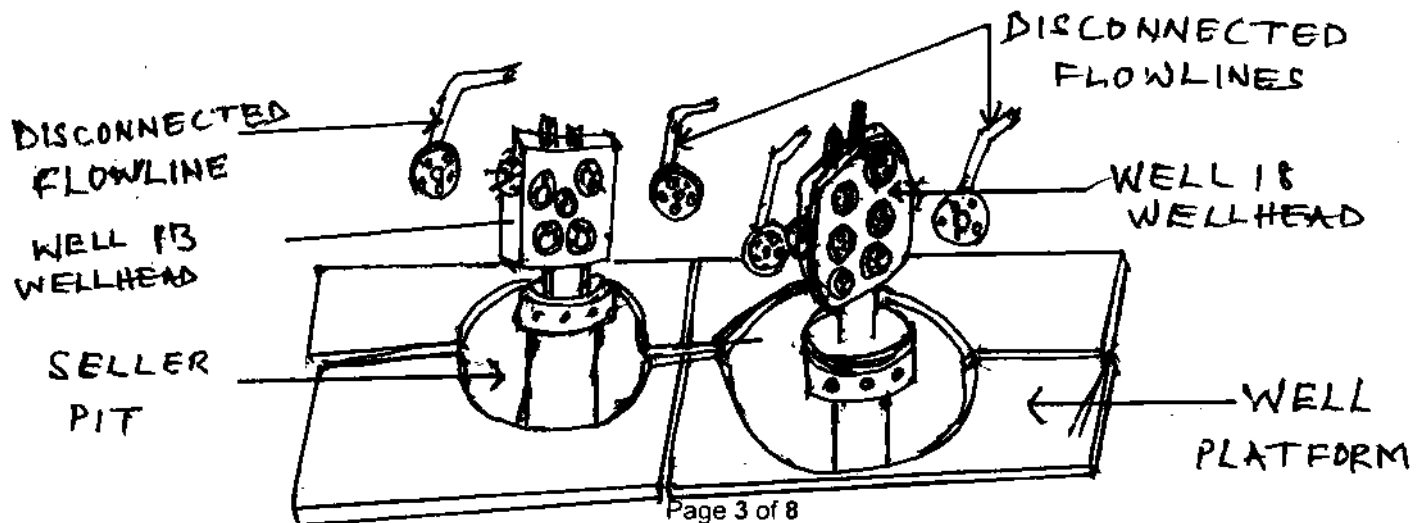
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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 AGRADA I WELL 13 AND 18 WELLHEADS AT OMUNKE SHOWING VANDALIZED WELLHEADS BY UNKNOWN PERSONS.



JOINT INVESTIGATION REPORT

INCIDENT NO: 172 88 50 JIV report S/N: Nº 0000198

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
1.		4.94011		6.98238
2.		4.94022		6.98244
3.		4.94006		6.98274
4.		4.94004		6.98261
5.		4.94001		6.98250
6.		4.93999		6.98251
7.		4.93998		6.98255

JOINT INVESTIGATION REPORT

INCIDENT NO: 1728850 JIV report S/N: **Nº** 0000198

G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.06 Ha
- Impact within R.O.W YES
- Impact outside R.O.W NO

b. Volume of oil recovered before completion of JIV (V_{rec}):

Recovered oil V_{rec} :	<u>NIL</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)* =

13.40 BARRELS

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

14 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:

SPILL WAS SIGNIFICANTLY CONTAINED WITHIN THE
CONCRETE SURFACE OF THE WELLHEAD BASE,
THEREBY LIMITING THE INFILTRATION IN SOIL.

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

JOINT INVESTIGATION REPORT

INCIDENT NO: 1728850 JIV report S/N: **Nº 0000198**

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

<p>This report was filled, agreed and signed by the following joint investigation team representatives:</p> <ul style="list-style-type: none">• Host Community: <input checked="" type="checkbox"/>• Department of Petroleum Resources [DPR]: <input checked="" type="checkbox"/>• National Oil Spill Detection and Response Agency [NOSDRA]: <input checked="" type="checkbox"/>• State Ministry of Environment [SME]: <input checked="" type="checkbox"/>• Asset Owner: <input checked="" type="checkbox"/>• Signatories agree with reported findings: <input checked="" type="checkbox"/>• Separate DPR form has been filled out with same findings: <input checked="" type="checkbox"/> <p style="text-align: right;"><i>Tick as applicable</i></p>
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f. Appendix 1: Overview sketch of the site

Location: AGBADA I WELL 13 AND 18 WELLHEADS AT OMUNIKE

