

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2992937 JIV report S/N: 0000894

(Note: As practicable as possible the JIV report is to be signed in the field by all the participating parties)

## A. GENERAL INFORMATION:

1. Fountain Incident Number: 2992937 2. Type of incident\* OIL SPILL  
3. Name of Location 10" DIEBU CREEK - NIUN RIVER DELIVERY LI  
4. Name of nearest community ENWARI/ONYAMA State: BAYELSA LGA: SOUTHERN IJAW  
7. Production Facility Installation CRUDE OIL PIPELINE  
8. Asset Owner Hub THE SHELL PETROLEUM DEVELOPMENT COMPANY

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date Reported: 15TH JULY, 2021  
b. Start date/time of Investigation: 18TH JULY, 2021 10:30 HRS  
c. Investigation End date: 18TH JULY, 2021 Day(s) on site: ONE (1) 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  Sand bag(s)

Additional observations around the spill point:

NOT APPLICABLE

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

- Smooth round-edge hole  Rough-edge hole  Hack saw cut  
 Complete Rupture  Inward dent,  Well head tampering  
 Failed Weld-on illegal hot tap valve  Failed Clamp,  Missing Pipeline/Flowline  
 Crude oil theft (illegal bunkering) point,  Saver-pit over flow  Third party tampering with Clamp  
 Third party tampering with valve setting  Bulging Outward  Third party tampering with flange,  
 Flare System/Bund wall failure  Cold vent  Surge vessel overflow,  
 Valve Failure  Relief valve failure  Accidental 3<sup>rd</sup> party equipment impact  
 Tear ( \_\_\_\_\_ )  
 Others (specify) DIAGONAL TEAR DUE TO SUSPECTED EXTERNAL EXPLOSIVE IMPACT

## f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3<sup>rd</sup> party damage   
 Operational  Others (including Mystery spills) \_\_\_\_\_

\*This can be: (a) Oil Spill (b) Drilling fluid/Chemical (c) Siltation (d) Water Leak (e) Fire (f) Non-leaking theft point removal

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g. Spill Point Coordinates (\*Incidents > 100m apart to be aggregated into one Joint Investigation Report)

h. Measuring unit WGS 84

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.74874</u>	<u>6.10238</u>

## C. RISK ASSESSMENT

### 10. Details of Environment

i. Type of environment where spill occurred (select one):

- Land     
  Swamp     
  Water     
  Seasonal swamp     
  Shoreline/Waterfront

ii. Type of environment to which oil has spread:

- Land     
  Swamp     
  Waterbody (specify) \_\_\_\_\_

iii. Weather condition

- Dry     
  Wet     
  Windy     
  Hot

### 11. Distance to Sensitive habitat within 100m radius

- |   |   |     |
|---|---|-----|
| <input type="checkbox"/> Government reserved and designated protected area                    | [ | .m] |
| <input type="checkbox"/> Drinking water source  | [ | .m] |
| <input type="checkbox"/> Surface water <input type="checkbox"/> Borehole                      | [ | .m] |
| <input type="checkbox"/> Built up Area  | [ | .m] |
| <input type="checkbox"/> Residential Area <input type="checkbox"/> Commercial/Industrial Area | [ | .m] |
| <input type="checkbox"/> Farmlands  | [ | .m] |
| <input type="checkbox"/> Fish Farm/Pond   | [ | .m] |
| <input type="checkbox"/> Fishing net  | [ | .m] |
| <input type="checkbox"/> Others (specify) _____   | [ | .m] |

} NONE SEEN  
WITHIN VICINITY

### 12. Containment measures put in place:

- Booms   
  Trench   
  Dyke   
  Pit   
  Natural depression   
  None

Others: \_\_\_\_\_

13. Any pictures or video coverage?

[N]

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

~~Y~~

If yes to item 14, give brief description:

SPILL RECOVERY

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15. Was there any disruption to the investigation? [Y]  [N]

If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed? [Y]  [N]

Reason(s): NOT APPLICABLE

- Delayed Community Access Approval     Security Challenges     Access constraint due to terrain  
 Others (specify) \_\_\_\_\_

**D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL**

17. Structures / Properties

S/N	Type of Structures	Description	Size	Number	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>				

18. Crops/Economic Trees

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

19. Fish/Nets/Ponds

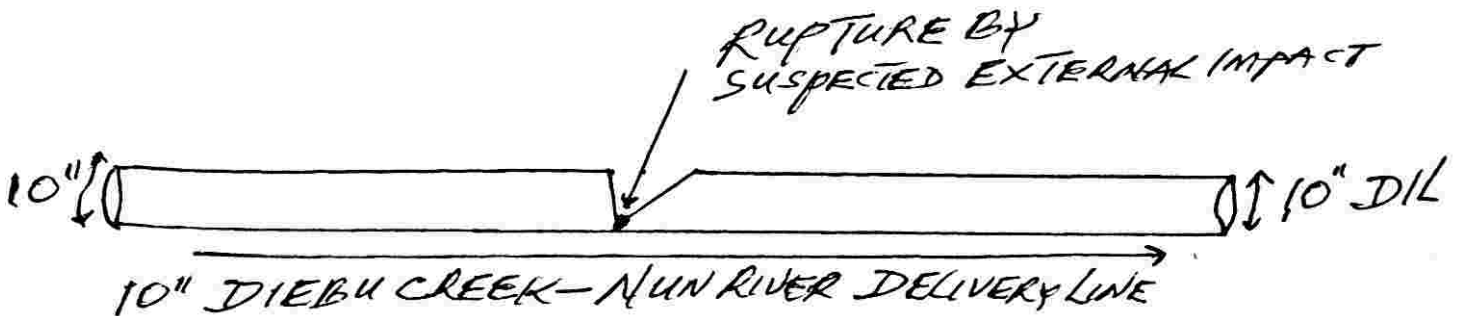
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>			

20. Others (Specify) e.g. Animal Traps

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

**E. GRAPHIC DESCRIPTION OF LEAK POINT** (while detailed description of the leak point should be contained in the leak report, overview sketch of the site should be added as appendix 1)

A SECTION OF 10" DIEBU CREEK - NUN RIVER DELIVERY LINE AT ENIWAR/ONYOMA SHOWING RUPTURE BY SUSPECTED EXTERNAL IMPACT.



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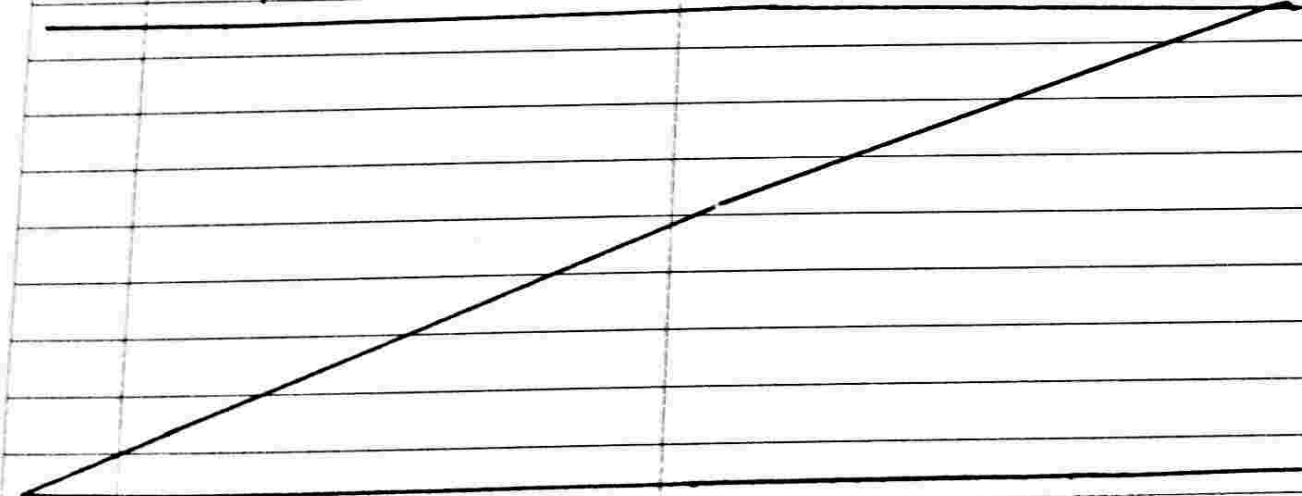
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F. TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

21. Impacted area boundary Coordinates (If more, Print and attach as Appendix)

WUS 84

S/N	Northing	LATITUDE	Easting	LONGITUDE
		4. 749209		6.102381
		4. 749208		6.102412
		4. 749073		6.102425
		4. 749006		6.102415
		4. 749031		6.102382
		4. 74887		6.102391
		4. 748666		6.102453
		4. 748518		6.102404
		4. 748644		6.102815
		4. 748277		6.1021612
		4. 747694		6.103739
		4. 748384		6.103627
		4. 74758		6.102276
		4. 747596		6.102205
				

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details \*

- Total calculated area of impact (Ha) 2.17 HECTARES
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W YES

\* Round off to 2 decimal places if area is  $\geq 100 \text{ m}^2$  or to 4 decimal places if area is  $< 100 \text{ m}^2$  (e.g. 14.55, 0.0051, 0.0009)  
 \* Express in Hectares (Ha)

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

Recovered oil $V_{\text{rec}}$ :	<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 $V_{\text{Est}}(\text{bbls})^* = 58.48 \text{ BARRELS}$

Estimated Reported Volume\*\*  $V_{\text{rep}}(\text{bbls}) = 59 \text{ BARRELS}$

#### \*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 volume estimation or cause of spill:

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  $\text{m}^3$  to barrels is  $\text{Volume (m}^3) \times 6.29$ ; \*\*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 column 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 JII therefore recommend that the site be closed out
- II. Investigation of the incident site showed that there is residual impact on site requiring further works

## 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]:
- The Shell Petroleum Development Company [SPDC]:
- Separate DPR form has been filled out with same findings
- Separate NOSDRA form has been filled out with same findings
- Separate SME form has been filled out with same findings

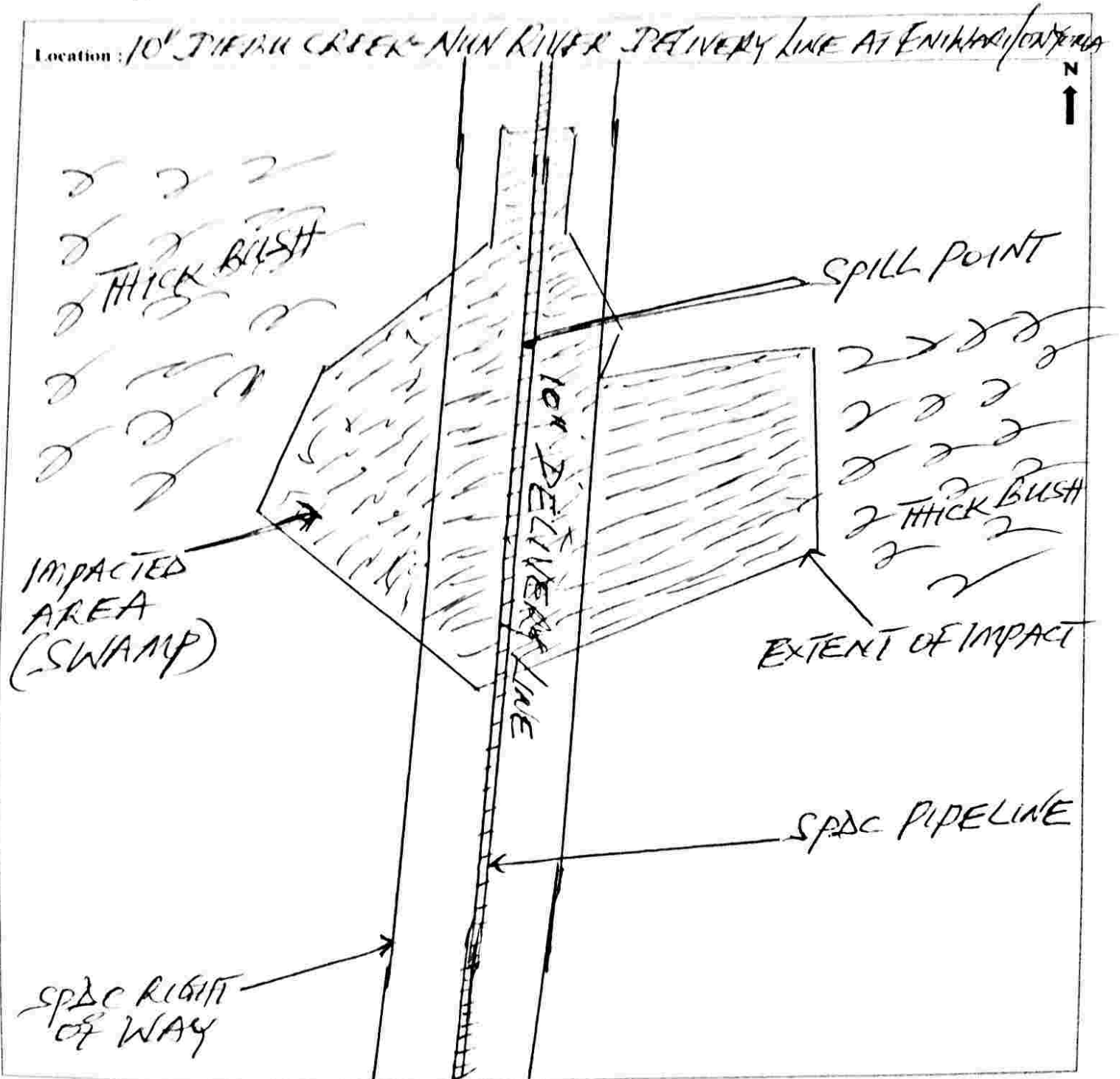
*Tick as applicable*

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## f. Appendix 1: Overview sketch of the site



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