

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2326071 JIV report S/N: 0296

(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: 2326071 2. Type of incident\* OIL SPILL  
3. Name of Location: 10" DISBU - NUN RIVER DELIVERY LINE (PIPELINE)  
4. Name of nearest community: ONYOMA/EKOWE, State: BAYELSA 6. LGA: SOUTHERN-LSAN  
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: 17TH APRIL 2019  
b. Start date/time of investigation: 27TH APRIL 2019/1400HRS  
c. Investigation End date: 27TH 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:

NOT APPLICABLE

### e. Description of leak point (tick as applicable);

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Drilled hole                              | <input checked="" 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/Buid 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**

WGS 84

Measuring unit	
Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.745078</u>	<u>6.101994</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
- Drinking water source
- Built up area
- Farmlands
- Fish Farm/Pond
- Fishing net
- Others (specify): \_\_\_\_\_

}

NONE OBSERVED  
WITHIN VICINITY

**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 BY CLAMPING ONGOING

**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>						

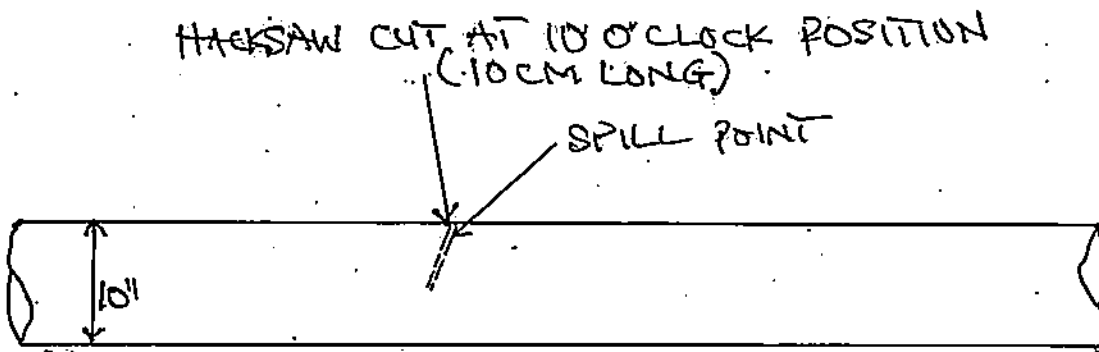
**18. Fishing Nets/Fish Ponds**

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 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 10" DIEBU - NUN RIVER DELIVERY LINE (PIPELINE) AT ONYOMAEKOLE SHOWING A HACKSAW CUT AT 10 O' CLOCK POSITION BY UNKNOWN PERSONS.



FROM DIEBU CREEK - NUN RIVER MANIFOLD

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JIV ID 2019\_2326071

Incident Date 17-04-19

JIV Date 27-04-19

Terrain : SEASONAL SWAMP

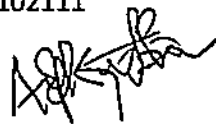
Vegetation:Light Bush

Cause:Third Party Interference ( Arc saw cut on the pipe at 10 O clock position.)

Area 10" DIOUBU CREEK D/L @ ONYOMA/EKOWE

S/N	WGS84 LAT	WGS84 LONG
1	4.745078	6.101994 SPILL POINT

S/N	Boundary Coordinates	
	LAT	LONG
1	4.744146	6.101904
2	4.744328	6.1019
3	4.744373	6.101898
4	4.744386	6.101832
6	4.74449	6.101819
7	4.744498	6.101845
8	4.744687	6.101873
9	4.744852	6.10188
10	4.744845	6.101932
	4.744963	6.101934
11	4.744983	6.101914
12	4.745214	6.101952
13	4.745205	6.101978
14	4.745337	6.10202
15	4.745458	6.102029
16	4.745449	6.102039
17	4.745413	6.102038
18	4.745412	6.102084
19	4.74536	6.102079
20	4.745359	6.102047
21	4.745225	6.102011
22	4.745209	6.102036
23	4.745181	6.102036
24	4.745175	6.102051
25	4.745108	6.102022
26	4.745058	6.102045
27	4.745026	6.102014
28	4.744977	6.102009
29	4.744972	6.102078
30	4.744952	6.102117
31	4.744933	6.102111



32	4.74492	6.102065
33	4.744813	6.102047
34	4.744819	6.102012
35	4.744772	6.101996
36	4.744735	6.102008
37	4.744731	6.102036
38	4.74477	6.102075
39	4.744704	6.102346
40	4.743905	6.102345
41	4.743975	6.102006
42	4.744136	6.101923

*Handwritten signature or scribble*

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details

- Total calculated area of impact 0.519201 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>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. <u>Net Estimated Spilled Volume <math>V_{est}</math> (bbls)* = 69.34 BARRELS</u>
<u>Estimated Reported Volume** <math>V_{rep}</math> (bbls) = 70 BARRELS</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:

NOT APPLICABLE

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

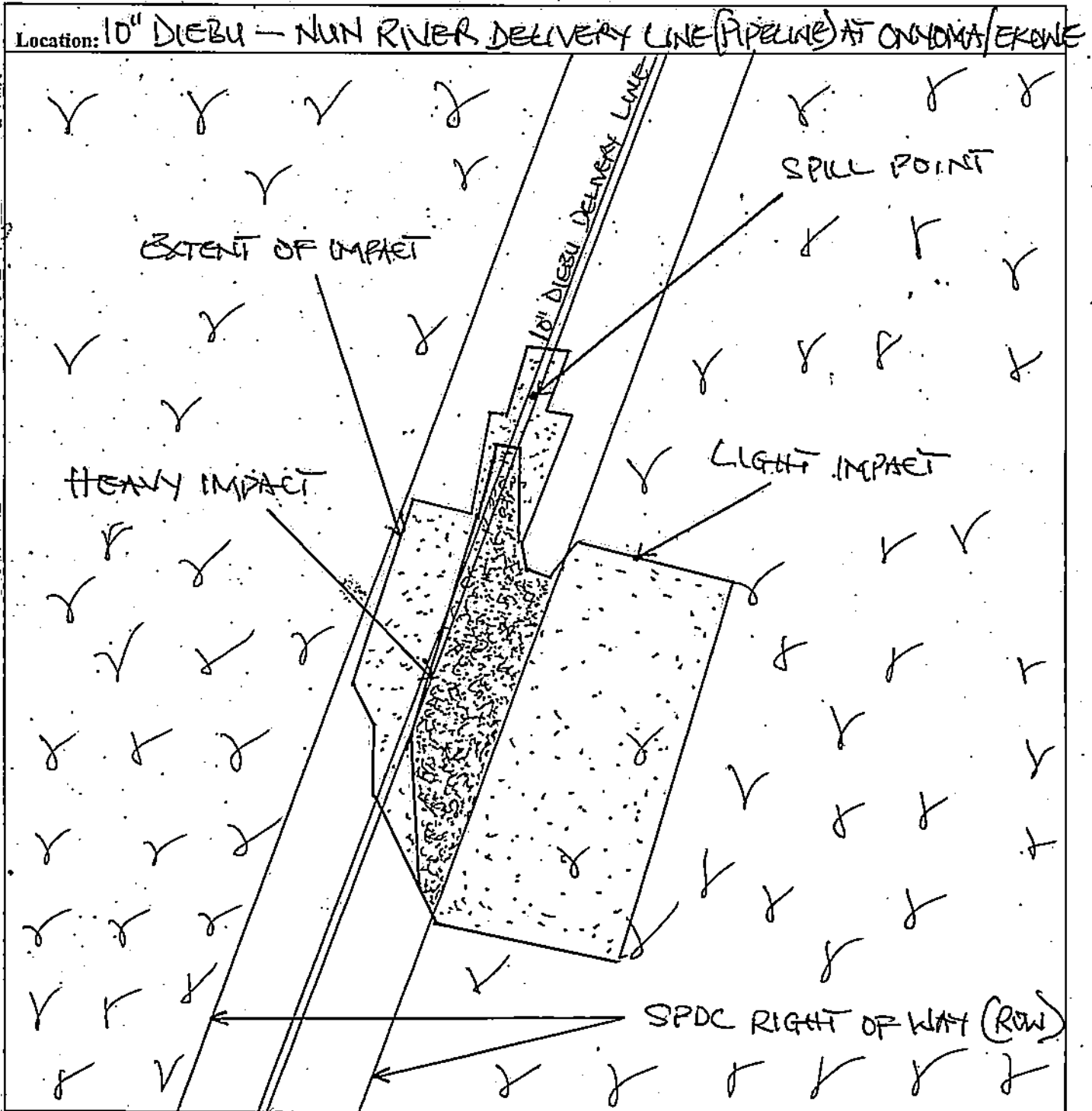
<p>This report was filled, agreed and signed by the following joint investigation team representatives:</p> <ul style="list-style-type: none"><li>• Host Community: <input checked="" type="checkbox"/></li><li>• Department of Petroleum Resources [DPR]: <input type="checkbox"/></li><li>• National Oil Spill Detection and Response Agency [NOSDRA]: <input checked="" type="checkbox"/></li><li>• State Ministry of Environment [SME]: <input checked="" type="checkbox"/></li><li>• Asset Owner: <input checked="" type="checkbox"/></li><li>• Signatories agree with reported findings: <input checked="" type="checkbox"/></li><li>• Separate DPR form has been filled out with same findings <input type="checkbox"/></li></ul> <p style="text-align: right;"><i>Tick as applicable</i></p>
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f. Appendix 1: Overview sketch of the site



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