

JOINT INVESTIGATION REPORT

INCIDENT NO: 1440709 JIV report S/N: N^o 0000040

(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: 1440709 2. Type of incident* OIL SPILL
3. Name of Location ADIBAWA WELL 8 S/L WELL HEAD
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 L.T.D.

LAND 2

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 12TH JULY 2015.
b. Start date/time of investigation: 13TH JULY 2015 / 930HRS
c. Investigation End date: 19TH FEBRUARY 2016 Actual investigation duration, days: SEVEN (7) DAYS
d. Description of spill point environment

- | | | |
|---|-------------------------------------|--|
| <input checked="" type="checkbox"/> Firm soil | <input type="checkbox"/> Loose soil | <input 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: THE TEAM OBSERVED ① TAMPERED FLANGES. ② SLACKED AND REMOVED BOLTS AND NUTS ③ A HACK SAW CUT ④ THAT THE SPILL SITE WAS BURNT.

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 checked="" 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) Siltation d) construction e) Encroachment f) Fire.

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g. Spill point coordinates

h. Measuring unit

WGS-84

Northing: (LATITUDE)	Easting: (LONGITUDE)
5.19776	6.51341
/	/

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]
 [, m]
 [, m]
 [50 , m]
 [, m]
 [, m]

}

NONE WITHIN
 AREA OF
 IMPACT

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:

LEAK REPAIRED

15. Was there any disruption to the investigation?

[N]

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If yes to item 15 give brief description:

COMMUNITY ISSUES

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	MANY	MANY	MANY	MANY	IMPACTED
2	/					/

18. Fishing Nets/Fish Ponds

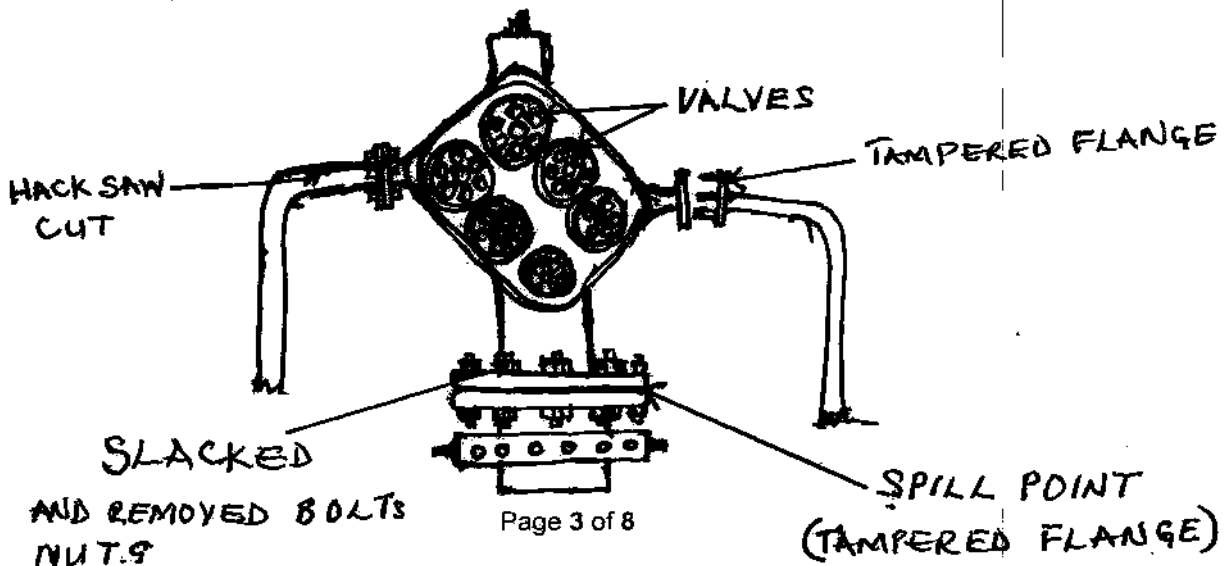
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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 ADIBAWA WELL & WELL HEAD AT EDAGBERI SHOWING TAMPERED FLANGES AND A HACKSAW CUT DONE BY UNKNOWN PERSONS.



ADIBAWA WELL 8 WELLHEAD AT EDAGBERI
INCIDENT NUMBER 1440709

Point	Latitude	Longitude	Remark
	5.19776	6.51341	SPILL POINT
1	5.19799	6.5127	
2	5.19803	6.51291	
3	5.19794	6.51301	
4	5.19803	6.51329	
5	5.19816	6.51333	
6	5.19823	6.51358	
7	5.1979	6.51375	
8	5.19778	6.51368	
9	5.19755	6.51411	
10	5.19734	6.51411	
11	5.19719	6.51384	
12	5.19695	6.51352	
13	5.19674	6.51338	
14	5.19617	6.5131	
15	5.19561	6.51274	
16	5.19512	6.51251	
17	5.19446	6.51246	
18	5.19402	6.51246	
19	5.19388	6.51243	
20	5.1939	6.51231	
21	5.19398	6.51209	
22	5.19395	6.51195	
23	5.19376	6.51188	
24	5.19358	6.51167	
25	5.19355	6.51147	
26	5.19339	6.51128	
27	5.19326	6.51128	
28	5.19321	6.51149	
29	5.19299	6.51133	
30	5.19286	6.51124	
31	5.19276	6.51129	
32	5.19232	6.51088	
33	5.19213	6.51073	
34	5.19237	6.51059	
35	5.19237	6.51059	
36	5.19262	6.51072	
37	5.19294	6.51093	
38	5.19303	6.5109	
39	5.19284	6.51073	
40	5.19263	6.51059	
41	5.19229	6.51038	
42	5.19235	6.51023	
43	5.19239	6.5102	
44	5.19261	6.51021	

M. Kundi 19/02/16

45	5.19287	6.51005
46	5.19295	6.51002
47	5.19314	6.5101
48	5.19327	6.5102
49	5.19341	6.51031
50	5.19345	6.51041
51	5.19358	6.51053
52	5.19384	6.51067
53	5.194	6.5107
54	5.19419	6.51094
55	5.19446	6.51111
56	5.19483	6.51131
57	5.19512	6.51137
58	5.1955	6.51154
59	5.19566	6.5117
60	5.19578	6.51185
61	5.19615	6.51207
62	5.19638	6.51226
63	5.1964	6.51241
64	5.19652	6.51234
65	5.1966	6.51254
66	5.19669	6.51258
67	5.19676	6.51255
68	5.19684	6.51259
69	5.19694	6.51275
70	5.19722	6.51263
71	5.19725	6.51248
72	5.19737	6.51249
73	5.1974	6.51282
74	5.19718	6.51287
75	5.19718	6.51316
76	5.19729	6.51309
77	5.19749	6.51312
78	5.19758	6.51304
79	5.19755	6.51294
80	5.19749	6.5129
81	5.19747	6.51273
82	5.19763	6.51272
83	5.19767	6.51282
84	5.19773	6.51289
85	5.19775	6.51297
86	5.19783	6.51298
87	5.19783	6.51289
88	5.19782	6.51272

Handwritten signature and date: *Handwritten signature* 19/02/16

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 7.73 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>3692</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)* =

3850.3 BBLs

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

3851 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 m^3 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.

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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

<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 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

