

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2154925 JIV report S/N: 0088

(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: 2154925 2. Type of incident\*: OIL SPILL  
3. Name of Location 24" NKPOKU - BOMU PIPELINE  
4. Name of nearest community BERA 5. State: RIVERS 6. LGA GOKANA  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date of incident: 2<sup>ND</sup> SEPTEMBER 2018  
b. Start date/time of investigation: 05<sup>TH</sup> SEPTEMBER 2018/15:41 HRS.  
c. Investigation End date: 05<sup>TH</sup> SEPTEMBER 2018 Actual investigation duration, days: ONE (1) DAY  
d. Description of spill point environment

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Firm soil                           | <input checked="" 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) | <input type="checkbox"/> Drill Rig              |  |

Additional observations around the spill point: THE JOINT INVESTIGATION TEAM OBSERVED 10MM PARTLY DRILLED AND PARTLY PUNCHED HOLE AT 12 O'CLOCK POSITION BY UNKNOWN PERSONS). THE TEAM ALSO OBSERVED BURST SOIL WITHIN THE LEAK POINT AREA.

### 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 <sup>rd</sup> 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 3<sup>rd</sup> party damage   
 Operational  Mystery spills  Others(specify) \_\_\_\_\_

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g. Spill point coordinates

Measuring unit

Northing:	Easting:
4.67954	7.27680

## 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 CASSAVA
- Fish Farm/Pond
- Fishing net
- Others (specify).

[ NIL ,m]  
 [ NIL ,m]  
 [ NIL ,m]  
 [ 05 ,m]  
 [ NIL ,m]  
 [ NIL ,m]  
 NONE

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:

CRUDE OIL RECOVERY AND PIPELINE REPAIR BY CLAMPING ARE ONGOING.

15. Was there any disruption to the investigation?

[Y] []

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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						

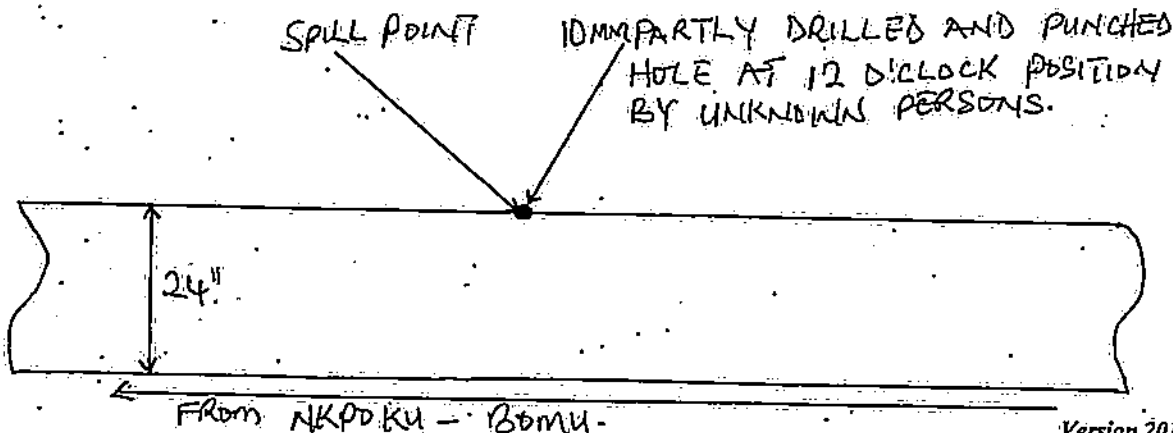
**18. Fishing Nets/Fish Ponds**

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 detailed 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 24" NKPOKU-BOMU PIPELINE AT BERA SHOWING A PARTLY DRILLED AND PARTLY PUNCHED HOLE AT 12 O'CLOCK POSITION 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
1	4.6796	7.276882
2	4.679528	7.27688
3	4.679448	7.27686
4	4.679449	7.276752
5	4.679449	7.27674
6	4.67951	7.27672
7	4.67957	7.27675
8	4.679602	7.27676
9	4.679639	7.276771
10	4.6796	7.276882

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.028661 Ha *As per*
- Impact within R.O.W 0.02509 Ha
- Impact outside R.O.W 0.003571 Ha

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

Recovered oil $V_{rec}$ :	NIL	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

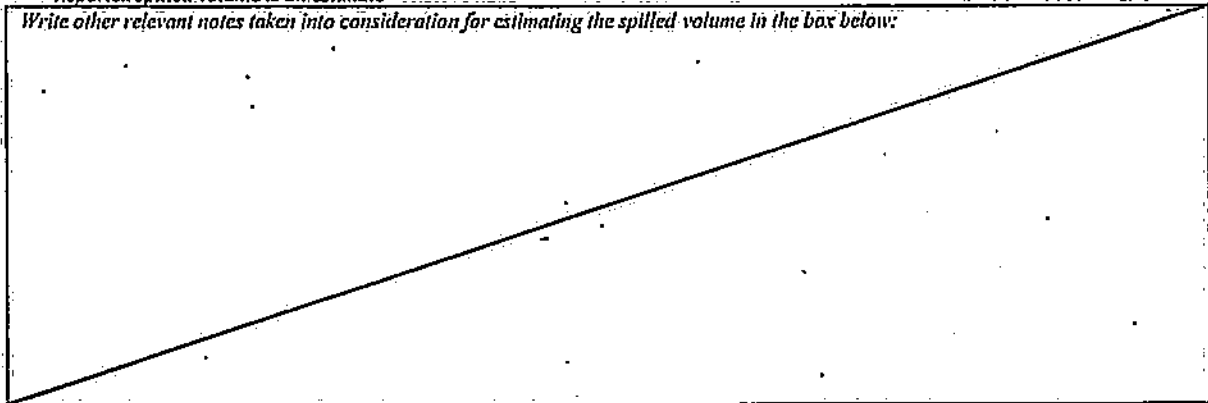
NIL	Barrels
-----	---------

<b>c. Net Estimated Spilled Volume <math>V_{ES}</math> (bbls) =</b>	<b>18.16 BARRELS</b>
<b>Estimated Reported Volume** <math>V_{rep}</math> (bbls) =</b>	<b>19 BARRELS</b>

**\*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 volume 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 ( $m^3$ ) 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 JIV 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:

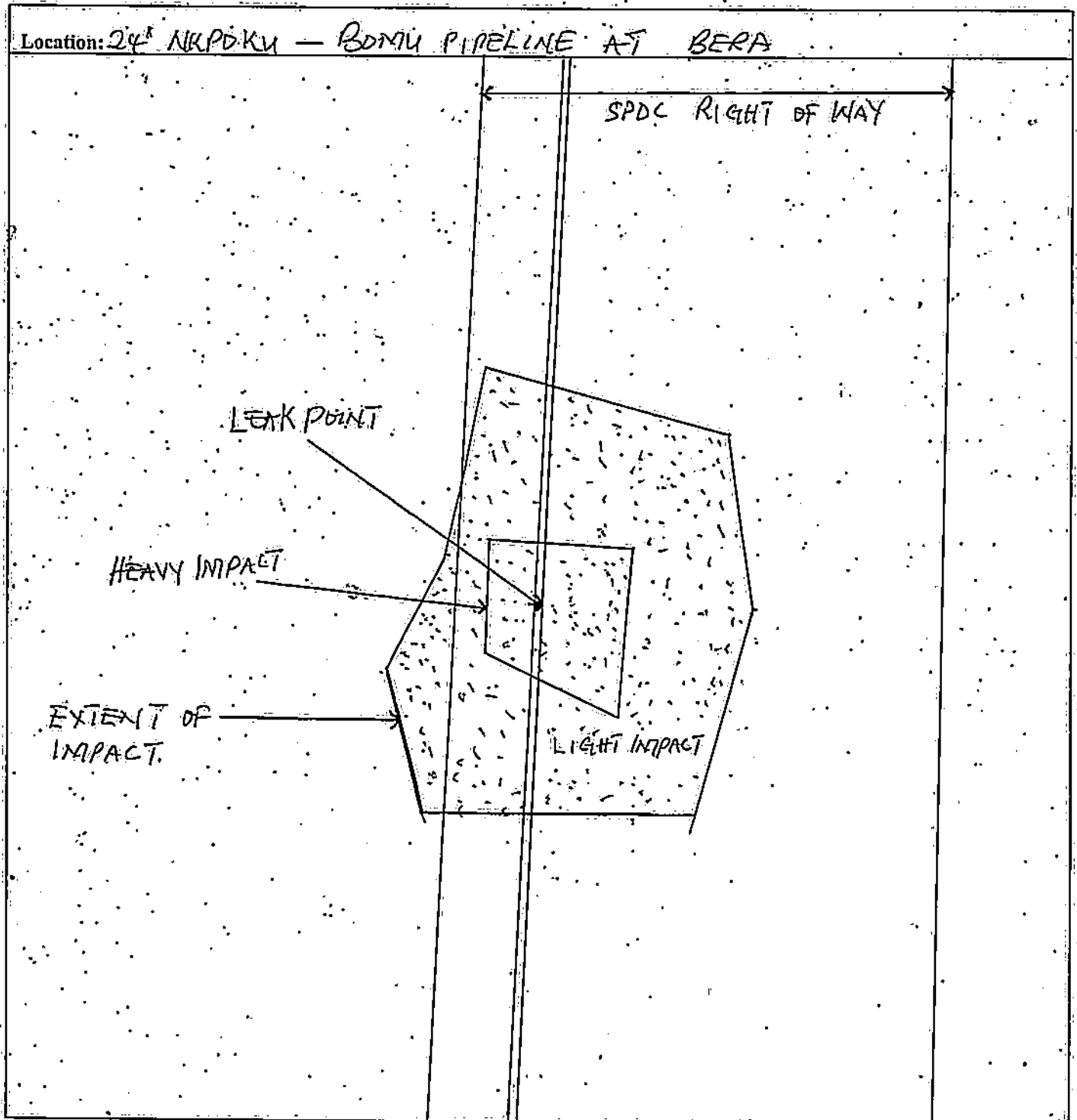
- Host Community:
- Department of Petroleum Resources (DPR):
- National Oil Spill Detection and Response Agency (NOSDRA):
- State Ministry of Environment (SME):
- Asset Owner:
- Signatories agree with reported findings:
- Separate DPR form has been filled out with same findings

Tick as applicable

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f. Appendix 1: Overview sketch of the site



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