

JOINT INVESTIGATION REPORT

INCIDENT NO: 2097259 JIV report S/N 1084

(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: 2097259 2. Type of incident* OIL SPILL
3. Name of Location UBIE WELL 5 L/S WELL HEAD
4. Name of nearest community IDU-EKPEYE 5. State: RIVERS 6. LGA MBADA WEST
7. Type of Production facility/Installation WELL HEAD
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA

B. INCIDENT INFORMATION: LIMITED/CENTRAL HUB.

9. Details of incident

- a. Date of incident: 08TH JUNE, 2018.
b. Start date/time of investigation: 12TH JUNE, 2018 AT 12:15 HRS
c. Investigation End date: 12TH JUNE, 2018 Actual investigation duration, days: ONE DAY
d. Description of spill point environment

- | | | |
|--|-------------------------------------|--|
| <input 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 checked="" type="checkbox"/> Well Platform (on Water) <u>LAND</u> | <input type="checkbox"/> Drill Rig | |

Additional observations around the spill point: THE JOINT INVESTIGATION TEAM OBSERVED THAT UBIE WELL 5 XMAS TREE HAD BEEN VANDALIZED.

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 checked="" 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"/> Corrosion | <input type="checkbox"/> Others(specify) _____ | |

f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line-theft ; Accidental 3rd party damage
 Operational Mystery spills Others(specify) _____

*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 NGS 84 D-D

Northing:	Easting:
5.11234	6.55109

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).

[] NONE OBSERVED
 [] WITHIN THE VICINITY
 [50] NONE OBSERVED
 [] WITHIN THE VICINITY

12. Containment measures put in place;

- Booms
 Trench
 Dyke
 Natural depression
 Pit
 None
 Others: CELLAR PIT.

13. Any pictures or video coverage?

[Y] [N]

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

[Y] [N]

if yes to item 14, give brief description:

EVACUATION OF CELLAR PIT PLANNED.

15. Was there any disruption to the investigation?

[Y] [N]

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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
NONE WITHIN AREA OF IMPACT.						

18. Fishing Nets/Fish Ponds

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

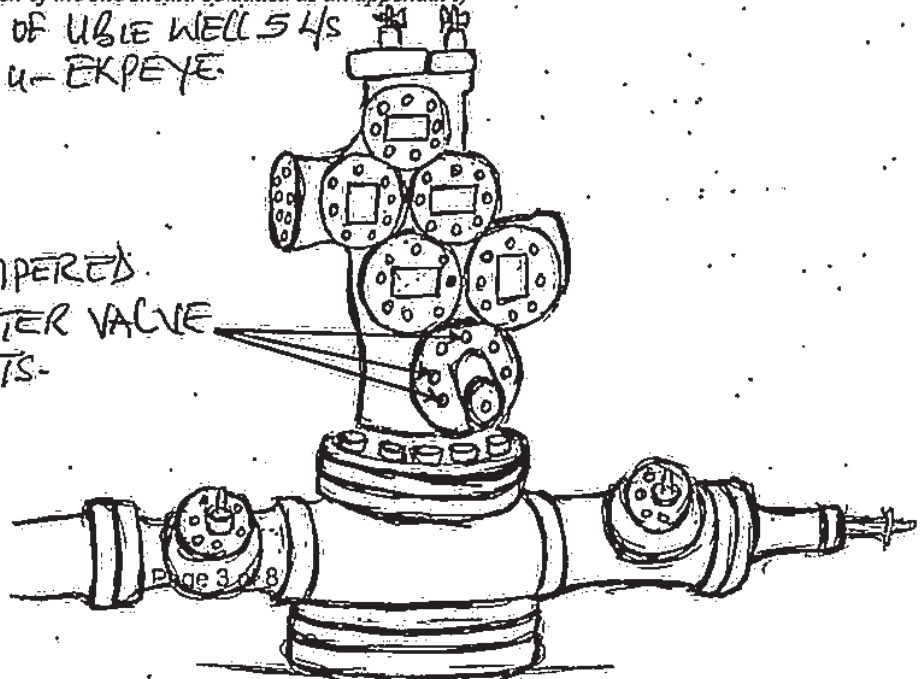
19. Others (Specify) i.e. Animal Traps

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 I)

SECTIONAL VIEW OF UBLE WELL 545
WELLHEAD AT IDU-EKPEYE

TAMPERS
MASTER VALVE
BOLTS-



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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
GP	6.55109 5.11234	6.55109
P1	5.11236	6.55111
P2	5.1123	6.55111
P3	5.1123	6.55105
P4	5.11236	6.55105

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.004417 HA
- Impact within R.O.W 0.004417 HA
- Impact outside R.O.W NIL

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)* =

0.26 BARRELS

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

0.3 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 $Volume(m^3) \times 6.29$. **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 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

This report was filled, agreed and signed by the following joint investigation team representatives:	
• 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 type="checkbox"/>	
	<i>Tick as applicable</i>

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f. Appendix 1: Overview sketch of the site

