

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2352367 JIV report S/N: 0114

(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: 2352367 2. Type of incident\* OIL SPILL  
3. Name of Location 20" KOLOCREEK - RUMUEKPE PIPELINE  
4. Name of nearest community ODAU (KM9) State: RIVERS 6. LGA ABUA/ODUAL  
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: 19<sup>TH</sup> MAY 2019  
b. Start date/time of investigation: 21<sup>ST</sup> MAY 2019 / 1205 HRS  
c. Investigation End date: 21<sup>ST</sup> MAY 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 checked="" 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: THE JOINT INVESTIGATION TEAM OBSERVED 3" BALL VALVE AND 3" NIPPLE ILLEGALLY INSTALLED AT 12 O'CLOCK POSITION ON 20" KOLOCREEK - RUMUEKPE PIPELINE AT ODAU (KM9).

## c. 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 <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. Version 2018/01  
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g. Spill point coordinates

WGS 84

Measuring unit Northing: (Latitude)	Easting: (Longitude)
4.92833	6.43710

## C. RISK ASSESSMENT

10. Type of environment:

- Land    
  Swamp    
  Water    
  Seasonal swamp    
  Shoreline/Waterfront

i. Type of environment to which oil has spread:

- Land    
  <sup>SEASONAL</sup> Swamp    
  Water    
  River (identify) \_\_\_\_\_

ii. Weather condition

- Rain    
  Sunny    
  Dry    
  Wet    
  Windy    
  Hot    
  cool

11. Distance from the nearest sensitive habitat

- |  |        |
|--|--------|
| <input type="checkbox"/> Government reserved and designated protected area | [ ] ,m |
| <input type="checkbox"/> Drinking water source                             | [ ] ,m |
| <input type="checkbox"/> Built up 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    
  Natural depression    
  Pit    
  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:

NOT APPLICABLE

15. Was there any disruption to the investigation?

[Y]

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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
1	PLANTAIN	✓	✓		12	IMPACTED BY SPILL

**18. Fishing Nets/Fish Ponds**

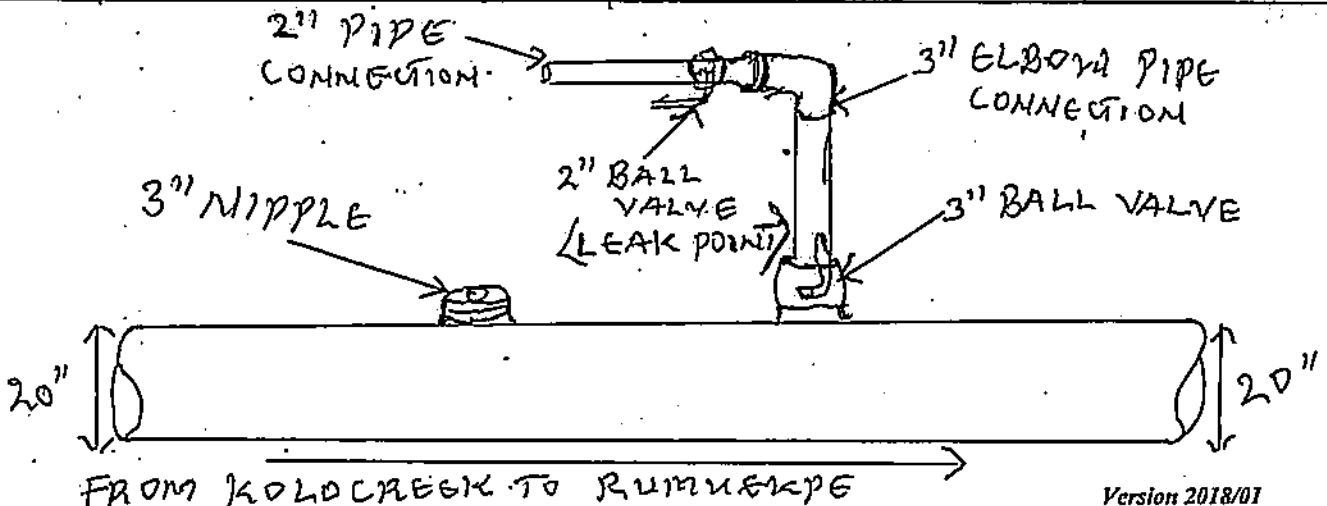
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

**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)

SECTION OF 20" KOLOCREEK - RUMURUPE PIPELINE AT DIDAU (km 9) SHOWING CRUDE OIL LEAK POINTS AT 12 O'CLOCK POSITION.



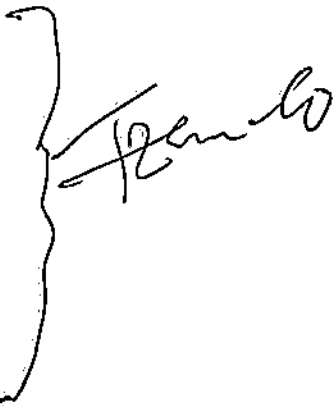
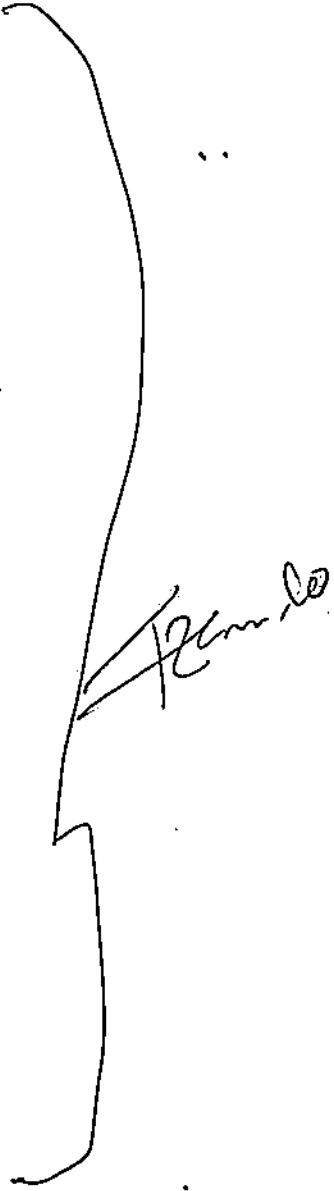
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20" Kolocreek - Rumuekpe pipeline at Odua (km 9) FID: 2352367

PT_ID	Long	Lat
SPILL POIN'	6.4371	4.92833
437	6.43888	4.92871
403	6.43701	4.92842
404	6.43694	4.92857
405	6.43688	4.92859
406	6.43685	4.92871
407	6.43706	4.92874
408	6.43709	4.9286
409	6.43719	4.9285
410	6.43771	4.92863
411	6.43755	4.92895
412	6.43775	4.92924
413	6.43786	4.92934
414	6.43801	4.92921
415	6.43804	4.92925
416	6.43833	4.92928
417	6.4384	4.92915
418	6.43862	4.92901
419	6.4388	4.92898
420	6.43889	4.92885
421	6.43894	4.92882
422	6.44092	4.92914
423	6.44092	4.92902
426	6.43909	4.92875
427	6.4391	4.9287
424	6.44082	4.92894
425	6.44084	4.92885
439	6.43711	4.92825
438	6.43703	4.92837
436	6.43888	4.92866
437	6.43888	4.92871
432	6.43899	4.92868
435	6.43892	4.92867
434	6.43892	4.92872
433	6.43898	4.92873
432	6.43899	4.92868
430	6.43903	4.92874
429	6.43907	4.92875
428	6.43908	4.92869
431	6.43904	4.92869
430	6.43903	4.92874



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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 1.79 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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<p><b>c. Net Estimated Spilled Volume <math>V_{Est}</math> (bbls)*=</b></p> <p style="text-align: center; font-size: 1.2em;"><u>168.09 BARRELS</u></p>
<p><b>Estimated Reported Volume** <math>V_{rep}</math> (bbls)=</b></p> <p style="text-align: center; font-size: 1.2em;"><u>169 BARRELS</u></p>

**\*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

<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

