

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2938807 JIV report S/N: 0000844

(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: 2938807 2. Type of incident\* OIL SPILL  
3. Name of Location 4<sup>th</sup> OBELE WELL 3L FLOWLINE  
4. Name of nearest community OBELE 5. State: RIVERS 6. LGA EMOHUE  
7. Production Facility Installation FLOWLINE  
8. Asset Owner/Hub THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD (SPDC)/LAND EAST HUB

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date Reported: 5<sup>TH</sup> MAY 2021  
b. Start date/time of Investigation: 7<sup>TH</sup> MAY 2021 / 1230HRS  
c. Investigation End date: 7<sup>TH</sup> MAY 2021 Day(s) on site: ONE (1) DAY  
d. Description of spill point environment

- |   |                                     |  |
|---|-------------------------------------|--|
| <input type="checkbox"/> Firm soil                | <input 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 type="checkbox"/> Well Platform (on water) | <input type="checkbox"/> Drill Rig  | <input type="checkbox"/> Sand bag(s)             |

Additional observations around the spill point:

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

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Smooth round-edge hole                      | <input type="checkbox"/> Rough-edge hole      | <input type="checkbox"/> Hack saw cut                                      |
| <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"/> Tear (_____)                                |   |  |
| <input checked="" type="checkbox"/> Others (specify) <u>PIN HOLE</u> |   |  |

## 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) Situation (d) Water Leak (e) Fire (f) Non-leaking theft point removal

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

h. Measuring unit

|            |  |          |  |
|------------|--|----------|--|
| Northings: |  | WGS 84   |  |
| 5.007397   |  | Easting: |  |
|            |  | 6.814012 |  |
|            |  |          |  |
|            |  |          |  |

## 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

☐ Government reserved and designated protected area [ ,m]  
☐ Drinking water source [ ,m]  
☐ Surface water ☐ Borehole [ ,m]  
☐ Built up Area [ ,m]  
☐ Residential Area ☐ Commercial/Industrial Area [ ,m]  
☐ Farmlands [ ,m]  
☐ Fish Farm/Pond [ ,m]  
☐ Fishing net [ ,m]  
☐ 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? ☒ [N]

If yes to item 14, give brief description:

REPLACEMENT OF HOOK-UP ARM

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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

| SN                         | Type of Structures | Description | Size | Number | Comments |
|----------------------------|--------------------|-------------|------|--------|----------|
| NONE WITHIN AREA OF IMPACT |                    |             |      |        |          |

18. Crops/Economic Trees

| SN                         | Type of crops | Young | Medium | Matured | Quantity | Comments |
|----------------------------|---------------|-------|--------|---------|----------|----------|
| NONE WITHIN AREA OF IMPACT |               |       |        |         |          |          |

19. Fish Nets/Ponds

| SN                         | Fish Nets/Ponds | Description | Quantity/Size | Comments |
|----------------------------|-----------------|-------------|---------------|----------|
| NONE WITHIN AREA OF IMPACT |                 |             |               |          |

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

| SN                         | Others | Description | Quantity/Size | Comments |
|----------------------------|--------|-------------|---------------|----------|
| NONE WITHIN AREA OF IMPACT |        |             |               |          |

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)

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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)

| S/N | Northing | Easting |
|-----|----------|---------|
| 1   | 5.00733  | 6.81394 |
| 2   | 5.00749  | 6.81408 |
| 3   | 5.00752  | 6.81398 |
| 4   | 5.00731  | 6.81404 |
| 5   | 5.00749  | 6.81411 |
| 6   | 5.00763  | 6.81401 |
| 7   | 5.00753  | 6.81392 |
| 8   | 5.00746  | 6.81392 |
| 9   | 5.00783  | 6.81394 |
| 10  | 5.0073   | 6.81405 |

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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 checked="" type="checkbox"/> |
| ii. | Investigation of the incident site showed that there is residual impact on site requiring further works  | <input 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]: ☒
- 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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## G. INCIDENT INFORMATION:

### a. Impacted Area Details \*

- Total calculated area of impact (Ha) 0.0508 Ha
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W NO

\* 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 |
|----------------------------------|------------|---------|

Controlled recovery/evacuation from source with no impact to environment:

|            |         |
|------------|---------|
| <u>NIL</u> | Barrels |
|------------|---------|

### c. Net Estimated Spilled Volume $V_{\text{Est}}(\text{bbls})^* =$

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

0.2 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.

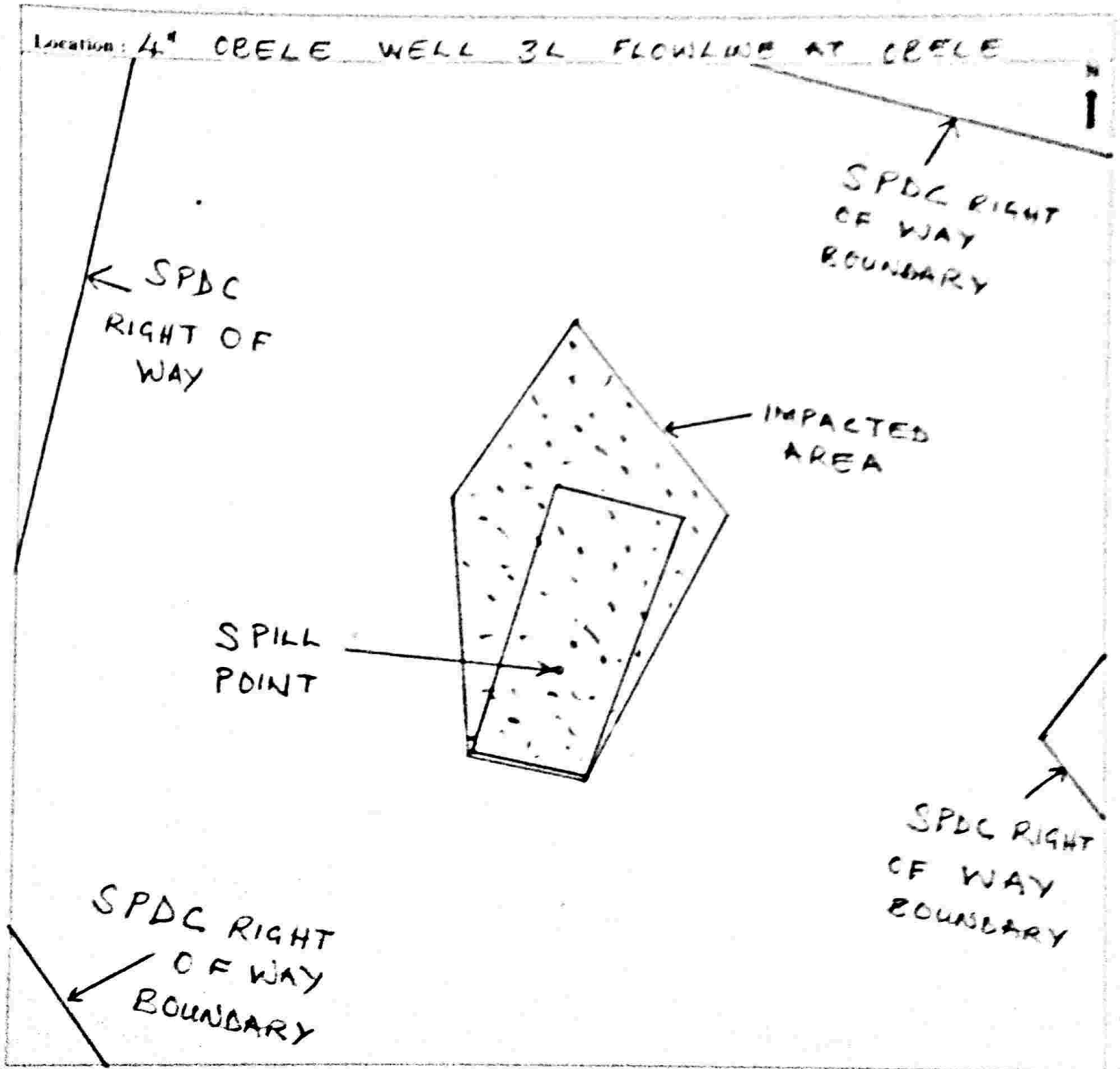
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## 1. Appendix I: Overview sketch of the site



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