

JOINT INVESTIGATION REPORT

INCIDENT NO: 1475866 JIV report S/N: Nº 0000054

(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: 1475866 2. Type of incident* OIL SPILL
3. Name of Location 8" AFAM WELL 25 FLOWLINE
4. Name of nearest community EGBERU 5. State: RIVERS 6. LGA OBIGBO
7. Type of Production facility/Installation OIL FLOWLINE
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA (SPDC)

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 31ST AUGUST 2015
b. Start date/time of investigation: 2ND SEPTEMBER 2015
c. Investigation End date: 4TH SEPTEMBER 2015 Actual investigation duration, days: TWO (2) 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: ON EXCAVATION, DRILL BITS WERE FOUND.

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 rd party equipment impact |
| <input type="checkbox"/> 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: 1475866 JIV report S/N: Nº 0000054

g. Spill point coordinates

h. Measuring unit

WGS 84

Northings- (LATITUDE)	Eastings- (LONGITUDE)
4.82631	7.29093

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 [.m]
- Drinking water source NONE SEEN AROUND [.m]
- Built up area THE AREA OF IMPACT, [.m]
- Farmlands [.m]
- Fish Farm/Pond AS AT THE TIME OF [.m]
- Fishing net JOINT INVESTIGATION VISIT [.m]
- Others (specify): _____

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:

SOURCE OF SPILL STOPPED AND REPAIR PLANNED.

15. Was there any disruption to the investigation?

JOINT INVESTIGATION REPORT

INCIDENT NO: 1475866 JIV report S/N: Nº 0000054

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
<u>NONE WITHIN THE AREA OF IMPACT</u>					

17. Crops/Economic Trees

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

18. Fishing Nets/Fish Ponds

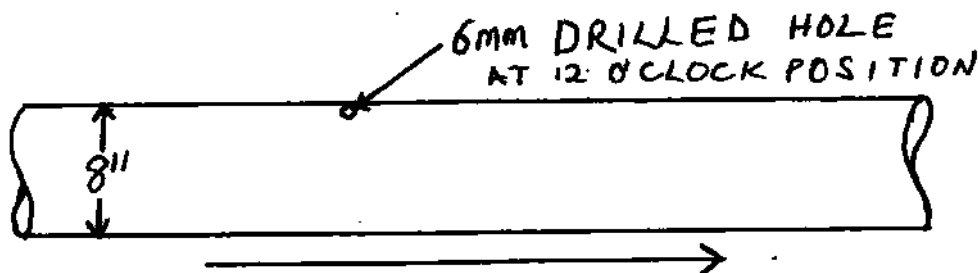
S/N	Nets/Ponds	Description	Quantity/Size	Comments
<u>NONE WITHIN THE AREA OF IMPACT</u>				

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

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

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 8" AFAM WELL 25 FLOWLINE AT EGBERU SHOWING A 6MM DRILLED HOLE AT 12 O'CLOCK POSITION, DONE BY UNKNOWN PERSONS.



AFAM WELL 25 TO FLOW STATION

APPENDIX A		
IMPACTED AREA COORDINATES		
INCIDENT NUMBER:1475866		
8"AFAM WELL 25 FLOWLINE AT EGBERU		
POINT	LATITUDE	LONGITUDE
2	4.82622	7.29076
3	4.82609	7.29094
4	4.82609	7.29097
5	4.82616	7.29102
6	4.82622	7.29151
7	4.82631	7.29167
8	4.8263	7.29189
9	4.82632	7.29192
10	4.82634	7.29206
11	4.82638	7.29222
12	4.82639	7.2924
13	4.82634	7.29285
14	4.82636	7.29286
15	4.82635	7.29291
16	4.82637	7.29292
17	4.82641	7.2927
18	4.82641	7.29243
19	4.82642	7.29231
20	4.8264	7.2921
21	4.82643	7.29197
22	4.82647	7.29194
23	4.82663	7.29203
24	4.82665	7.2919
25	4.82666	7.29174
26	4.82669	7.29161
27	4.82667	7.2914
28	4.82666	7.29123
29	4.82665	7.29115
30	4.82691	7.29118
31	4.82711	7.29128
32	4.82713	7.29127
33	4.827	7.29119
34	4.82657	7.29101
35	4.82648	7.29092
36	4.8264	7.29155
37	4.82644	7.29157
38	4.82652	7.29157
39	4.82651	7.29132

JOINT INVESTIGATION REPORT

INCIDENT NO: 1475866 JIV report S/N: N^o 0000054

G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.66Ha
- 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} :	1.5	Barrels
---------------------------	-----	---------

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

NIL	Barrels
-----	---------

c. Net Estimated Spilled Volume V_{est} (bbbls)* =

11.27 BARRELS

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

12 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:

THE IMPACTED AREA IS MORE OF LIGHT IMPACT.

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 m³ to barrels is Volume (m³) 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.

JOINT INVESTIGATION REPORT

INCIDENT NO: 1475866 JIV report S/N: N^o 0000054

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

JOINT INVESTIGATION REPORT

INCIDENT NO: 1475866 JIV report S/N:

Nº 0000054

f. Appendix 1: Overview sketch of the site

