

Eroton Exploration and Production Company Limited.

JOINT INVESTIGATION REPORT FOR INCIDENT NO: _____ JIV report S/N: _____

2017 EEP CC000031

Nº 0000093

(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: 2017 EEP CC000031 2. Type of incident* OIL SPILL
3. Name of Location CANTORNE CHANNEL II W29T
4. Name of nearest community MBIAMA 5. State: RIVERS 6. LGA DEHEMA
7. Type of Production facility/Installation FLOW LINE 8. Asset owner EROTON-CANCO II

B. INCIDENT INFORMATION:

9. Details of incident
a. Date of incident: 10-06-2017
b. Start date/time of investigation: 12-06-2017
c. Investigation End date: 12-06-2017 Actual investigation duration, days: 2 Day
d. Description of spill point environment

- | | | |
|---|--|--|
| ☐ Firmed soil | ☐ Loose soil | ☐ Recently excavated area |
| ☐ Under water | ☒ Swampy | ☒ Exposed pipe surface |
| ☐ Well Platform (on Water) | | ☐ Drill Rig |

Additional observations around the spill point:

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

- | | | |
|---|---|---|
| ☐ Drilled hole | ☐ Hack saw cut | ☐ Tear (_____). |
| ☐ 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, | | ☐ Third party tampering with Clamp |
| ☐ Third party tampering with valve setting, | | ☐ Third party tampering with flange, |
| ☒ Corrosion | ☐ Saver-pit over flow, | ☐ Surge vessel overflow, |
| ☐ Bulging Outward | ☐ Flare System/Bund wall failure | ☐ Accidental 3 rd party equipment |
| impact | ☐ Valve Failure | ☐ com unit failure |
| ☐ Relief valve failure | ☐ Others (specify) _____ | ☐ Cold vent |

f. Incident caused by:

- ☐ Third party interference (Sabotage ☐; crude theft ☐; Line theft ☐; Accidental 3rd party damage ☐)
☒ Operational ☐ Others (including Mystery spills) _____

*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire,

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(MINOR - MID BECT)

Measuring unit	
Northing:	Easting:
61327.336	504817.164
/	/
/	/
/	/
/	/

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).

[] m] 7A
 [] m] 7A
 [] m] K 300m
 [] m] 7A
 [] m] 7A
 [] m] 7A
 30TH ASEA

12. Containment measures put in place:

- ☒ Booms ☐ Trench ☐ Dyke ☐ Natural depression ☐ Pit ☐ None

13. Any pictures or video coverage?

[Y] [N]

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

[Y] [N]

If yes to item 14, give brief description:

15. Was there any disruption to the investigation?

[Y] [N]

If yes to item 15 give brief description:

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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 THE AREAS OF IMPACT			

17. Crops/Economic Trees

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

18. Fish/Nets/Ponds

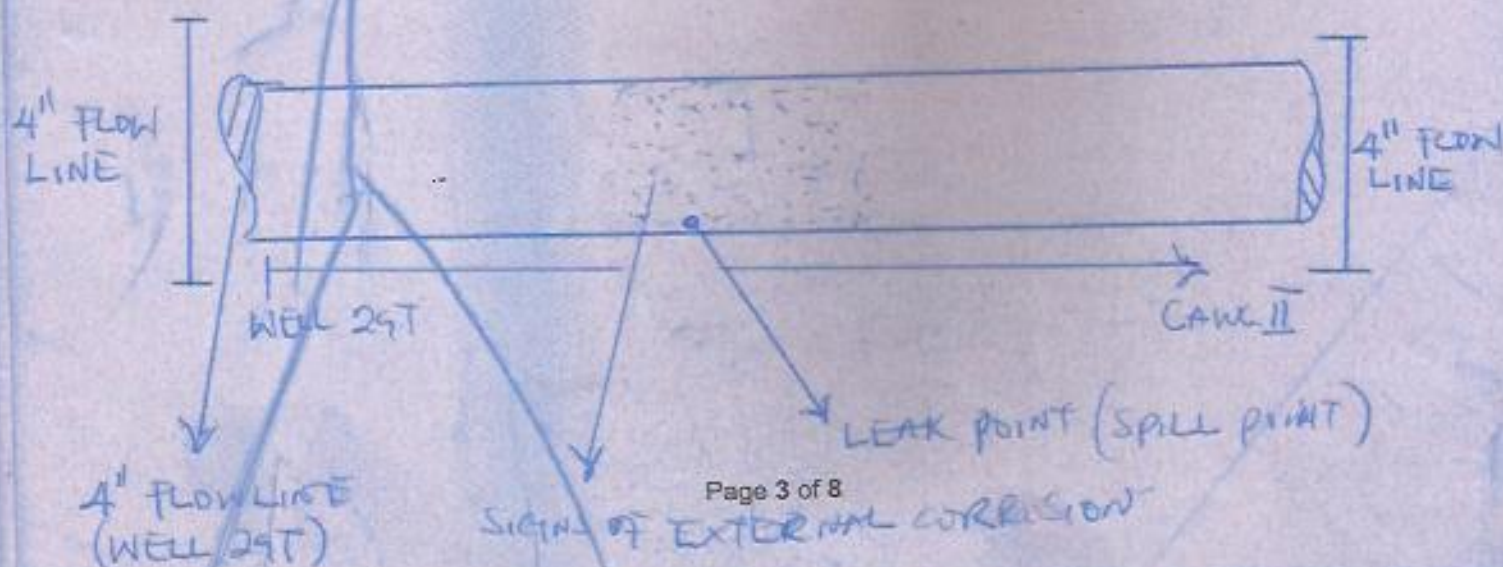
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
		NONE WITHIN THE AREAS OF IMPACT		

19. Others (Specify) i.e. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
		NONE WITHIN AREAS OF IMPACT		

E. GRAPHIC DESCRIPTION OF LEAK POINT (while detail 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 SKETCH SHOWING WELL 29T 4" FLOW LINE LEAK POINT AT 7 O'CLOCK POSITION



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F: TABLE SHOWING COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

20. Impacted area boundary Coordinates (If more, Print and attach as an appendix)

S/N	Northing	Easting
	61332.88	504876.4
	61295.41	504859.5
	61278.18	504818.1
	61259.78	504802.7
	61244.7	504693.2
	61282.62	504797.8
	61303.23	504838.5
	61324.11	504796.8
	61312.97	504674.1
	61353.21	504824
	61398.56	504776.3
	61390.08	504861.7

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G. INCIDENT INFORMATION:

20. Impacted Area Details

- Total calculated area of impact 10,600 m²
- Impact within Eroton R.o.W _____
- Impact outside Eroton R.o.W _____

21. 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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22. Net Estimated Spilled Volume $V_{est}(bbls)^* =$ 8 BARRELS

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

*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 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 m³ to barrels is Volume (m³) x 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 = 15.5 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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23. GENERAL STATUS OF THE SITE

- A. 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 ☐
- B. Investigation of the incident site showed that there is residual impact on site requiring further works ☒

24. REPRESENTATIVES

This report was filled, agreed and signed by the following joint investigation representatives:

- Host Community: ☒
- Department of Petroleum Resources [DPR]: ☒
- National Oil Spill Detection and Response Agency [NOSDRA]: ☒
- State Ministry of Environment [SME]: ☒
- Nigeria Police Force [NPF]: ☒
- Eroton E & P Company Ltd: ☒
- Signatories agree with reported findings: ☒
- Separate DPR form has been filled out with same findings: ☒

Tick as applicable

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25. Appendix 1: Overview sketch of the site

