

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2208824 JIV report S/N: 0131

(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: 2208824 2. Type of incident\* OIL SPILL  
3. Name of Location 20" KOLOCREEK - KUMUEKPE TRUNK LINE  
4. Name of nearest community URUMA 5. State: BAYELSA 6. LGA OGBIA  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED (SPDC)/PIPELINE

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date of incident: 9TH DECEMBER, 2018  
b. Start date/time of investigation: 12TH DECEMBER, 2018 15:00HRS  
c. Investigation End date: 13TH DECEMBER, 2018 Actual investigation duration, days: TWO (2) DAYS  
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: THE JOINT INVESTIGATION TEAM OBSERVED A DECOATED PORTION OF THE PIPELINE WHERE THE DRILLED HOLE WAS FOUND.

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

- |  |  |  |
|--|--|--|
| <input checked="" 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 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.

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g. Spill point coordinates

Measuring unit

WGS 84

Northings:	Eastings:
LATITUDE	LONGITUDE
4.92596	6.42228

## 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 [ NIL ,m]  
☐ Drinking water source [ NIL ,m]  
☐ Built up area [ NIL ,m]  
☐ Farmlands [ NIL ,m]  
☐ Fish Farm/Pond [ NIL ,m]  
☐ Fishing net [ NIL ,m]  
☐ Others (specify). NONE

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:

RECOVERY AND REPAIR ACTIVITIES ARE 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
	NONE WITHIN AREA OF IMPACT				

### 17. Crops/Economic Trees

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

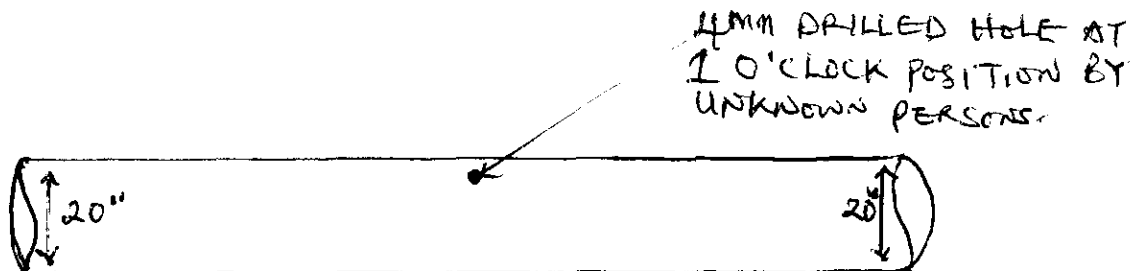
### 18. Fishing Nets/Fish Ponds

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) A SECTION OF 20" KOLE CREEK - RUMUEKPE PIPELINE AT ORUMA SHOWING A 4MM DRILLED HOLE AT ONE (1) O'CLOCK POSITION BY UNKNOWN PERSONS.



FROM KOLECREEK TO RUMUEKPE

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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)

S/N	Northing	Easting
SEE ATTACHED FOR COORDINATED LISTING		

INC. NO.: 2208824		
20" KC-RUMUEKPE TL @ ORUMA		
PT_ID	LAT_Y	LONG_X
SP	4.92596	6.42228
272	4.92599	6.42219
273	4.92602	6.42221
274	4.92602	6.42223
275	4.926	6.42237
276	4.92597	6.42237
277	4.92599	6.42233
278	4.92593	6.42229
279	4.92593	6.42228
280	4.92596	6.42229
282	4.92598	6.42229
283	4.92598	6.42241
284	4.92587	6.42201
285	4.92578	6.4219
286	4.92573	6.42186
287	4.92558	6.42155
288	4.92513	6.42154
289	4.92516	6.4212
290	4.92516	6.42119
291	4.92508	6.42109
292	4.92519	6.42177
293	4.92524	6.42198
294	4.9253	6.42213
295	4.92535	6.42226
296	4.92536	6.42234
297	4.92543	6.42249
298	4.92553	6.42271
299	4.9256	6.44291
300	4.92567	6.4231
301	4.92569	6.42312
302	4.92576	6.42326
303	4.92581	6.42336
304	4.92586	6.42351
305	4.92592	6.42362
306	4.92601	6.42373
307	4.925961	6.422267
308	4.925946	6.422573
309	4.925872	6.422668
310	4.925799	6.422811
311	4.925925	6.423195
312	4.92601	6.423587

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details

- Total calculated area of impact 1.12 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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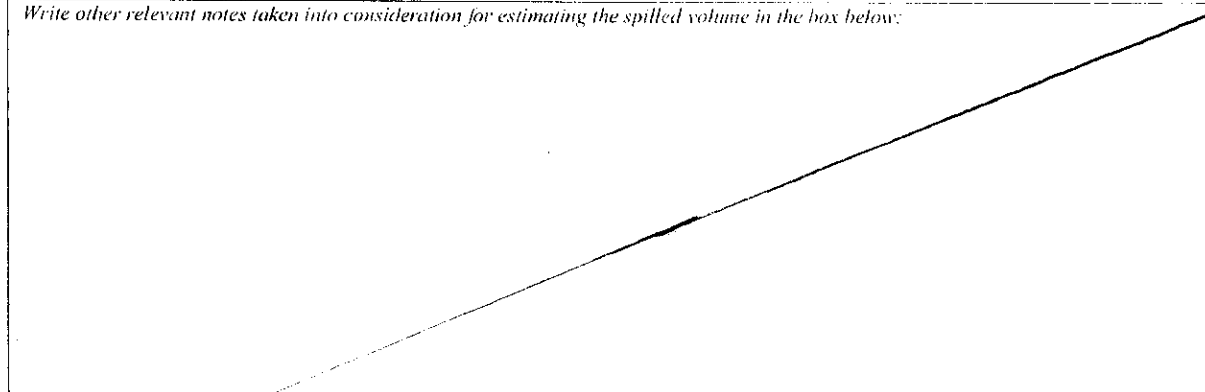
### c. Net Estimated Spilled Volume $V_{Est}(bbls)^* = 343.50 \text{ BARRELS}$

Estimated Reported Volume\*\*  $V_{rep}(bbls) = 344 \text{ BARRELS}$

#### \*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 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 ( $m^3$ )  $\times$  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

This report was filled, agreed and signed by the following joint investigation team representatives:	
• Host Community:	<input checked="" type="checkbox"/>
• Department of Petroleum Resources [DPR]:	<input 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

