

JOINT INVESTIGATION REPORT

INCIDENT NO: 1448402 JIV report S/N: N° 000032

(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: 1448402 2. Type of incident* OIL SPILL
3. Name of Location ADIBAWA WELL 16 T WELLHEAD
4. Name of nearest community EDAGBERI 5. State: RIVERS 6. LGA AHOADA WEST
7. Type of Production facility/Installation WELL HEAD
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA
LAND II

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 23RD JULY 2015
b. Start date/time of investigation: 29TH JULY 2015/9:30HRS
c. Investigation End date: 29TH JULY 2015 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) Drill Rig

Additional observations around the spill point: THE JOINT INVESTIGATION TEAM OBSERVED THAT THE LEAK HAS STOPPED BEFORE JIV TEAM ARRIVED.

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

- | | | |
|---|---|--|
| <input 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 |
- Others (specify) THIRD PARTY TAMPERING WITH COM-UNIT

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,

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g. Spill point coordinates

h. Measuring unit

WGS 84

Northing: (LATITUDE)	Easting: (EASTING)(LONGITUDE)
5.48288	6.20264

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 OBSERVED [.m]
- Built up area WITHIN THE AREA OF [.m]
- Farmlands [.m]
- Fish Farm/Pond IMPACT AS AT THE [.m]
- Fishing net TIME OF JOINT INVESTIGATION [.m]
- Others (specify): VISIT

12. Containment measures put in place:

- Booms
 Trench
 Dyke
 Natural depression
 Pit
 None
- Others: BORROW PITS

13. Any pictures or video coverage?

NY [N]

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

[Y] NY

If yes to item 14, give brief description:

NOT APPLICABLE

15. Was there any disruption to the investigation?

[Y] NY

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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
1	PALM TREES	1	1	3	5	IMPACTED
 						

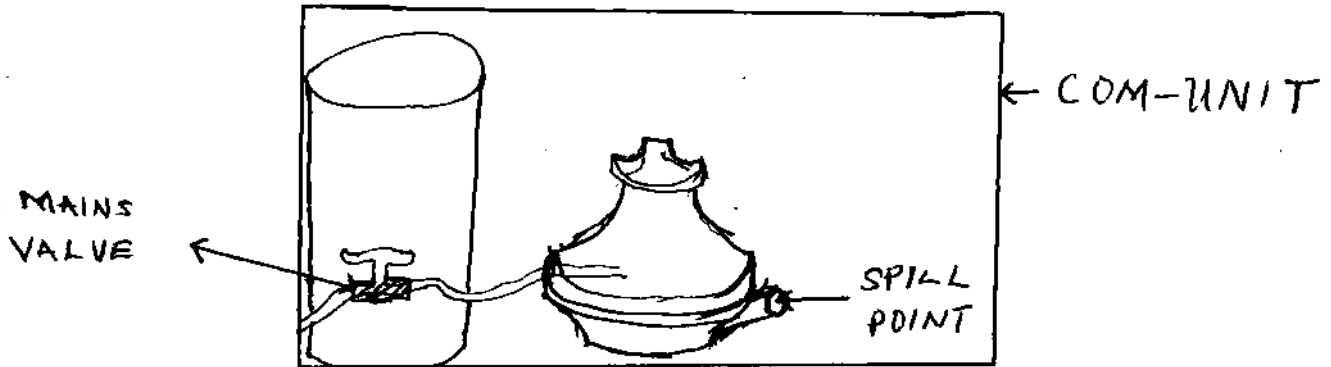
18. Fishing Nets/Fish Ponds

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 WELL 16 COM-UNIT SHOWING SPILL POINT AND THE VALVE (MAINS VALVE) TAMPERED FOR SPILL TO OCCUR 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)

S/N	Northing	Easting

S¹²
 ATTACHED FOR
 COORDINATE LISTINGS
 28-07-2015

ADIBAWA WELL 16T WELLHEAD SPILL @ EDAGBERI

INC.NO: 2015 1448402		INC.DATE: 23/07/2015	INV.DATE:29/07/2015
OBJECT	EASTING	NORTHING	REMARKS
SP	6.48288	5.20264	SPILL POINT
2	6.48319	5.20278	IMPACT BOUNDARY
3	6.48319	5.20279	IMPACT BOUNDARY
4	6.48321	5.20280	IMPACT BOUNDARY
5	6.48322	5.20279	IMPACT BOUNDARY
6	6.48323	5.20279	IMPACT BOUNDARY
7	6.48323	5.20277	IMPACT BOUNDARY
8	6.48322	5.20276	IMPACT BOUNDARY
9	6.48320	5.20276	IMPACT BOUNDARY
10	6.48319	5.20277	IMPACT BOUNDARY
11	6.48341	5.20297	IMPACT BOUNDARY
12	6.48342	5.20288	IMPACT BOUNDARY
13	6.48343	5.20279	IMPACT BOUNDARY
14	6.48343	5.20273	IMPACT BOUNDARY
15	6.48340	5.20267	IMPACT BOUNDARY
16	6.48343	5.20254	IMPACT BOUNDARY
17	6.48340	5.20253	IMPACT BOUNDARY
19	6.48330	5.20270	IMPACT BOUNDARY
20	6.48333	5.20273	IMPACT BOUNDARY
21	6.48337	5.20274	IMPACT BOUNDARY
22	6.48334	5.20277	IMPACT BOUNDARY
23	6.48329	5.20277	IMPACT BOUNDARY
24	6.48326	5.20280	IMPACT BOUNDARY
25	6.48314	5.20287	IMPACT BOUNDARY
26	6.48315	5.20281	IMPACT BOUNDARY
27	6.48314	5.20277	IMPACT BOUNDARY
28	6.48309	5.20273	IMPACT BOUNDARY
29	6.48301	5.20263	IMPACT BOUNDARY
30	6.48287	5.20260	IMPACT BOUNDARY
31	6.48280	5.20262	IMPACT BOUNDARY
32	6.48284	5.20272	IMPACT BOUNDARY
33	6.48278	5.20274	IMPACT BOUNDARY
34	6.48275	5.20280	IMPACT BOUNDARY
35	6.48263	5.20290	IMPACT BOUNDARY
36	6.48265	5.20300	IMPACT BOUNDARY
37	6.48282	5.20285	IMPACT BOUNDARY
38	6.48290	5.20290	IMPACT BOUNDARY
39	6.48289	5.20296	IMPACT BOUNDARY
40	6.48282	5.20304	IMPACT BOUNDARY
41	6.48281	5.20316	IMPACT BOUNDARY
42	6.48288	5.20325	IMPACT BOUNDARY

OBJECT	Easting	Northing	REMARKS
43	6.48293	5.20326	IMPACT BOUNDARY
44	6.48299	5.20319	IMPACT BOUNDARY
45	6.48307	5.20312	IMPACT BOUNDARY
46	6.48320	5.20311	IMPACT BOUNDARY
47	6.48335	5.20308	IMPACT BOUNDARY
48	6.48291	5.20288	IMPACT BOUNDARY
49	6.48283	5.20284	IMPACT BOUNDARY
50	6.48281	5.20282	IMPACT BOUNDARY
51	6.48282	5.20277	IMPACT BOUNDARY
52	6.48297	5.20275	IMPACT BOUNDARY
53	6.48301	5.20279	IMPACT BOUNDARY
54	6.48306	5.20278	IMPACT BOUNDARY
55	6.48311	5.20282	IMPACT BOUNDARY
56	6.48310	5.20287	IMPACT BOUNDARY
57	6.48307	5.20295	IMPACT BOUNDARY
58	6.48295	5.20291	IMPACT BOUNDARY
59	6.48316	5.20269	IMPACT BOUNDARY
60	6.48314	5.20264	IMPACT BOUNDARY
61	6.48315	5.20268	IMPACT BOUNDARY
62	6.48316	5.20270	IMPACT BOUNDARY

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.3023Ha
- Impact within R.O.W YES
- Impact outside R.O.W YES

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

Recovered oil $V_{rec.f}$:	<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 $V_{Est}(bbls)^* =$

232.22 BBLs

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

233 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 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*

Whenever 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 on 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)
- 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

