

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2622095 JIV report S/N:

0489

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

## A. GENERAL INFORMATION:

1. Fountain Incident Number: 2622095 2. Type of incident\* OIL SPILL  
3. Name of Location 20" KOLOCREEK - RUMUEKPE (TRUNKLINE) PIPELINE  
4. Name of nearest community ODAKU (KML 9) 5. State: RIVERS 6. LGA ABUA/ODAKU  
7. Production Facility/Installation OIL PIPELINE  
8. Asset Owner/Hub THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED/ PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date Reported: 7<sup>TH</sup> APRIL, 2020  
b. Start date/time of Investigation: 9<sup>TH</sup> APRIL, 2020  
c. Investigation End date: 9<sup>TH</sup> APRIL, 2020 Day(s) on site: 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 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:

NOT APPLICABLE.

### 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 checked="" 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"/> Tear (_____)  |   |  |
| <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  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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Blue (Host Community)

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

h. Measuring unit

WGS 84

Northing:	Easting:
LATITUDE	LONGITUDE
4.928287	6.437204
/	/
/	/

## 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] | } | NONE SEEN WITHIN VICINITY. |
| <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] |   |                            |

### 12. Containment measures put in place:

- Booms   
  Trench   
  Dyke   
  Pit   
  Natural depression   
  None

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

13. Any pictures or video coverage?      [X] [N]

14. Further response/repair initiated as at the time of JIV?      [X] [N]

If yes to item 14, give brief description:

OIL SPILL RECOVERY WORK IS ONGOING AND TEMPORARY REPAIR WORK BY BLIND FLANGING COMPLETED.

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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
NONE WITHIN AREA OF IMPACT					

18. Crops/Economic Trees

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

19. Fish/Nets/Ponds

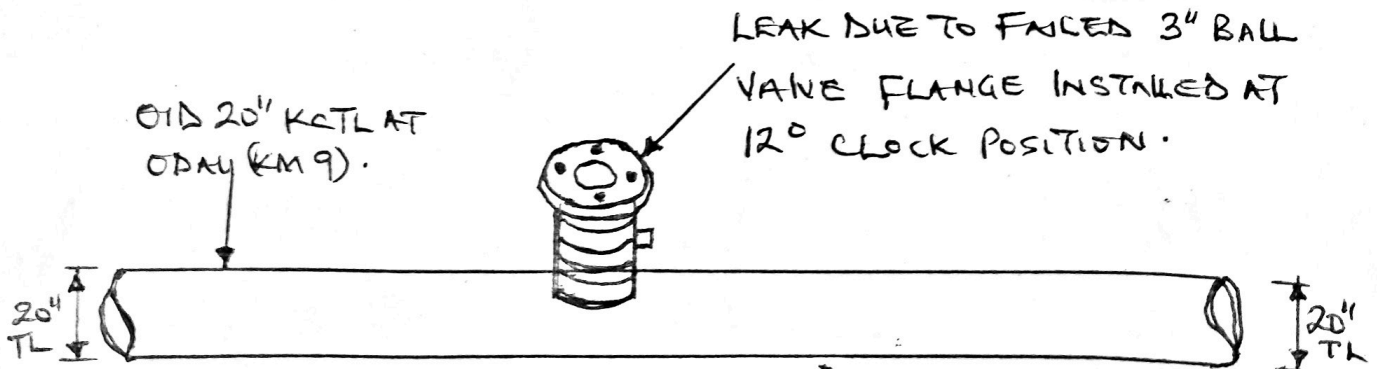
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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

S/N	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)

SECTIONAL VIEW OF 20" KOLOCREEK - RUMUEKPE (TRUNKLINE) PIPELINE AT ODAY (KM 9) SHOWING: FAILED 3" THEFT FITTINGS



KOLOCREEK - RUMUEKPE PIPELINE Version 2020/01

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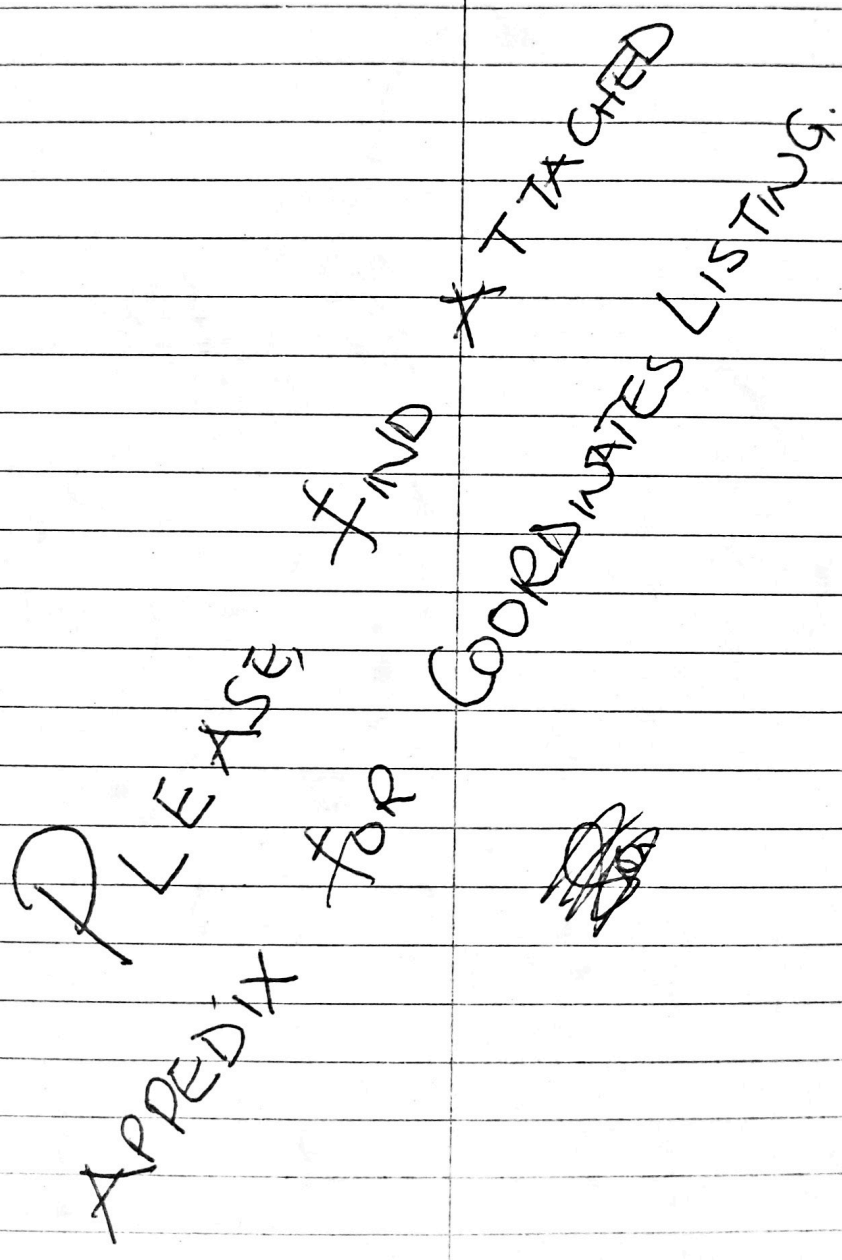
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F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

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

S/N	Northing	Easting

PLEASE FIND ATTACHED COORDINATES LISTING.



~~COORDINATES LISTING~~

JIV\_2622095\_ODAU

PT_ID	POINT_X	POINT_Y
SP	6.437204	4.928287
1	6.437103	4.928371
2	6.437075	4.92833
3	6.437095	4.928204
4	6.437115	4.928192
5	6.43718	4.928207
6	6.437227	4.928264
7	6.437385	4.928272
8	6.437443	4.928279
9	6.437438	4.928355
10	6.437865	4.928393
11	6.439012	4.928577
12	6.439102	4.928654
13	6.438846	4.92863
14	6.43879	4.928643
15	6.438573	4.92862
16	6.438387	4.928551
17	6.438247	4.928548
18	6.438219	4.928553
19	6.438046	4.928535
20	6.437951	4.928517
21	6.437803	4.928481
22	6.437789	4.928452
23	6.437754	4.928477
24	6.437675	4.928483
26	6.437575	4.928454
26	6.437413	4.92843
27	6.437327	4.928413
28	6.437344	4.928355
29	6.437325	4.928346
30	6.437289	4.928411
31	6.439106	4.928655
32	6.439157	4.928666
33	6.439276	4.928682
34	6.439274	4.928723
35	6.439339	4.928732
36	6.439362	4.928724
37	6.439396	4.928713
38	6.439399	4.928692
39	6.439518	4.928719
40	6.439518	4.928764
41	6.439784	4.928815
43	6.439926	4.928827

PT_ID	POINT_X	POINT_Y
43	6.439977	4.928841
44	6.440044	4.928817
45	6.440101	4.928837
47	6.440214	4.928858
47	6.440281	4.928846
48	6.440474	4.92889
49	6.440527	4.928896
50	6.440835	4.928925
51	6.440824	4.928874
53	6.440921	4.929035
53	6.440907	4.929123
54	6.440836	4.929142
55	6.440606	4.928893
56	6.4406	4.928938
57	6.440603	4.928954
58	6.440245	4.928936
59	6.440196	4.929018
60	6.44024	4.929041
61	6.440737	4.928849
62	6.440715	4.92877
63	6.440731	4.928615
64	6.440311	4.928701
65	6.440275	4.928765
66	6.439333	4.928617
67	6.439313	4.928544
68	6.439204	4.928553
70	6.439082	4.928344
70	6.438834	4.928402
71	6.438512	4.928318
72	6.438459	4.928387
73	6.438125	4.928341
74	6.43779	4.928294
75	6.437775	4.928341
76	6.437593	4.928348
77	6.437455	4.928321
78	6.437447	4.92825
79	6.440043	4.928682
80	6.438774	4.928448
81	6.438659	4.928426
82	6.439716	4.928631
83	6.440591	4.928738
84	6.440531	4.928692
85	6.438975	4.928476

PT_ID	POINT_X	POINT_Y
86	6.439101	4.92844
87	6.438967	4.928411
88	6.438721	4.928391
89	6.438637	4.928304

JR

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details \*

- Total calculated area of impact (Ha) 0.75807Ha
- 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>38</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 $V_{\text{Est}}$ (bbls)\* =

99.54 BARRELS

Estimated Reported Volume\*\*  $V_{\text{rep}}$  (bbls) = 100 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:

NOT APPLICABLE

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 Volume ( $\text{m}^3$ ) 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 = 15.3 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 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:
- 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*

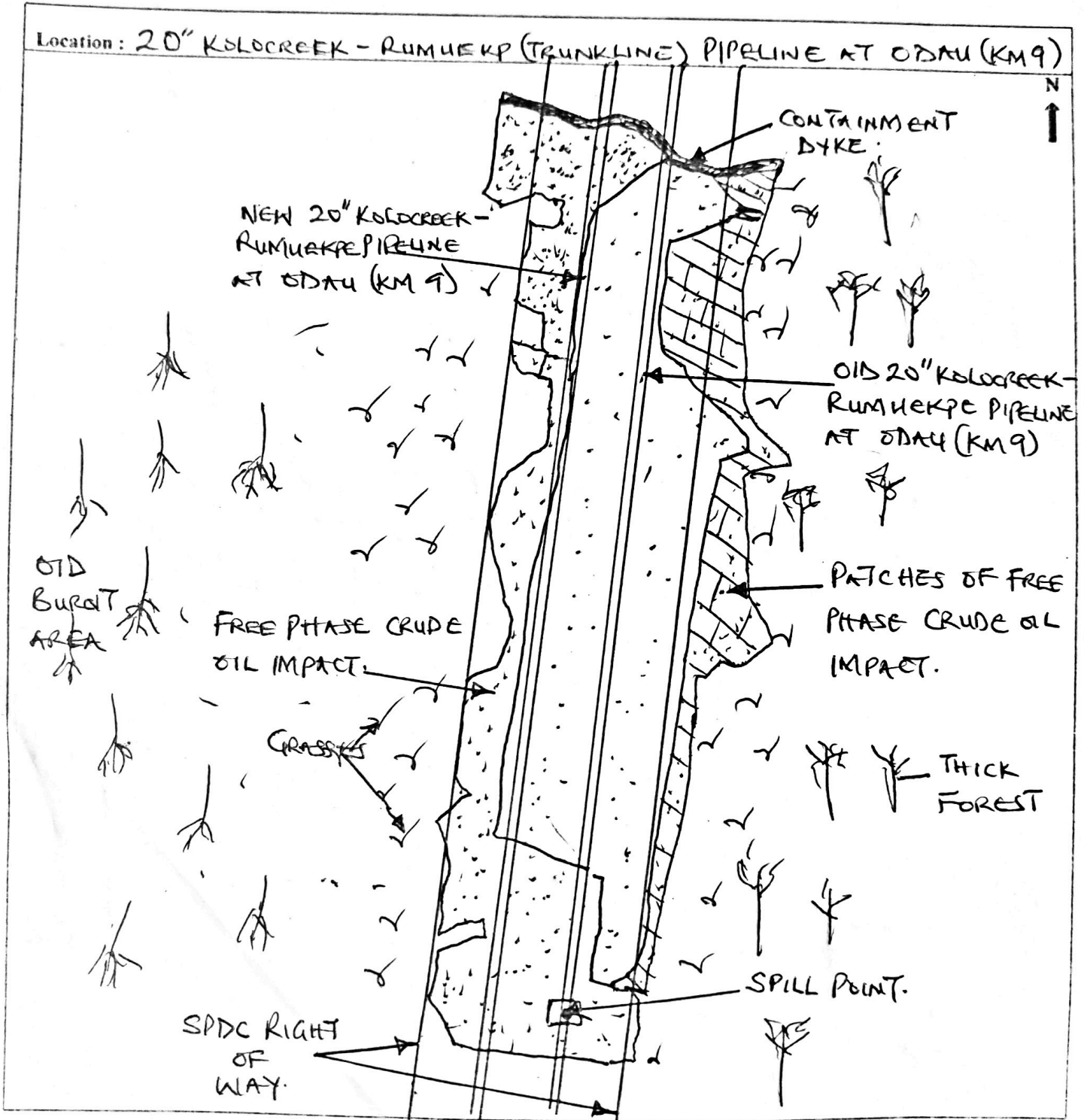
*Tick as applicable*



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f. Appendix 1: Overview sketch of the site



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