

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2310600 JIV report S/N:0295

(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: 2310600 2. Type of incident\*: OIL SPILL  
3. Name of Location: 28" NIKPOKU - BONNU PIPELINE  
4. Name of nearest community: B-DERE 5. State: RIVERS 6. LGA: GOLETA  
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: 30<sup>TH</sup> MARCH 2019  
b. Start date/time of investigation: 19<sup>TH</sup> APRIL 2019 / 12:55 HRS  
c. Investigation End date: 19<sup>TH</sup> APRIL 2019 Actual investigation duration, days: ONE DAY  
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:

## c. 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 checked="" type="checkbox"/> Failed Weld-on illegal hot tap valve      | <input type="checkbox"/> Failed Clamp          | <input type="checkbox"/> Missing Pipeline/Flowline                         |
| <input checked="" 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) \_\_\_\_\_

\*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire. Version 2018/01  
Distribution of copies: White (Asset Owner); Pink (DPR); Green (NOSDRA); Yellow (State Ministry of Environment); Blue (Host Community).

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g. Spill point coordinates

Measuring unit

WGS 84

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.66809</u>	<u>7.27756</u>
/	/
/	/

## 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 [ ] ,m
- Built up area [ ] ,m
- Farmlands NONE SEEN [ ] ,m
- Fish Farm/Pond WITHIN VICINITY [ ] ,m
- Fishing net [ ] ,m
- Others (specify) [ ] ,m

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:

REPAIR WORK WAS DONE BY CLAMPING.

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**

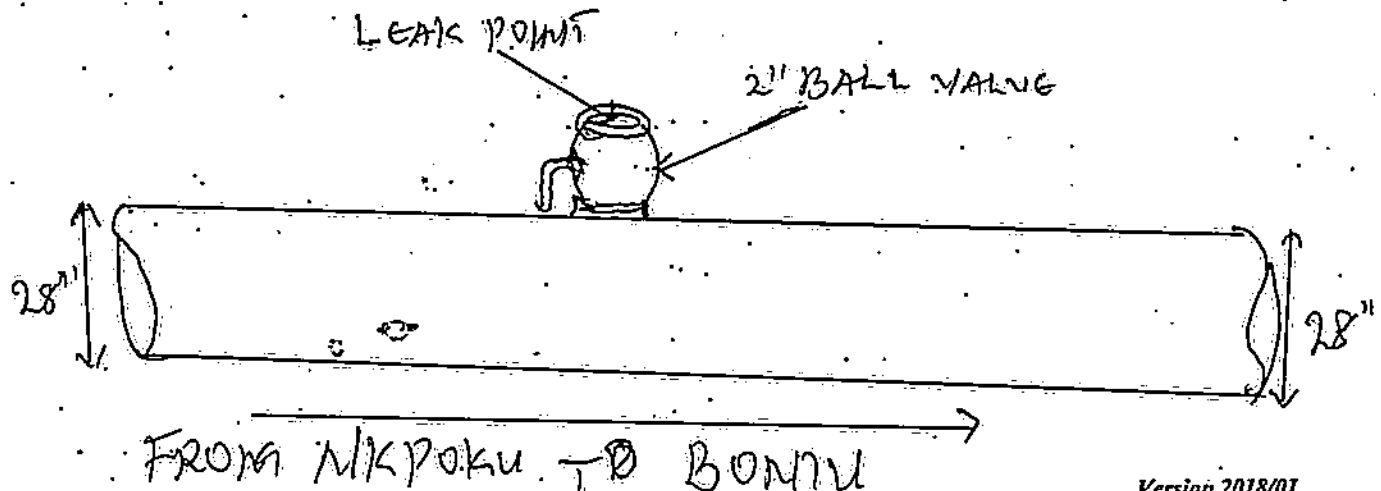
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

**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 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)

SECTION OF 28" MKPOKU - BONNI PIPELINE AT B-DERE SHOWING CRUDE OIL LEAK POINT AT 12 O'CLOCK POSITION.



FROM MKPOKU TO BONNI →

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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)

WGS 84

S/N	Northing	LATITUDE	Easting	LONGITUDE
		4.66811		7.2776
		4.66807		7.2776
		4.66807		7.27755
		4.66807		7.27752
		4.6681		7.27756

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.0025 Ha
- Impact within R.O.W YES
- Impact outside R.O.W ~~YES~~ NO

**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:

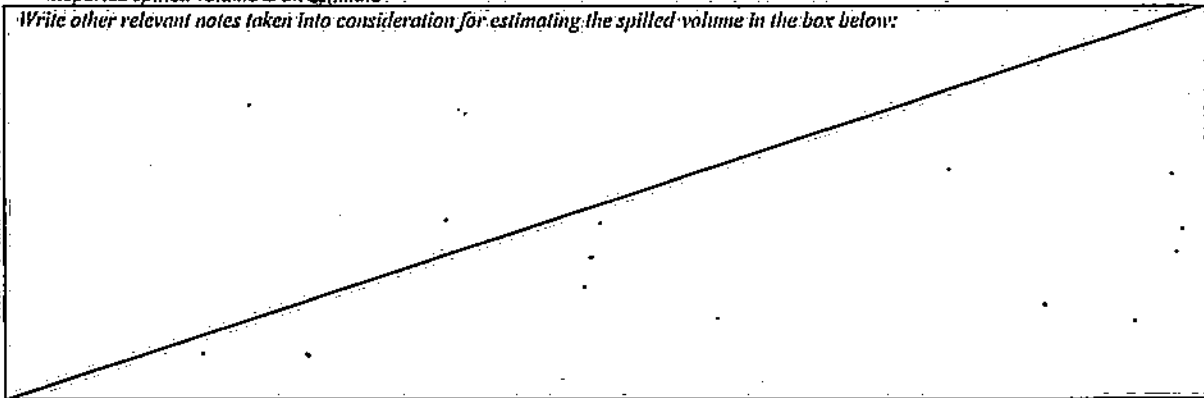
<u>NIL</u>	Barrels
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c.	<b>Net Estimated Spilled Volume <math>V_{Est}</math> (bbls)* =</b>
<u>0.72 BARREL</u>	
<b>Estimated Reported Volume** <math>V_{rep}</math> (bbls) =</b>	
<u>0.8 BARREL</u>	

**\*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 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

