

JOINT INVESTIGATION REPORT

INCIDENT NO: 1969308 JIV report S/N: 0915

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

A. GENERAL INFORMATION:

1. Spill incident Number: 1969308 2. Type of incident* OIL SPILL
3. Name of Location 20" KOLO CREEK - RUMUEKPE PIPELINE
4. Name of nearest community ODAU/OZOCHI 5. State: RIVERS 6. LGA ABUA/ODUAL | AHOADA-EAST
7. Type of 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: 14TH NOVEMBER, 2017.
b. Start date/time of investigation: 25TH NOVEMBER, 2017/11:17HOURS; 27TH AND 30TH NOVEMBER 2017; 2ND, 6TH, 8TH, 10TH, 13TH AND 15TH DECEMBER, 2017.
c. Investigation End date: 17TH DECEMBER, 2017 Actual investigation duration, days: TEN(10) DAYS.
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 | |

Additional observations around the spill point: **AN ILLEGAL PIPE CONNECTION WAS OBSERVED RUNNING FROM THE SPILL POINT INTO THE SURROUNDING FOREST. WITHIN THE VICINITY OF THE SPILL POINT WAS ANOTHER SPILL POINT FOR A PREVIOUS INCIDENT (REFERENCE ID 1858269).**

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Drilled hole | <input type="checkbox"/> Jack 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 rd 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 3rd 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

h. Measuring unit

WGS 84

Northing:	Easting:
LATITUDE	LONGITUDE
4.93812	6.50026
 	
 	

C. RISK ASSESSMENT

10. Type of environment:

- Land
 Swamp
 Water
 Seasonal swamp
 Shoreline/Waterfront

i. Type of environment to which oil has spread:

- Land
 SEASONAL Swamp
 Water (CREEK)
 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 checked="" type="checkbox"/> Fish Farm/pond | [| .m] | } IMPACTED BY SPILL |
| <input checked="" type="checkbox"/> Fishing net | [| .m] | |
| <input type="checkbox"/> Others (specify). | | | |

12. Containment measures put in place;

- Booms
 Trench
 Dyke
 Natural depression
 Pit
 None
- Others: _____

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:

REPAIR WAS DONE TEMPORARILY BY BLIND-FLANGING AND INSTALLING RESTRICTION AT THE CRUDE OIL THEFT POINT.

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
1	CANE PLANT			✓	WITHIN AN IMPACTED AREA OF 1.76Ha	WITHIN SPILL - IMPACTED REGION
2	IROKO TREES			✓		
3	PALM TREES			✓		

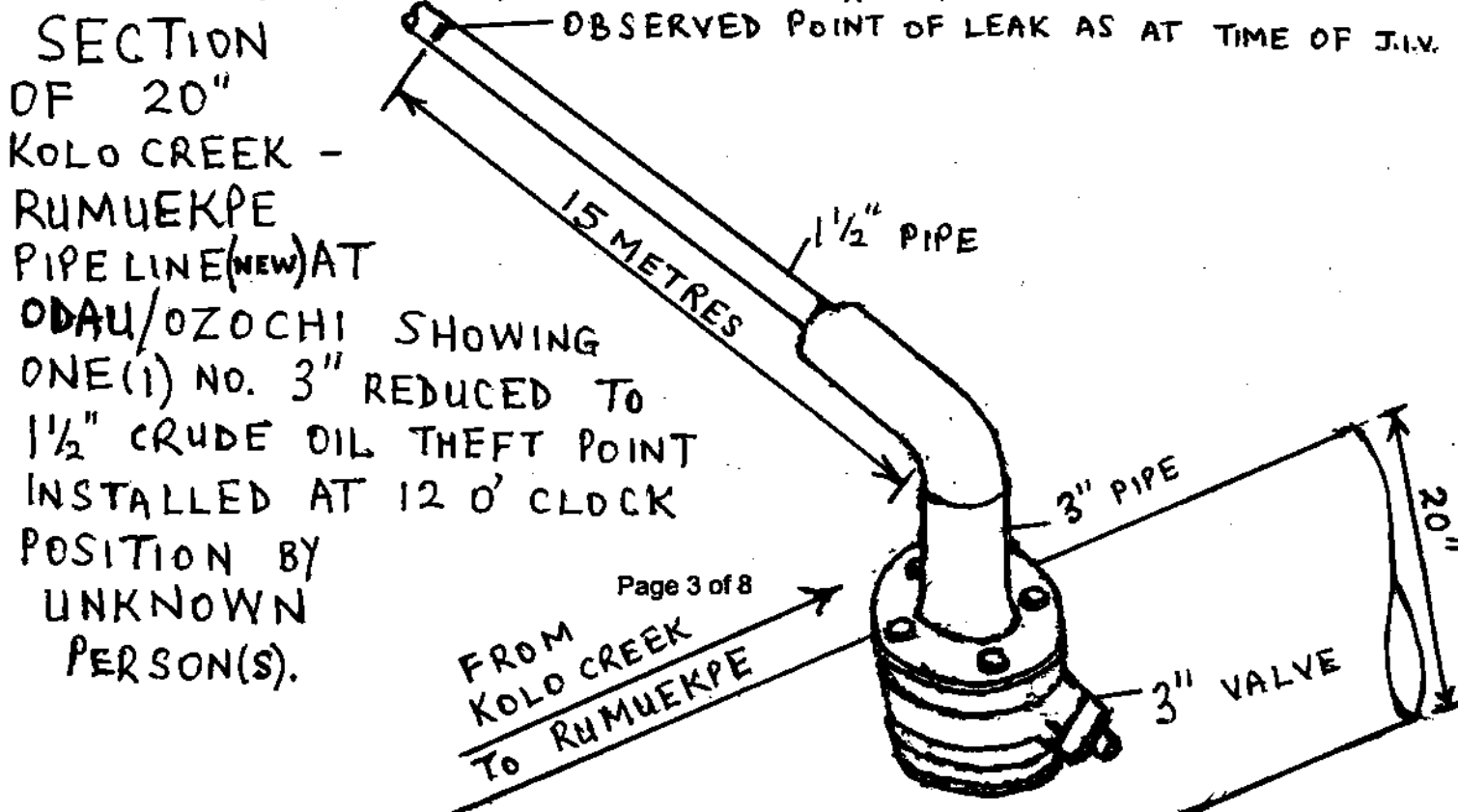
18. Fishing Nets/Fish Ponds

S/N	Nets/Ponds	Description	Quantity/Size	Comments
1	FISHING NET	FISHING NET	1 NO.	IMPACTED BY SPILL
2	FISH POND	FISH POND	3 NO.	IMPACTED BY SPILL

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 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)



APPENDIX A**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
501	4.9383	6.5002
500	4.93822	6.5003
502	4.93829	6.50043
503	4.93833	6.50039
504	4.93852	6.50049
505	4.93831	6.49991
506	4.93819	6.49991
507	4.93813	6.49991
508	4.93807	6.50006
509	4.93795	6.50027
510	4.93769	6.50044
523	4.9389	6.4998
524	4.93913	6.49969
525	4.93925	6.49952
526	4.93938	6.49948
527	4.93958	6.49927
528	4.93978	6.49916
529	4.93988	6.49902
530	4.94003	6.4989
531	4.94012	6.4988
532	4.94025	6.49867
533	4.94031	6.4986
534	4.94055	6.49837
536	4.93879	6.4999
538	4.93863	6.5
539	4.93865	6.50006
540	4.93867	6.50008
541	4.93865	6.50014
542	4.93848	6.50009
543	4.93844	6.50017
544	4.93839	6.50017
545	4.93842	6.50011
546	4.93856	6.50025
547	4.93847	6.5003
548	4.93849	6.5004
549	4.93849	6.50054
550	4.93849	6.5007
551	4.9385	6.50076
552	4.93851	6.50089
553	4.93848	6.501
554	4.93855	6.50152
555	4.9386	6.50199
556	4.93859	6.50199
557	4.93861	6.50239
558	4.93863	6.50236

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
559	4.93869	6.50225
560	4.9385	6.50242
561	4.93845	6.50234
562	4.9384	6.50233
563	4.93838	6.50234
564	4.93833	6.50233
565	4.93848	6.50245
566	4.93838	6.5025
567	4.93844	6.50249
568	4.93854	6.50249
569	4.93846	6.5025
570	4.93844	6.50265
571	4.93866	6.50256
572	4.93874	6.50256
573	4.9382	6.50239
574	4.9382	6.50236
575	4.93802	6.50241
576	4.938	6.50239
577	4.93775	6.50245
578	4.9377	6.50261
579	4.93745	6.50265
580	4.9373	6.50274
581	4.93717	6.50285
582	4.9371	6.50292
583	4.93674	6.50305
584	4.93641	6.50297
585	4.93622	6.5029
586	4.93567	6.50289
587	4.93561	6.50288
597	4.93806	6.49991
598	4.93811	6.50021
599	4.93799	6.50016
600	4.93792	6.5003
601	4.93777	6.50031
602	4.93763	6.50037
603	4.93751	6.50039
604	4.93732	6.50049
605	4.93734	6.50055
606	4.93737	6.50027
607	4.93722	6.50029
608	4.93708	6.50033
609	4.93701	6.50041
610	4.93691	6.50053
611	4.93696	6.50054
612	4.93677	6.50052

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
613	4.93669	6.50061
614	4.93664	6.5007
615	4.93643	6.5008
616	4.93629	6.5009
617	4.93627	6.50095
618	4.93609	6.5008
619	4.93611	6.50091
620	4.9384	6.50183
621	4.93834	6.50171
622	4.93814	6.50032
623	4.93815	6.50037
625	4.93879	6.50223
626	4.93919	6.50232
627	4.93938	6.50233
628	4.93953	6.5024
629	4.93955	6.50235
630	4.93964	6.50232
631	4.93968	6.50232
632	4.93975	6.50232
633	4.93982	6.50235
634	4.93992	6.50246
635	4.94001	6.50242
636	4.9401	6.50244
637	4.94014	6.50256
638	4.9402	6.50257
639	4.94016	6.50244
640	4.94045	6.50237
641	4.9406	6.50231
642	4.94082	6.50216
643	4.94113	6.5019
644	4.94149	6.5016
645	4.94151	6.50162
646	4.94199	6.5011
647	4.94214	6.50085
648	4.94218	6.5007
649	4.94223	6.50068
650	4.94326	6.49985
651	4.94343	6.49962
652	4.94357	6.49948
653	4.94364	6.49935
654	4.94372	6.49919
655	4.94369	6.49904
656	4.94369	6.49898
657	4.94365	6.49888
658	4.94363	6.49934

APPENDIX A (CONTINUED)

20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI

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IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]

PT_ID	LAT_Y	LONG_X
659	4.94194	6.50105
660	4.94029	6.50262
661	4.94053	6.50271
662	4.94068	6.50259
663	4.93824	6.50258
664	4.93798	6.50263
665	4.9379	6.50272
666	4.93784	6.50272
667	4.93783	6.50277
668	4.93768	6.50287
669	4.93762	6.5029
670	4.93763	6.50293
671	4.93766	6.50295
672	4.93769	6.50288
673	4.93763	6.50298
674	4.93757	6.50306
675	4.93746	6.50308
676	4.93745	6.50316
677	4.93735	6.50319
678	4.93729	6.5032
679	4.93715	6.50314
680	4.93669	6.50321
681	4.93661	6.5032
682	4.93607	6.5032
683	4.93603	6.50323
684	4.93594	6.50324
685	4.93593	6.50318
686	4.93577	6.50316
687	4.93573	6.50314
688	4.93573	6.50321
689	4.93566	6.50329
690	4.93556	6.50328
691	4.93547	6.50328
692	4.93546	6.50324
693	4.93541	6.50324
694	4.93532	6.50328
695	4.9352	6.50326
696	4.93511	6.50321
697	4.93507	6.50313
698	4.93492	6.50322
699	4.93478	6.50318
700	4.93451	6.50319
701	4.93438	6.50321
702	4.93432	6.5032
703	4.93421	6.50316

APPENDIX A (CONTINUED)

20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI

INCIDENT NO. 1969308

IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]

PT_ID	LAT_Y	LONG_X
704	4.93262	6.50287
705	4.93186	6.50274
706	4.93162	6.50285
707	4.93161	6.50284
708	4.93109	6.50262
709	4.93095	6.50259
710	4.93885	6.50291
711	4.94019	6.50262
712	4.94042	6.5026
713	4.94059	6.50259
714	4.94066	6.5025
715	4.9409	6.50236
716	4.94127	6.50212
717	4.94147	6.50198
718	4.94153	6.50191
719	4.94159	6.50188
720	4.9417	6.5017
721	4.94225	6.50121
722	4.94261	6.50098
723	4.94246	6.50087
724	4.94245	6.50084
725	4.94273	6.5006
726	4.94264	6.50055
727	4.94299	6.50029
728	4.94338	6.49994
729	4.9436	6.49966
730	4.94386	6.49936
731	4.94381	6.4992
732	4.94377	6.49794
733	4.94399	6.49768
734	4.95482	6.5074
735	4.95483	6.5074
736	4.95478	6.50735
737	4.95471	6.50723
738	4.95468	6.50707
739	4.95442	6.50673
740	4.95446	6.50666
741	4.95455	6.50651
742	4.95469	6.50643
743	4.9547	6.50616
744	4.95474	6.50611
745	4.95466	6.50603
746	4.95461	6.50601
747	4.95463	6.50593
748	4.95444	6.50599

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
749	4.95445	6.50615
750	4.95434	6.50612
751	4.95435	6.50622
752	4.95432	6.5064
753	4.95421	6.50629
754	4.95427	6.50624
755	4.95424	6.5061
756	4.95432	6.50603
757	4.95416	6.50587
758	4.9543	6.50575
759	4.95425	6.50563
760	4.95427	6.50553
761	4.95437	6.50552
762	4.95447	6.50544
763	4.95459	6.50549
764	4.95478	6.50757
765	4.95479	6.50762
766	4.95412	6.50533
767	4.95422	6.50505
768	4.95434	6.50494
769	4.95445	6.50481
770	4.95443	6.50476
771	4.95431	6.50466
772	4.95431	6.50465
773	4.95422	6.50459
774	4.9542	6.50462
775	4.95416	6.50456
776	4.9541	6.50458
777	4.95404	6.5045
778	4.95408	6.50444
779	4.95398	6.50443
780	4.95402	6.50438
781	4.95396	6.50448
782	4.95389	6.50442
783	4.95386	6.50432
784	4.95394	6.50428
785	4.95387	6.5043
786	4.95378	6.50427
787	4.95382	6.50422
788	4.95371	6.5043
789	4.95372	6.50418
790	4.9536	6.50416
791	4.9536	6.50418
792	4.95362	6.50416
793	4.95358	6.5042

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
794	4.95351	6.50413
795	4.9535	6.5041
796	4.95362	6.50406
797	4.9536	6.504
798	4.95356	6.504
799	4.9536	6.50398
800	4.95367	6.50395
801	4.95361	6.50392
802	4.95367	6.50382
803	4.95365	6.5038
804	4.9537	6.5038
805	4.95375	6.50381
806	4.95367	6.50368
807	4.95365	6.50369
808	4.95363	6.50372
809	4.95363	6.50373
810	4.95359	6.5036
811	4.9536	6.50353
812	4.95366	6.50345
813	4.95376	6.50346
814	4.95375	6.50344
815	4.95369	6.50342
816	4.95372	6.50328
817	4.95365	6.50321
818	4.95377	6.50321
819	4.95366	6.50316
820	4.9538	6.50309
821	4.95377	6.50299
822	4.95368	6.50293
823	4.95374	6.50286
824	4.9539	6.5027
825	4.95396	6.50263
826	4.95384	6.50269
827	4.95394	6.5026
828	4.95407	6.50243
829	4.95418	6.50245
830	4.95429	6.50239
831	4.95428	6.50235
832	4.95445	6.50231
833	4.95458	6.50232
834	4.95447	6.50238
835	4.95466	6.50225
836	4.95458	6.50483
837	4.95453	6.50491
838	4.95458	6.50492

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
839	4.95466	6.50495
840	4.95464	6.50499
841	4.95464	6.50506
842	4.95468	6.5051
843	4.95473	6.5051
844	4.95526	6.50488
845	4.95468	6.50519
846	4.95477	6.50529
847	4.95481	6.50529
848	4.95498	6.50542
849	4.95515	6.50523
850	4.95538	6.50506
851	4.9555	6.50524
852	4.95583	6.50511
853	4.95583	6.50529
854	4.95585	6.50554
855	4.95549	6.50524
856	4.95546	6.50526
857	4.95539	6.50532
858	4.95539	6.50534
859	4.95534	6.50539
860	4.95532	6.50538
861	4.95521	6.50539
862	4.95526	6.50598
863	4.95491	6.50636
864	4.95481	6.5064
865	4.95479	6.50639
866	4.95477	6.50642
867	4.95477	6.50641
868	4.95479	6.50648
869	4.95468	6.5066
870	4.95456	6.5067
871	4.95454	6.50685
872	4.95452	6.50684
873	4.95471	6.507
874	4.95469	6.507
875	4.95475	6.50721
876	4.95483	6.50752
877	4.95484	6.50764
878	4.95692	6.50838
879	4.95697	6.50825
880	4.96509	6.5122
881	4.96517	6.51207
882	4.9548	6.50764
883	4.95493	6.50805

APPENDIX A (CONTINUED)

20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI

INCIDENT NO. 1969308

IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]

PT_ID	LAT_Y	LONG_X
884	4.95483	6.50811
885	4.95487	6.50821
886	4.95478	6.50834
887	4.9548	6.50836
888	4.95465	6.50854
889	4.95467	6.50856
890	4.95471	6.5087
891	4.95477	6.50877
892	4.95471	6.50892
893	4.95468	6.50903
894	4.95463	6.50898
895	4.95469	6.50902
896	4.95453	6.50926
897	4.95443	6.50926
898	4.95448	6.50928
899	4.95446	6.5093
900	4.95438	6.50935
901	4.95433	6.5093
902	4.95434	6.50941
903	4.95423	6.50965
904	4.95433	6.50987
905	4.95436	6.50983
906	4.95433	6.50989
907	4.95438	6.50993
908	4.95453	6.50986
909	4.95455	6.50996
910	4.95469	6.51002
911	4.95481	6.51007
912	4.95483	6.51022
913	4.95491	6.51029
914	4.95503	6.51034
915	4.95503	6.51039
916	4.95513	6.51047
917	4.95521	6.51061
918	4.95542	6.51062
919	4.95534	6.51049
920	4.95545	6.51051
921	4.95553	6.51062
922	4.95555	6.51056
923	4.95567	6.51073
924	4.95563	6.51081
925	4.95574	6.51082
926	4.95576	6.51094
927	4.95581	6.51089
928	4.95584	6.51085

APPENDIX A (CONTINUED)

20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI

INCIDENT NO. 1969308

IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]

PT_ID	LAT_Y	LONG_X
929	4.95596	6.51091
930	4.95596	6.51089
931	4.95606	6.51088
932	4.95608	6.51087
933	4.95615	6.5109
934	4.95618	6.51098
935	4.95629	6.51101
936	4.95641	6.51098
937	4.95653	6.51103
938	4.95659	6.51098
939	4.95669	6.51099
940	4.95672	6.51099
941	4.95679	6.51098
942	4.95678	6.51102
943	4.95692	6.51108
944	4.95695	6.51112
945	4.95701	6.51108
946	4.95704	6.51112
947	4.95724	6.51105
948	4.95726	6.51107
949	4.95728	6.51112
950	4.95739	6.51125
951	4.9574	6.51124
952	4.95742	6.51135
953	4.95741	6.51135
954	4.95745	6.51132
955	4.95746	6.51148
956	4.95754	6.51148
957	4.95756	6.51145
958	4.95764	6.51154
959	4.95772	6.51161
962	4.96445	6.51258
100	4.93868	6.50152
101	4.93856	6.50101
102	4.93843	6.50089
103	4.93843	6.50077
104	4.93842	6.5007
105	4.9384	6.50054
106	4.93843	6.5004
107	4.93854	6.50032
108	4.93849	6.50049
109	4.93881	6.49993
110	4.94054	6.49836
111	4.9403	6.49859
112	4.94024	6.49866

APPENDIX A (CONTINUED)**20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI****INCIDENT NO. 1969308****IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]**

PT_ID	LAT_Y	LONG_X
113	4.94011	6.49879
114	4.94001	6.49889
115	4.93987	6.49901
116	4.93977	6.49914
117	4.93956	6.49925
118	4.93937	6.49947
119	4.93924	6.4995
120	4.93912	6.49968
121	4.93889	6.49979
122	4.93644	6.50084
123	4.93644	6.50091
124	4.93666	6.50085
125	4.93733	6.50071
126	4.93788	6.5004
127	4.937	6.50073
128	4.93762	6.50061
129	4.9379	6.50049
130	4.94366	6.49793
131	4.94359	6.49835
132	4.93974	6.50239
133	4.93938	6.50238
134	4.94001	6.50258
135	4.93973	6.50252
136	4.93981	6.5024
137	4.93968	6.50239
138	4.93915	6.50287
139	4.93623	6.50304
140	4.93642	6.50309
141	4.93675	6.50314
142	4.93712	6.503
143	4.93722	6.50294
144	4.93531	6.50294
145	4.9348	6.5029
146	4.93426	6.50284
147	4.94378	6.4992
148	4.94377	6.49941
149	4.94339	6.49988
150	4.94361	6.49953
151	4.94329	6.49989
152	4.94227	6.50077
153	4.94218	6.5009
154	4.94202	6.50115
155	4.94117	6.50194
156	4.94083	6.50219
157	4.9406	6.50236

APPENDIX A (CONTINUED)

20" KOLO CREEK - RUMUEKPE PIPELINE AT ODAU/OZOCHI

INCIDENT NO. 1969308

IMPACTED AREA COORDINATES (WGS 84) [SHARED WITH INCIDENT NO. 1858269]

PT_ID	LAT_Y	LONG_X
158	4.94045	6.50246
159	4.9392	6.50246
160	4.94372	6.4984
161	4.9438	6.49888
162	4.94358	6.49964
163	4.94297	6.50027
164	4.94163	6.50163
165	4.94022	6.50261
166	4.94	6.50254
167	4.93974	6.5025
168	4.93922	6.50244
169	4.93882	6.50252
170	4.93888	6.50277
171	4.93905	6.50274
172	4.93905	6.50249
173	4.94372	6.4994
174	4.94378	6.49932
175	4.9438	6.4992
176	4.95459	6.50684
177	4.95471	6.50698
178	4.95469	6.50664
179	4.9554	6.506
180	4.95456	6.50683
181	4.95464	6.50672
182	4.95482	6.50651

JOINT INVESTIGATION REPORT

INCIDENT NO: 1969308 JIV report S/N: 0915

G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 9.4634 Ha (AREA OF IMPACT SHARED WITH INC. NO. 1858269)
- Impact within R.O.W YES
- Impact outside R.O.W YES

b. Volume of oil recovered before completion of JIV (V_{recd}):

Recovered oil V_{recd} :	NIL	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

NIL	Barrels
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c. Net Estimated Spilled Volume $V_{est}(bbls)^* = 2,025.7$

Estimated Reported Volume $V_{rpt}(bbls) = 2,026$ 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 in the box below:

IN ADHERENCE TO THE SPDC "WORK INSTRUCTIONS FOR JOINT INVESTIGATION OF OIL SPILL INCIDENTS," GIVEN THAT THIS SPILL INCIDENT (ID 1969308) SUPERIMPOSES A PREVIOUSLY EXISTING ONE (ID 1858269), THE NET VOLUME YET TO BE RECOVERED FROM THE PREVIOUS SPILL (ESTIMATED AS 54 BARRELS) WAS DEDUCTED FROM THE NET CUMULATIVE SPILL VOLUME ESTIMATE OF 2,079.7 BARRELS TO ARRIVE AT THE NET SPILL VOLUME ESTIMATE FOR THE RECENT SPILL (ID 1969308). THUS, $2,079.7 - 54 = 2,025.7$ BARRELS.

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:(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 = 15.3 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 6e (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.

JOINT INVESTIGATION REPORT

INCIDENT NO: 1969308 JIV report S/N: 0915

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">• Host Community: <input checked="" type="checkbox"/>• Department of Petroleum Resources [DPR]: <input checked="" 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 checked="" type="checkbox"/> <p style="text-align: right;"><i>Tick as applicable</i></p>
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JOINT INVESTIGATION REPORT

INCIDENT NO: 1969308 JIV report S/N: 0915

f. Appendix 1: Overview sketch of the site

