

JOINT INVESTIGATION REPORT

INCIDENT NO: 1382546 00008 JIV report S/N:

(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: 1382546 2. Type of incident: OIL SPILL
3. Name of Location: 28" BOMU - BONNY TRANS NIGER PIPELINE
4. Name of nearest community: OTUKOLOMABIE 5. State: RIVERS 6. LGA: BONNY
7. Type of Production facility/Installation: OIL PIPELINE
8. Asset owner/District: SHELL PETROLEUM DEVELOPMENT COMPANY OF (NIG) LTD

B. INCIDENT INFORMATION:

9. Details of incident
a. Date of incident: 3RD APRIL, 2015
b. Start date/time of investigation: 9TH MAY, 2015
c. Investigation End date: 9TH MAY, 2015 Actual investigation duration, days: ONE DAY
d. Description of spill point environment
☐ Firm soil ☒ Loose soil ☒ Recently excavated area
☐ Under water ☒ Swampy ☐ Exposed pipe surface
☐ Well Platform (on Water) ☐ Drill Rig

Additional observations around the spill point: EVIDENCE OF HOSE CONNECTION TO THE THEFT POINT WAS SIGHTED BY THE INVESTIGATING TEAM

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 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 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

Northings:	Easting:
4.4516183	7.1787746
<i>[Signature]</i>	<i>[Signature]</i>

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] } NONE SEEN
 [,m] } WITHIN
 [,m] } VICINITY.
 [,m]
 [,m]

12. Containment measures put in place;

☐ Booms ☐ Trench ☒ Dyke ☐ Natural depression ☒ Pit ☐ None

☐ Others: _____

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:

TEMPORARY REPAIR WORK BY
SCREW CAPPING.

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
	<u>NONE WITHIN AREA OF IMPACT</u>				

17. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>					

18. Fishing Nets/Fish Ponds

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

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

S/N	Others	Description	Quantity/Size	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>			

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)

SECTIONAL VIEW OF 28" BOMU - BONNY TRANS NIGER PIPELINE AT

ATOKHOMABIC/OLOMA SHOWING ILLEGAL THEFT POINT.

OIL IMPACT FOUND
AROUND THE THEFT
POINT. DUE TO BUNKER
ACTIVITIES.

1.5" HOSE
CONNECTION

4" ILLEGAL BUNKERING
THEFT FITTING INSTALLED
AT 12° CLOCK POSITION.

28"
TNP

28"
TNP

Bomu - BONNY PIPELINE.

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20. Impacted area boundary Coordinates (if more, Print and attach as an appendix)

09/05/2015

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.05HA
- 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>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 $V_{Est}(bbls)^* =$

4.26 BARRELS

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

5 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) 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 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:	
<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 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

