Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	NRM2015753993
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	+-105 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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State of New Mexico
Oil Conservation Division

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Robbie Runnels_____ Title: Environmental Specialist_____

Signature:_____  _____ Date: __4-9-21_____

email: __runnels@mewbourne.com_____ Telephone: _575-393-5905_____

OCD Only

Received by: Cristina Eads Date: 01/07/2021

State of New Mexico
Oil Conservation Division

Incident ID	NRM2015753993
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Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Robbie Runnels_____ Title: _Environmental Specialist_____

Signature: ___  _____ Date: __4-9-21_____

email: __rrunnels@mewbourne.com_____ Telephone: __575-393-5905_____

OCD Only

Received by: Cristina Eads Date: 01/07/2021

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☑ Deferral Approved

Signature:  Date: 04/09/2021

Trinity Oilfield Services & Rentals, LLC

Environmental Site Summary & Closure Request

Company: Mewbourne Oil Company **Address:** P.O. Box 2570, Hobbs, NM 88241 **Telephone #:** (575) 393-5905

Site Name: QPQBSU **NMOCD Reference#:** NRM2015753993

Surface Owner: US Bureau of Land Management (BLM) **Mineral Owner:** US Bureau of Land Management (BLM)

Unit Letter: N **Section:** 23 **Township:** 18S **Range:** 32E **County:** Lea **GPS Coordinates:** 32.727610 **N** -103.739288 **W**

Date/Time of Release: 5/30/2020 **Type of Release:** ☑ **Crude Oil** ☑ **Produced Water**

Volume(s) Released: 30 bbls Crude Oil & 100 bbls Produced Water **Volume(s) Recovered:** 5 bbls Crude Oil & 15 bbls Produced Water

Closure Criteria for Impacted Soil (mg/kg; See Appendix C, "Closure Criteria Justification"):

Benzene: 10 **BTEX:** 50 **GRO+DRO:** 1,000 **TPH:** ☐ **100** ☑ **2,500** **Chloride:** ☐ **600** ☐ **10,000** ☑ **20,000**

Background Information:

On May 30, 2020, Mewbourne Oil Company (Mewbourne) discovered a release at the QPQBSU Water Flood facility. The hose coming off the suction into the discharge side failed, resulting in the release of approximately 30 barrels (bbls) of crude oil and 100 bbls of produced water. During initial response activities, the hose was replaced, and a vacuum truck was utilized to recover approximately 5 bbls of crude oil and 15 bbls of produced water. The release affected an area of the facility pad and access road measuring approximately 9,884 square feet, as well as an area of the adjacent pasture measuring approximately 15,625 square feet.

The release was immediately reported to the New Mexico Oil Conservation Division's (NMOCD) Artesia District Office on June 2, 2020. The NMOCD "Release Notification & Corrective Action" form (C-141) is provided as Appendix A. A "Site Location Map" is provided as Figure 1.

Summary of Field Activities:

On June 1, 2020, Trinity Oilfield Services & Rentals, LLC (Trinity), commenced delineation activities at the site. On June 1 and 2, 2020, a hand auger was utilized to advance a series of 18 boreholes (SP-1 through SP-18) at the site to investigate the vertical extent of impacted soil. The auger holes were advanced to total depths ranging from 1 to 3 feet below ground surface (bgs). Soil samples were collected at 1-foot vertical intervals and field-screened with a chloride test kit and olfactory/visual senses. Field test results indicated additional vertical delineation was required in some areas.

On June 2, 2020, excavation of impacted soil commenced. A chloride test kit and olfactory/visual senses were utilized to determine the horizontal extent of impacted soil and to guide the excavation. From June 2 through July 21, 2020, approximately 2,780 cubic yards of impacted soil was excavated and transported to R360 (NMOCD Permit #NM-01-00061), for disposal. Prior to disposal, excavated soil was stockpiled on-site on 6-mil plastic to prevent leaching of contaminants into the vadose zone.

On June 8, 2020, five (5) composite soil samples (SP-1 Comp., SP-2 Comp., SP-3, Comp., SP-4 Comp., and SP-5 Comp.) were collected from the floor of the excavation on the facility pad and submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis of chloride, total petroleum hydrocarbons (TPH), and benzene, toluene, ethylbenzene, and total xylene (BTEX) concentrations using Environmental Protection Agency (EPA) Methods 300.0, SW 846-8015 M/D, and SW 846-8021B, respectively. Laboratory analytical results indicated chloride, TPH, and BTEX concentrations in all soil samples were below the NMOCD Closure Criteria established for the site. However, additional vertical delineation was required in the area represented by soil sample SP-4 Comp.

On June 10, 2020, nine (9) composite soil samples (SP-7 Floor Comp., SP-8 Floor Comp., SP-10 Floor Comp., SP-11 Floor Comp., SP-15 Floor Comp., SP-16 Floor Comp., SP-17 Floor Comp., SP-18 W. Comp., and SP-18 Floor Comp.) were collected from the floor and sidewalls of the excavations in the pasture and submitted to the laboratory for analysis. Laboratory analytical results indicated chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site. However, additional vertical delineation was required in the areas represented

Trinity Oilfield Services & Rentals, LLC

Environmental Site Summary & Closure Request

Summary of Field Activities (cont.):

by soil samples SP-7 Floor Comp., SP-8 Floor Comp., SP-15 Floor Comp., and SP-16 Floor Comp.

On June 11, 2020, eight (8) composite soil samples (SP-6 Floor Comp., SP-7 E. Comp., SP-7 W. Comp., SP-8 E. Comp., SP-8 W. Comp., SP-12 Floor Comp., SP-13 Floor Comp., and SP-14 Floor Comp.) were collected from the floor and sidewalls of the excavations in the pasture and submitted to the laboratory for analysis. Additional delineation was also conducted in the areas represented by auger holes SP-1 through SP-8, SP-12 through SP-14, and SP-16 through SP-18 to further investigate the vertical extent of impacted soil in those areas. Soil samples were collected at 1- to 2-foot vertical intervals and field-screened with a chloride test kit and olfactory/visual senses. Representative confirmation samples (SP-1 @ 2', SP-2 @ 3', SP-3 @ 3', SP-4 @ 2', SP-5 @ 3', SP-6 @ 1', SP-7 @ 8', SP-8 @ 8', SP-12 @ 2', SP-13 @ 3', SP-14 @ 3', SP-16 @ 8', SP-17 @ 6', and SP-18 @ 2') were submitted to the laboratory for analysis. Laboratory analytical results indicated 1.) chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site, and 2.) vertical delineation in the areas represented by auger holes SP-1 through SP-8, SP-12 through SP-14, and SP-16 through SP-18 had been achieved.

On June 15, 2020, two (2) composite soil samples (SP-15 N. Comp. and SP-15 S. Comp.) were collected from the sidewalls of the excavation in the pasture and submitted to the laboratory for analysis. Additional delineation was also conducted in the area represented by auger hole SP-15 to further investigate the vertical extent of impacted soil in that area. Soil samples were collected at 1- to 2-foot vertical intervals and field-screened with a chloride test kit and olfactory/visual senses. A representative confirmation sample (SP-15 @ 8') was submitted to the laboratory for analysis. Laboratory analytical results indicated 1.) chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site, and 2.) vertical delineation in the area represented by auger hole SP-15 had been achieved.

On June 16, 2020, eleven (11) composite soil samples (SP-9 N. Comp., SP-9 S. Comp., SP-9 E. Comp., SP-9 Floor Comp., SP-15 E. Comp., SP-16 N. Comp., SP-16 S. Comp., SP-17 N. Comp., SP-17 S. Comp., SP-18 N. Comp., and SP-18 S. Comp.) were collected from the floor and sidewalls of the excavations in the pasture and submitted to the laboratory for analysis. Laboratory analytical results indicated the chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site, but additional horizontal delineation and excavation was required in the areas represented by soil samples SP-9 N. Comp., SP-9 E. Comp., and SP-16 N. Comp. However, additional remediation activities in the area represented by soil sample SP-16 N. Comp. were precluded by the presence of the caliche access road and several active pipelines.

On June 17, 2020, six (6) composite soil samples (SP-10 @ 14', SP-10 N. Comp., SP-10 S. Comp., SP-11 @ 14', SP-11 N. Comp., and SP-11 S. Comp.) were collected from the floor and sidewalls of the excavations in the pasture and submitted to the laboratory for analysis. Laboratory analytical results indicated the chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site, but additional horizontal delineation and excavation was required in the area represented by soil sample SP-11 S. Comp.

On June 30, 2020, the excavation was advanced to the extent practicable in the areas represented by soil samples SP-9 N. Comp. and SP-9 E. Comp. Two (2) additional composite samples (SP-9 N. and SP-9 E.) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis. Additional delineation was conducted in the areas represented by auger holes SP-1 through SP-4 to further investigate the vertical extent of impacted soil in those areas. A hand auger was also utilized to advance a borehole (SP-11 S.) adjacent to the caliche access road to the south of the area represented by soil sample SP-11 S. Comp to further investigate the horizontal extent of impacted soil in that area. Laboratory analytical results indicated the chloride, TPH, and BTEX concentrations in all soil samples were below the Closure Criteria established for the site, but additional horizontal delineation and excavation was required in the area represented by soil sample SP-11 S. Comp. However, additional remediation activities in that area were precluded by the presence of the caliche access road and several active pipelines.

Locations of the auger holes and composite soil samples are depicted in Figure 2, "Site Plan". Laboratory analytical results are summarized in Table 1, and analytical reports are provided in Appendix D. Field test results are provided in Appendix E.

Trinity Oilfield Services & Rentals, LLC

Environmental Site Summary & Closure Request

Deferral, Variance & Site Closure Requests:

Soil samples collected from the impacted area were analyzed by an NMOCD-approved laboratory, and concentrations of chloride, TPH, and BTEX were below the Closure Criteria listed in Table I of Section 19.15.29.12 of the New Mexico Administrative Code (NMAC) for a site where depth to groundwater is greater than 100 feet (see Appendix C, "Closure Criteria Justification", for more information). However, the chloride concentrations in composite soil samples SP-4 Comp., SP-11 S. Comp., and SP-16 N. Comp. were above the 600 mg/kg limit specified in Section 19.15.29.13.D(1) NMAC. Similarly, the TPH concentrations in composite soil samples SP-9 N. and SP-9 E. were slightly above the limit of 100 mg/kg (i.e., 114 and 116 mg/kg, respectively). Additional delineation and excavation in those five (5) areas was precluded by the presence of several active pipelines, as well as the caliche access road, which is the only thoroughfare to an active well and the QPQASU Consolidated Tank Battery to the west of the release site. Limiting access to both the production well and the tank battery would have placed an undue financial burden on Mewbourne and possibly introduced an environmental hazard, since routine inspection, maintenance, and repairs would not have been possible.

Pursuant to Section 19.15.29.12.C(2) NMAC, leaving the contamination in the areas represented by soil samples SP-4 Comp., SP-9 N., SP-9 S., SP-11 S. Comp., and SP-16 N. Comp. in-situ "does not cause an imminent risk to human health, the environment, or ground water". Therefore, Trinity, on behalf of Mewbourne, hereby requests closure of the release site, with deferral of remediation activities in the areas represented by soil samples SP-4 Comp., SP-11 S. Comp., and SP-16 N. Comp. until such time that the QPQBSU Water Flood and QPQASU Consolidated Tank Battery facilities and associated well, pipes, appurtenances, etc., are decommissioned and/or abandoned. A variance from the requirements of Sections 19.15.29.12.C(3) and 19.15.29.13.D(1) NMAC is also requested to leave the minimal TPH contamination in the areas represented by soil samples SP-9 N. and SP-9 S. in-situ, with no further remediation activity to be conducted.

Enclosures:

Figure 1: Site Location Map
Figure 2: Sample Location Map
Table 1: Concentrations of Benzene, BTEX, TPH & Chloride in Soil
Appendix A: Release Notification & Corrective Action (Form C-141)
Appendix B: Photographs
Appendix C: Closure Criteria Justification
Appendix D: Laboratory Analytical Results
Appendix E: Field Notes

10/29/2020
Ben J. Arguijo
Project Manager

Figures

0.5 0.25 0 0.5
Distance in Miles

Figure 1
Site Location Map
Mewbourne Oil Company
QPQBSU
Lea County, New Mexico
NMOCD Reference #: NRM2015753993

TRINITY
OILFIELD SERVICES

Trinity Oilfield Services & Rentals, LLC
P.O. Box 2587
Hobbs, NM 88241

Drawn By: BJA	Checked By: JEH
August 26, 2020	Scale: 1" = 0.5mi

Legend:

- Auger Hole
- Composite Floor Sample
- Composite Wall Sample

Figure
Sample Location Map
Mewbourne Oil Company
QPQBSU
Lea County, New Mexico
NMOCD Reference #: NRM2015753993

TRINITY OILFIELD SERVICES

Trinity Oilfield Services & Rentals, LLC
P.O. Box 2587
Hobbs, NM 88241

Drawn By: BJA	Checked By: JEH
October 23, 2020	Scale: 1" = 40'

25 12.5 0 25
Distance in Feet

Tables

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

MEWBOURNE OIL COMPANY
QPQBSU
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: NRM2015753993

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SAMPLE TYPE	SOIL STATUS	EPA SW-846 Method 8021B				EPA SW-846 Method 8015M					EPA 300
					BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	GRO C6-C12 (mg/kg)	DRO C12-C28 (mg/kg)	GRO+ DRO (mg/kg)	MRO C28-C35 (mg/kg)	TPH C6-C35 (mg/kg)	CHLORIDE (mg/kg)
NMOCD Closure Limits					**10**	**NE**	**NE**	**NE**	**NE**	**NE**	**1,000**	**NE**	**2,500**	**20,000**
SP-1 @ 2'	2'	6/11/2020	Grab	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.4	<10	<47	<47	3,800
SP-1 @ 3'	3'	6/30/2020	Grab	In-Situ	<0.024	<0.48	<0.48	<0.97	<4.8	<9.6	<9.6	<48	<48	370
SP-1 Comp.	0.5' - 1'	6/8/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.9	<9.9	<49	<49	270
SP-2 @ 3'	3'	6/11/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.6	<9.6	<48	<48	6,400
SP-2 @ 6'	6'	6/30/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.7	<9.7	<48	<48	680
SP-2 Comp.	0.5' - 1'	6/8/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	<9.3	<9.3	<46	<46	270
SP-3 @ 3'	3'	6/11/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.6	<9.6	<48	<48	2,200
SP-3 @ 4'	4'	6/30/2020	Grab	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.7	<9.7	<48	<48	480
SP-3 Comp.	0.5' - 1'	6/8/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.7	<9.7	<48	<48	280
SP-4 @ 2'	2'	6/11/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.3	<9.3	<47	<47	9,100
SP-4 @ 3'	3'	6/30/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	<9.9	<9.9	<50	<50	490
SP-4 Comp.	0.5' - 1'	6/8/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.9	<9.9	<50	<50	6,800
SP-5 @ 3'	3'	6/11/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.4	<9.4	<47	<47	220
SP-5 Comp.	0.5' - 1'	6/8/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	<9.7	<9.7	<49	<49	270
SP-6 @ 1'	1'	6/11/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	26	26	<47	26	<60
SP-6 Floor Comp.	0.5' - 1'	6/11/2020	Composite	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.8	<9.8	<49	<49	62
SP-7 @ 8'	8'	6/11/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	12	12	64	76	130
SP-7 E. Comp.	2'	6/11/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.8	<9.8	<49	<49	<60
SP-7 W. Comp.	2'	6/11/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.9	<9.9	<49	<49	<60
SP-7 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.098	<4.9	21	21	<48	21	5,600
SP-8 @ 8'	8'	6/11/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	18	18	72	89	120
SP-8 E. Comp.	2'	6/11/2020	Composite	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.6	<9.6	<48	<48	<60
SP-8 W. Comp.	2'	6/11/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.5	<9.5	<48	<48	<60
SP-8 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.6	<9.6	<48	<48	5,200

NE = Not Established
- = Not analyzed
Concentrations in **BOLD** exceed the NMOCD Closure Limit.

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

MEWBOURNE OIL COMPANY
QPQBSU
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: NRM2015753993

TRINITY OILFIELD SERVICES

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SAMPLE TYPE	SOIL STATUS	EPA SW-846 Method 8021B				EPA SW-846 Method 8015M					EPA 300
					BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	GRO C6-C12 (mg/kg)	DRO C12-C28 (mg/kg)	GRO+ DRO (mg/kg)	MRO C28-C35 (mg/kg)	TPH C6-C35 (mg/kg)	CHLORIDE (mg/kg)
NMOCD Closure Limits					**10**	**NE**	**NE**	**NE**	**NE**	**NE**	**1,000**	**NE**	**2,500**	**20,000**
SP-9 N. Comp.	2'	6/16/2020	Composite	Excavated	<0.024	<0.049	<0.049	<0.098	<4.9	25	25	130	160	260
SP-9 N.	2'	6/30/2020	Composite	In-Situ	<0.023	<0.046	<0.046	<0.092	<4.6	55	55	59	114	180
SP-9 S. Comp.	2'	6/16/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.7	<9.7	<49	<49	110
SP-9 E. Comp.	2'	6/16/2020	Composite	Excavated	<0.024	<0.049	<0.049	<0.098	<4.9	30	30	160	190	290
SP-9 E.	2'	6/30/2020	Composite	Excavated	<0.023	<0.046	<0.046	<0.092	<4.6	56	56	60	116	190
SP-9 Floor Comp.	4'	6/16/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.098	<4.9	<9.6	<9.6	<48	<48	430
SP-10 @ 14'	14'	6/17/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<10	<10	<50	<50	<60
SP-10 N. Comp.	2'	6/17/2020	Composite	In-Situ	<0.024	<0.048	<0.048	<0.097	<4.8	<9.9	<9.9	<49	<49	<60
SP-10 S. Comp.	2'	6/17/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.9	<9.9	<49	<49	340
SP-10 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	<9.9	<9.9	<49	<49	220
SP-11 @ 14'	14'	6/17/2020	Grab	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.6	<9.6	<48	<48	<60
SP-11 N. Comp.	2'	6/17/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.6	<9.6	<48	<48	<60
SP-11 S. Comp.	2'	6/17/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	<9.5	<9.5	<47	<47	2,400
SP-11 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.9	<9.9	<50	<50	240
SP-11 S. @ 2'	2'	6/30/2020	Grab	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	52	52	51	103	870
SP-12 @ 2'	2'	6/11/2020	Grab	Excavated	<0.024	<0.049	<0.049	<0.097	<4.9	<9.8	<9.8	<49	<49	<60
SP-12 Floor Comp.	0.5' - 1'	6/11/2020	Composite	In-Situ	<0.024	<0.049	<0.049	<0.098	<4.9	<9.8	<9.8	<49	<49	4,300
SP-13 @ 3'	3'	6/11/2020	Grab	Excavated	<0.025	<0.049	<0.049	<0.098	<4.9	<9.7	<9.7	<49	<49	<60
SP-13 Floor Comp.	0.5' - 1'	6/11/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.4	<9.4	<47	<47	9,400
SP-14 @ 3'	3'	6/11/2020	Grab	Excavated	<0.025	<0.050	<0.050	<0.099	<5.0	<9.8	<9.8	<49	<49	<60
SP-14 Floor Comp.	0.5' - 1'	6/11/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	<9.1	<9.1	<45	<45	2,300
SP-15 @ 8'	8'	6/15/2020	Grab	In-Situ	<0.025	<0.050	<0.050	<0.099	<5.0	32	32	56	88	1,700
SP-15 N.Comp.	2'	6/15/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.098	<4.9	<9.1	<9.1	<45	<45	290
SP-15 S. Comp.	2'	6/15/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.4	<9.4	<47	<47	<59
SP-15 E. Comp.	2'	6/16/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.098	<4.9	<9.8	<9.8	<49	<49	<60
SP-15 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.025	<0.049	<0.049	<0.099	<4.9	260	260	320	580	7,400

NE = Not Established
- = Not analyzed
Concentrations in **BOLD** exceed the NMOCD Closure Limit.

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

MEWBOURNE OIL COMPANY
QPQBSU
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: NRM2015753993

TRINITY OILFIELD SERVICES

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SAMPLE TYPE	SOIL STATUS	EPA SW-846 Method 8021B				EPA SW-846 Method 8015M					EPA 300
					BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	GRO C6-C12 (mg/kg)	DRO C12-C28 (mg/kg)	GRO+ DRO (mg/kg)	MRO C28-C35 (mg/kg)	TPH C6-C35 (mg/kg)	CHLORIDE (mg/kg)
NMOCD Closure Limits					**10**	**NE**	**NE**	**NE**	**NE**	**NE**	**1,000**	**NE**	**2,500**	**20,000**
SP-16 @ 8'	8'	6/11/2020	Grab	In-Situ	<0.025	0.34	0.62	1.6	24	660	690	340	1,000	<60
SP-16 N. Comp.	2'	6/16/2020	Composite	In-Situ	<0.023	<0.046	<0.046	<0.093	<4.6	24	24	<48	24	3,800
SP-16 S. Comp.	2'	6/16/2020	Composite	In-Situ	<0.024	<0.048	<0.048	<0.095	<4.8	<9.6	<9.6	<48	<48	240
SP-16 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.025	<0.050	<0.050	<0.10	<5.0	<9.8	<9.8	<49	<49	5,000
SP-17 @ 6'	6'	6/11/2020	Grab	In-Situ	<0.12	0.42	0.57	1.3	14	360	380	180	560	<60
SP-17 N. Comp.	2'	6/16/2020	Composite	In-Situ	<0.024	<0.048	<0.048	<0.096	<4.8	<9.5	<9.5	<48	<48	<59
SP-17 S. Comp.	2'	6/16/2020	Composite	In-Situ	<0.024	<0.048	<0.048	<0.095	<4.8	<9.6	<9.6	<48	<48	240
SP-17 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.024	<0.047	<0.047	<0.095	<4.7	<9.5	<9.5	<48	<48	<60
SP-18 @ 2'	2'	6/11/2020	Grab	Excavated	<0.024	<0.048	<0.048	0.1	<4.8	<9.8	<9.8	<49	<49	<60
SP-18 N. Comp.	2'	6/16/2020	Composite	In-Situ	<0.023	<0.046	<0.046	<0.092	<4.6	<9.7	<9.7	<48	<48	<60
SP-18 S. Comp.	2'	6/16/2020	Composite	In-Situ	<0.023	<0.047	<0.047	<0.094	<4.7	<9.3	<9.3	<46	<46	<60
SP-18 W. Comp.	2'	6/10/2020	Composite	In-Situ	<0.024	<0.048	<0.048	<0.097	<4.8	11	11	<49	11	350
SP-18 Floor Comp.	4'	6/10/2020	Composite	In-Situ	<0.024	<0.047	<0.047	<0.094	<4.7	<9.4	<9.4	<47	<47	120

NE = Not Established
- = Not analyzed
Concentrations in **BOLD** exceed the NMOCD Closure Limit.

Appendices

Appendix A
Release Notification & Corrective Action (Form C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2015753993
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Mewbourne Oil Company	OGRID 14744
Contact Name Robbie Runnels	Contact Telephone 575-393-5905
Contact email rrunnels@mewbourne.com	Incident # *(assigned by OCD)*
Contact mailing address P.O. Box 5270, Hobbs, NM 88241	

Location of Release Source

Latitude 32.727610 Longitude -103.739288
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: QPQBSU	Site Type: Recycle
Date Release Discovered 5/30/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
N	23	18S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 30	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 100	Volume Recovered (bbls) 15
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release – The hose coming off the suction into the discharge side failed.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2015753993
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release was larger than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Robbie Runnels via email to Victoria Venegas and Jim Griswold.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why: N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Robbie Runnels_____ Title: _Environmental Specialist_____

Signature: ___  _____ Date: _6/2/2020_____

email: __rrunnels@mewbourne.com_____ Telephone: _575-393-5905_____

OCD Only

Received by: _____ Date: _____

Appendix B
Photographs

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Aerial Photograph of Release Site

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

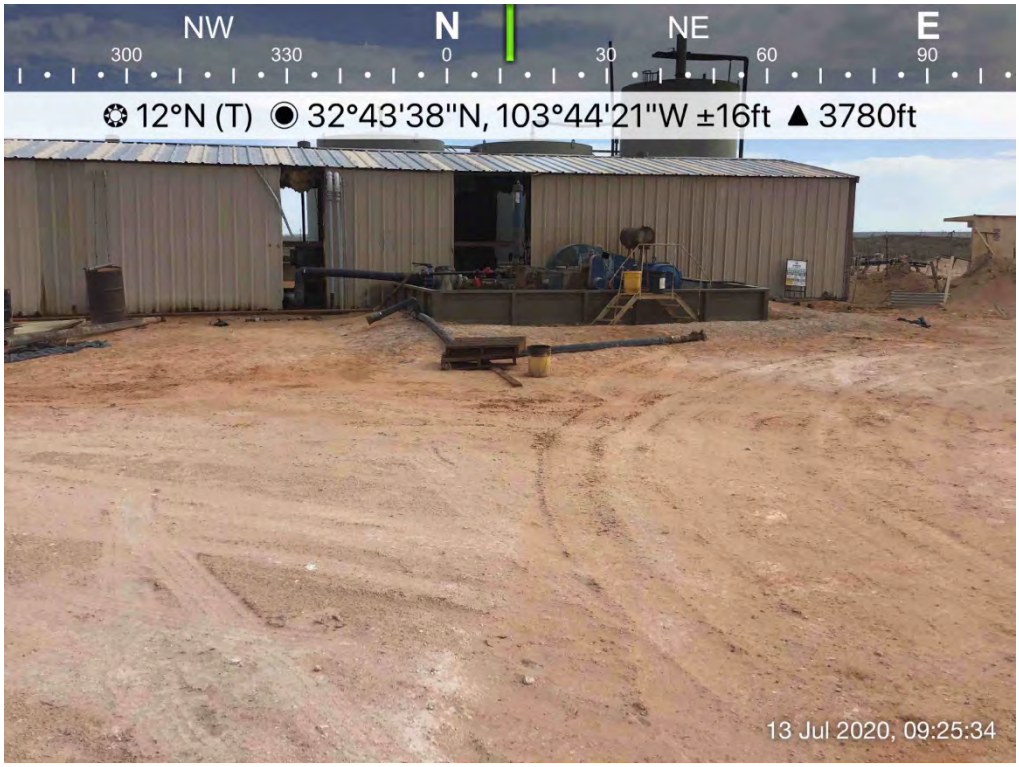
Excavation – Near Point of Release (Looking East)

Excavation (Looking East)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking East-Northeast)



Excavation (Looking North)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (North-Northwest)

Excavation (Looking Northwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking West- Northwest)

Excavation (Looking West)

Mewbourne Oil Company – QPQBSU

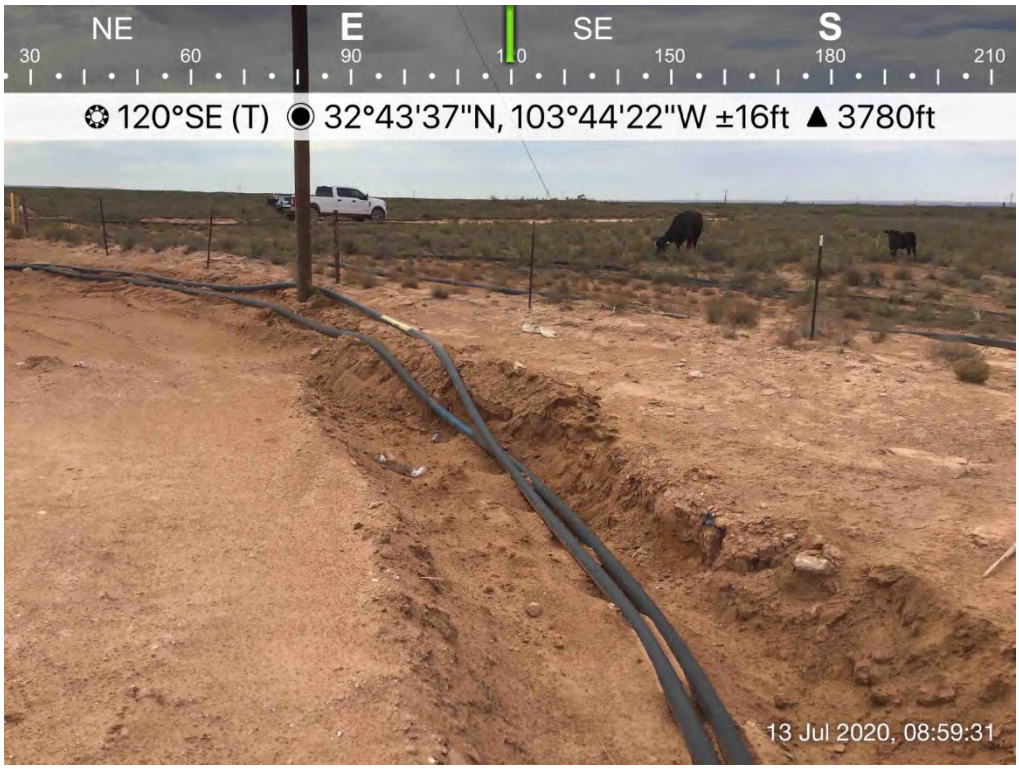
Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking South)

Excavation (Looking Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E



Excavation (Looking East-Southeast)

Excavation (Looking Northwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

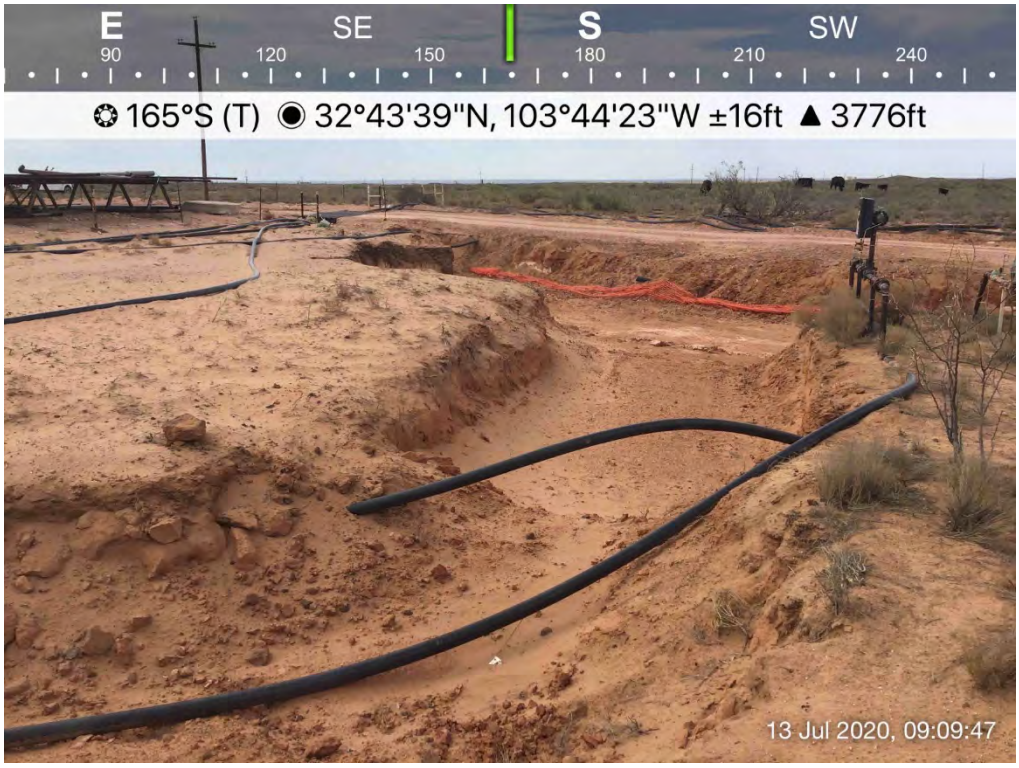
Excavation (Looking North-Northwest)

Excavation (Looking North)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Northwest)

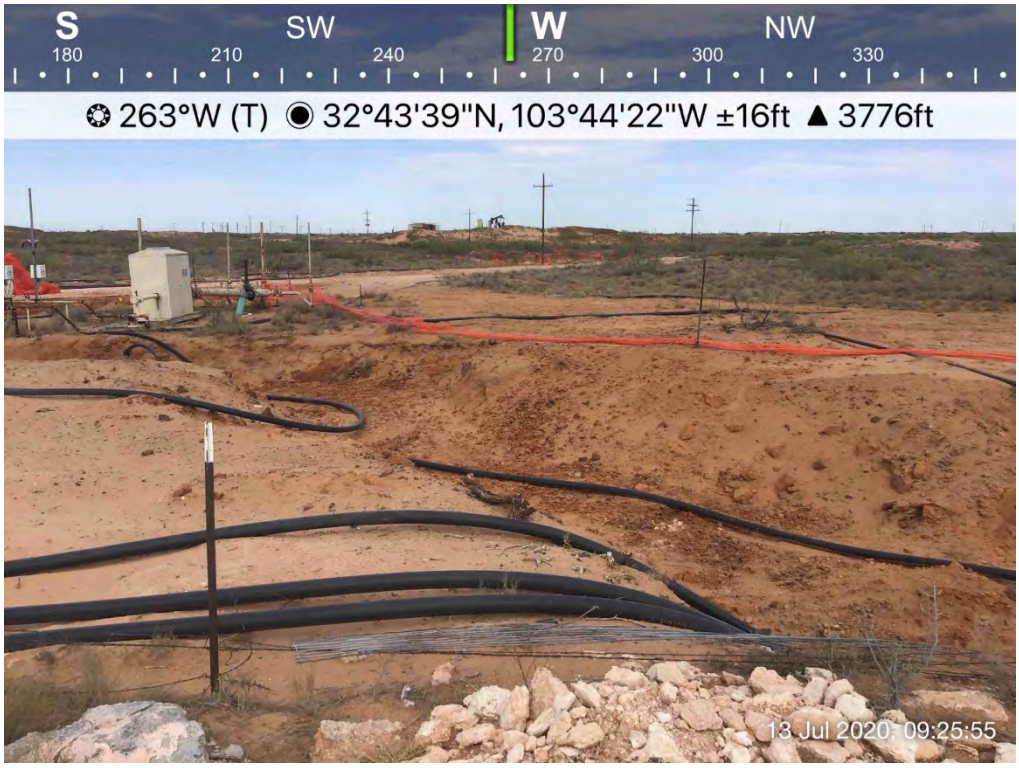


Excavation (Looking South-Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

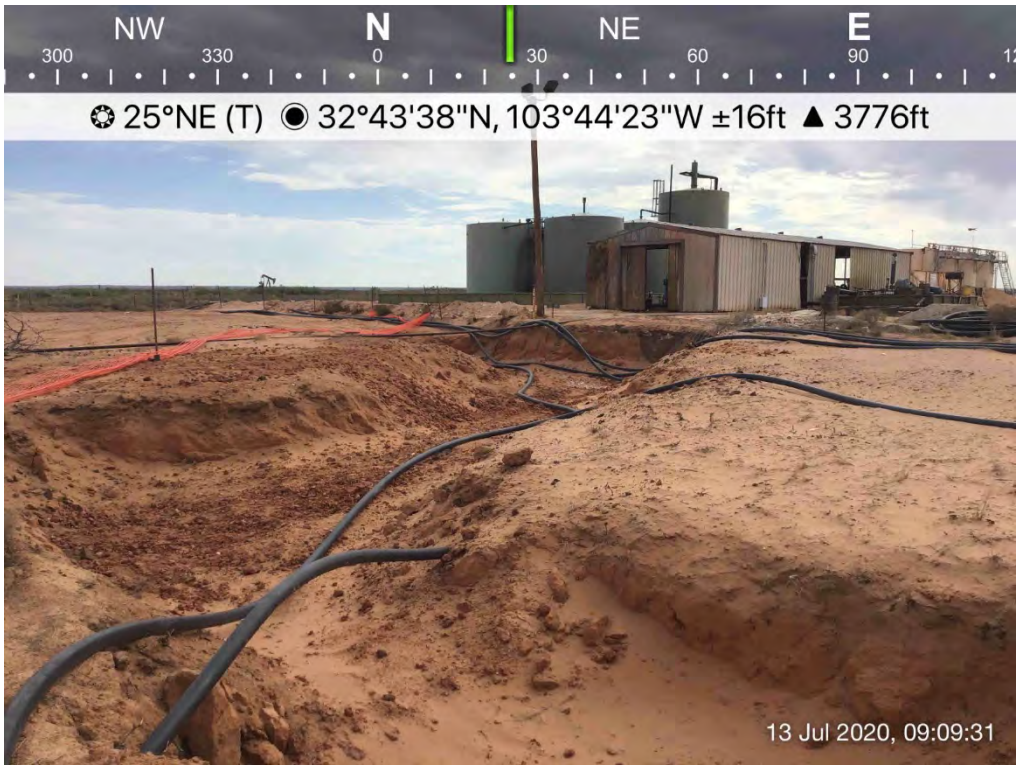
Excavation (Looking South)



Excavation (Looking South-Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

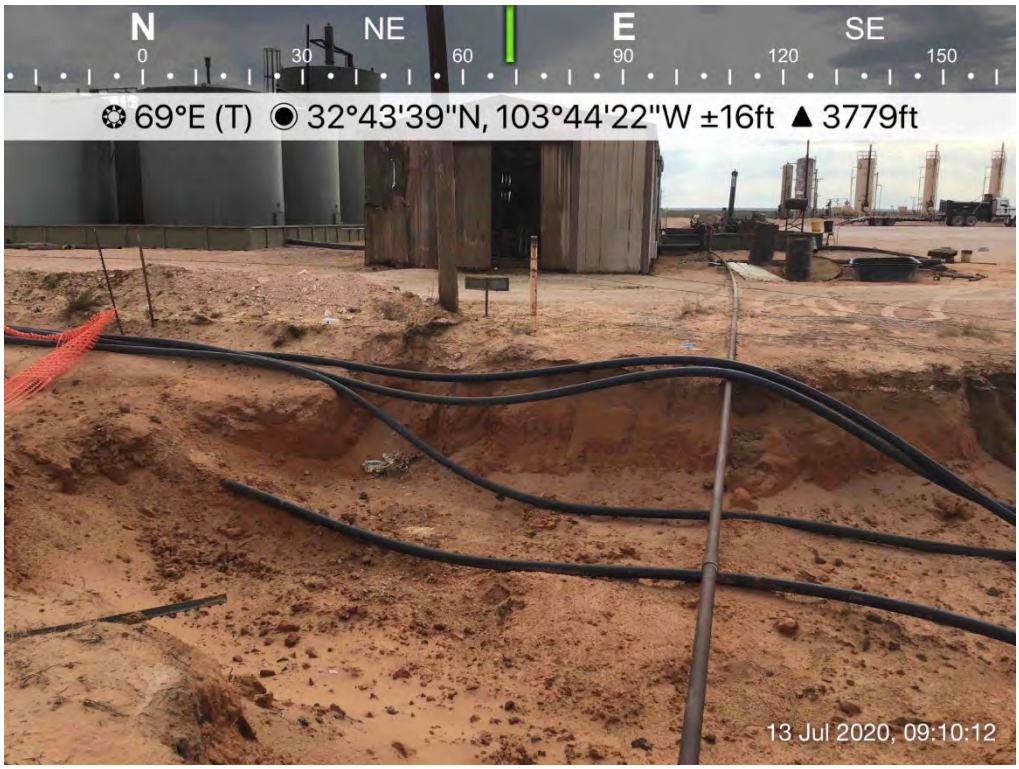


Excavation (Looking North-Northeast)

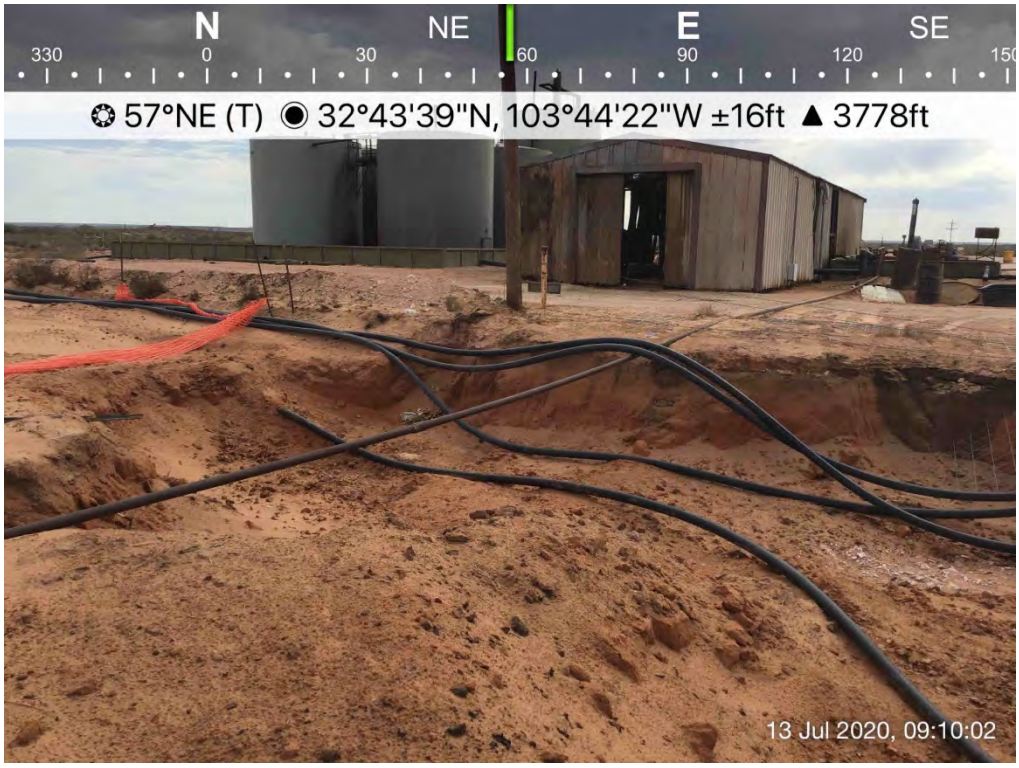
Excavation (Looking East)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E



Excavation (Looking East-Northeast)



Excavation (Looking Northeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Southeast)

Excavation (Looking East)

Mewbourne Oil Company – QPQBSU

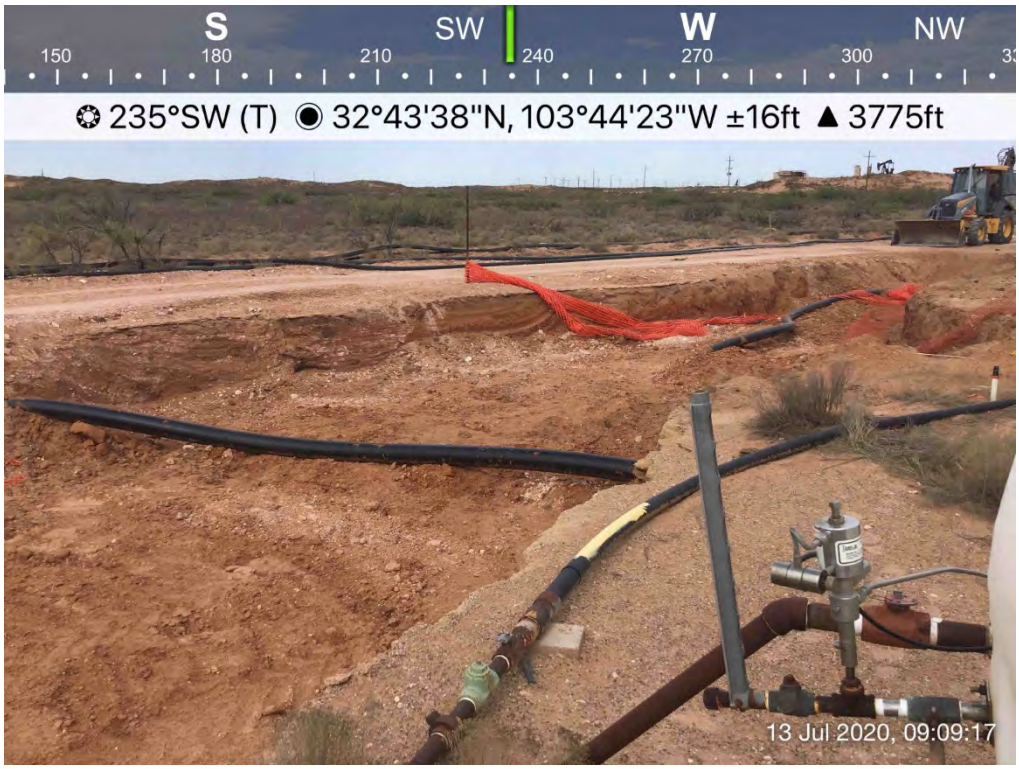
Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Southeast)

Excavation (Looking Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E



Excavation (Looking Southwest)

Excavation (Looking Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking East-Southeast)

Excavation (Looking West)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Southwest)

Excavation (Looking South)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Southwest)

Excavation (Looking South-Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

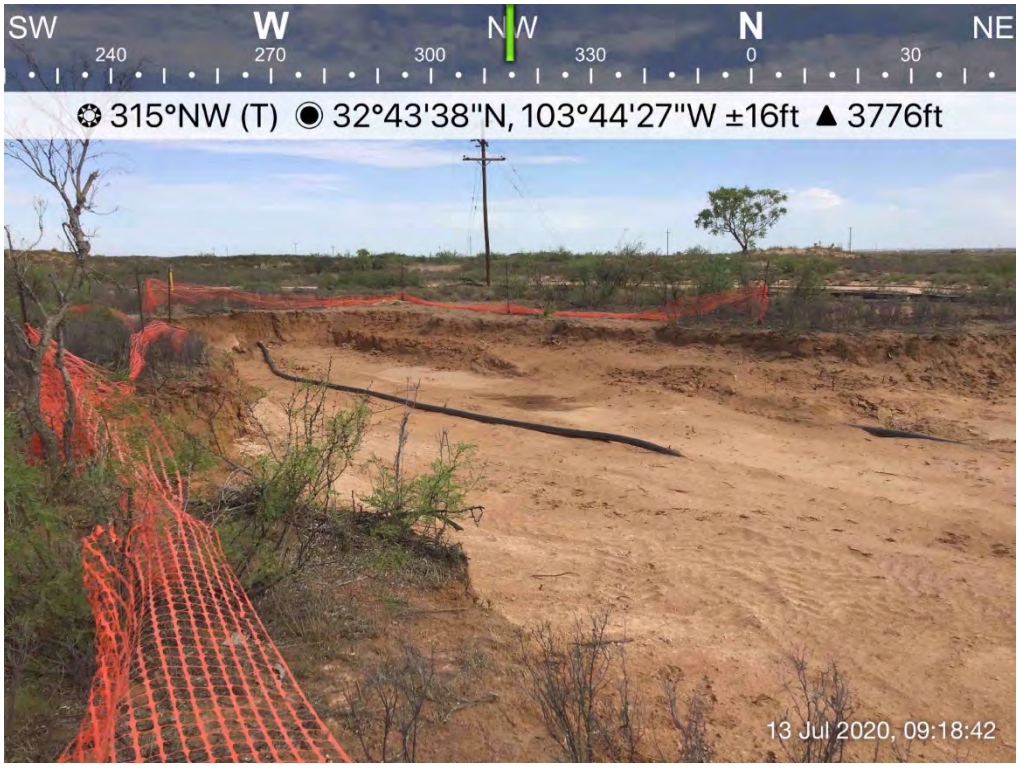
Excavation (Looking East-Southeast)

Excavation (Looking East)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Excavation (Looking Northeast)



Excavation (Looking Northwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

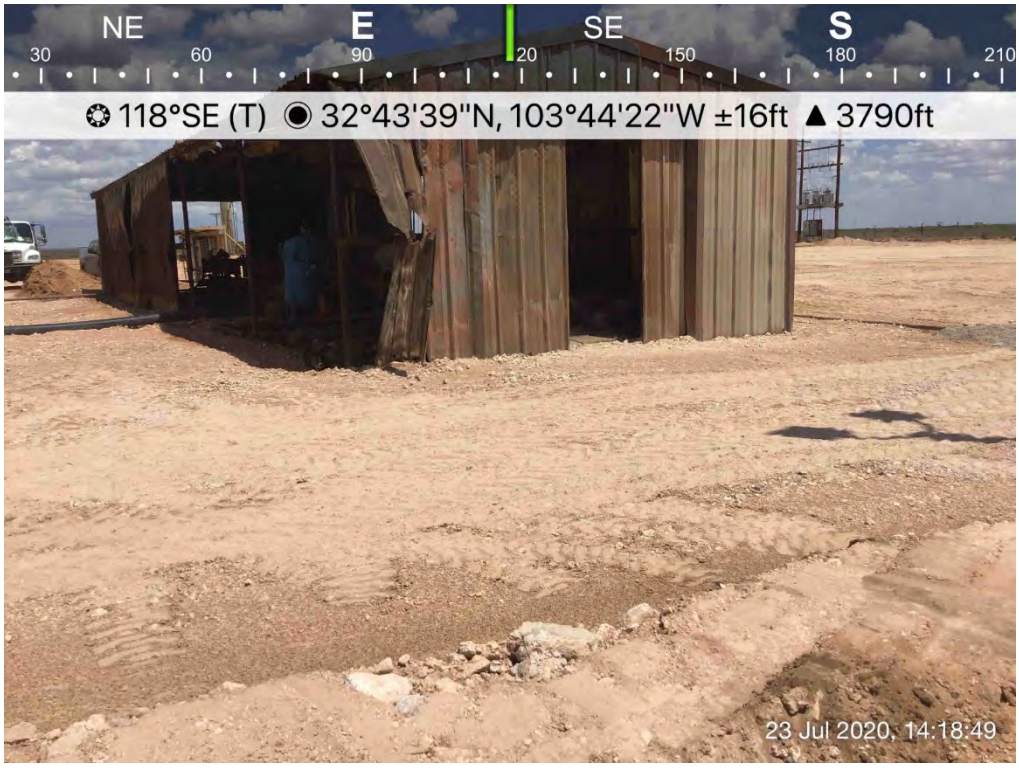
Excavation (Looking West-Northwest)

Excavation (Looking South-Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking Southeast)



Backfilled Excavation (Looking East-Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking Northwest)

Backfilled Excavation (Looking North)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking North-Northeast)

Backfilled Excavation (Looking (East-Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking East)

Backfilled Excavation (Looking South-Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking West-Southwest)

Backfilled Excavation (Looking South)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

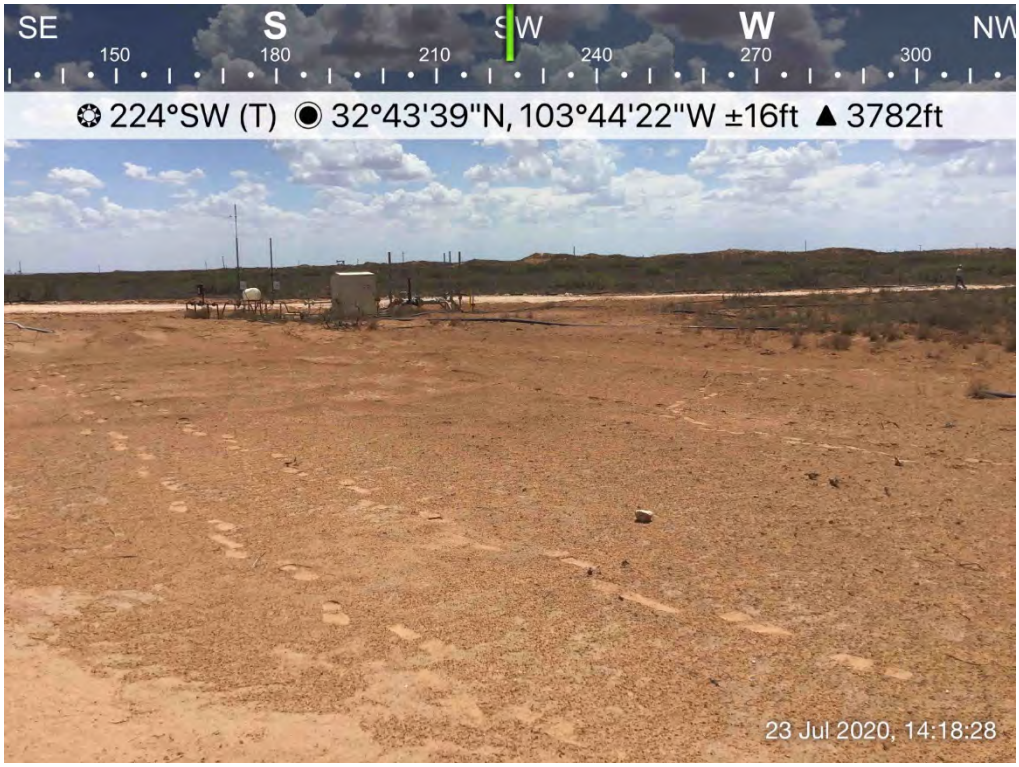
Backfilled Excavation (Looking South-Southeast)

Backfilled Excavation (Looking South)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

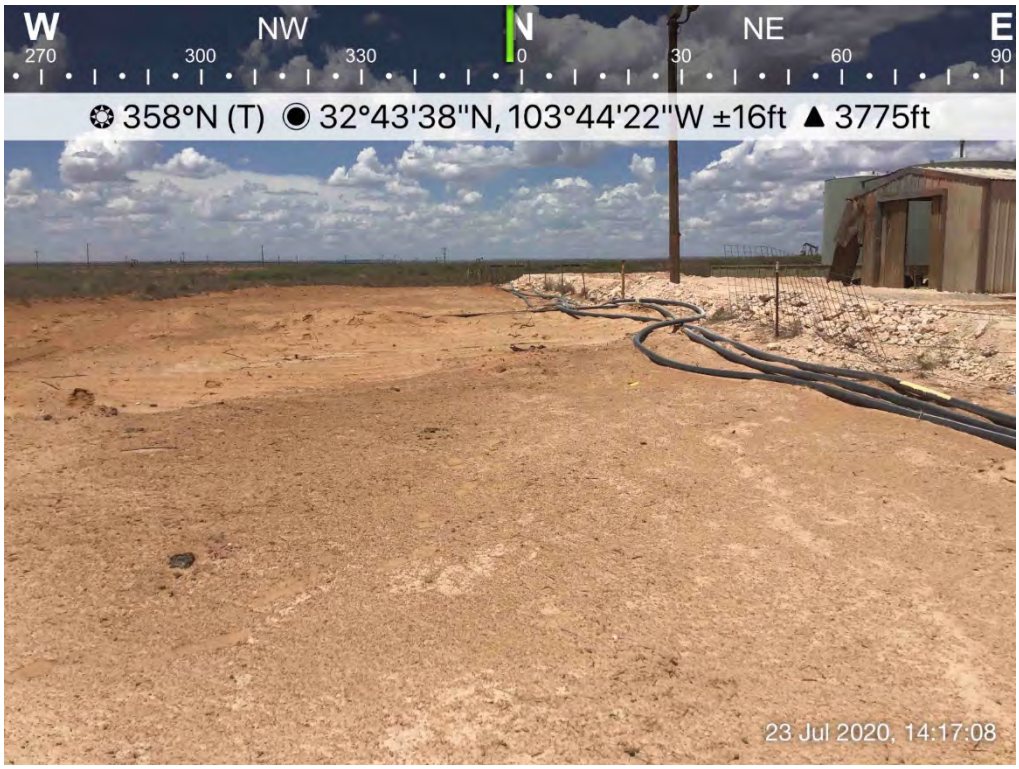
Backfilled Excavation (Looking Southwest)



Backfilled Excavation (Looking Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E



Backfilled Excavation (Looking North)

Backfilled Excavation (Looking North)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking North-Northeast)

Backfilled Excavation (Looking North)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking Northwest)

Backfilled Excavation (Looking West-Northwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking East-Southeast)

Backfilled Excavation (Looking South-Southeast)

Mewbourne Oil Company – QPQBSU

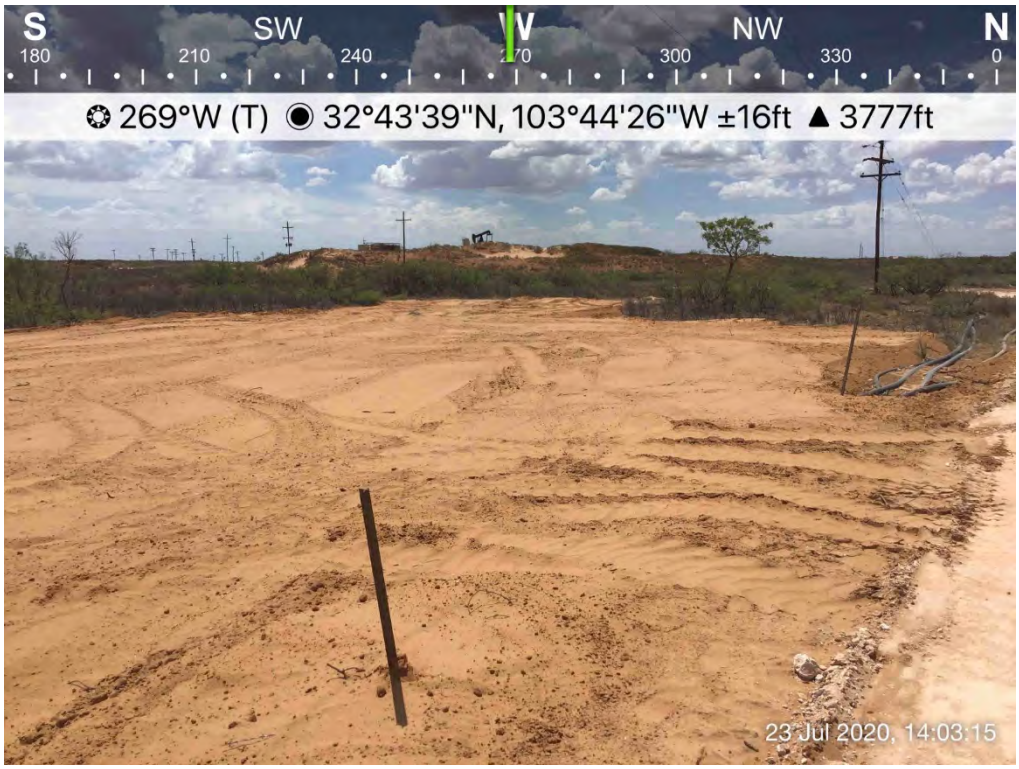
Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking East-Northeast)

Backfilled Excavation (Looking West-Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

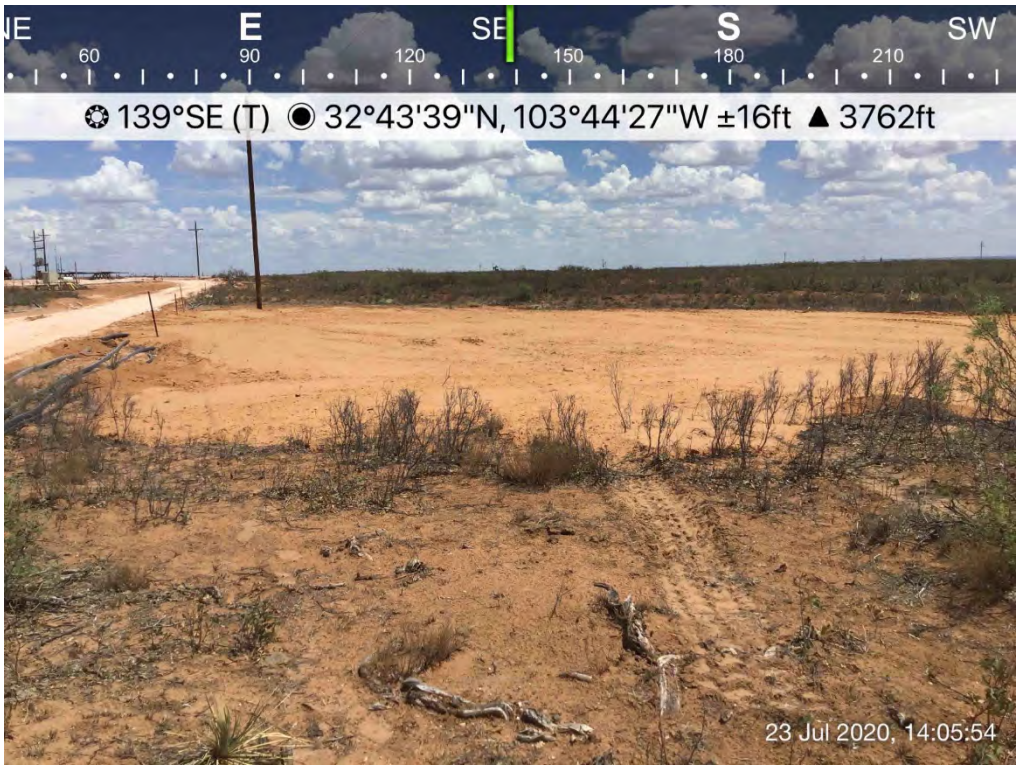


Backfilled Excavation (Looking West)

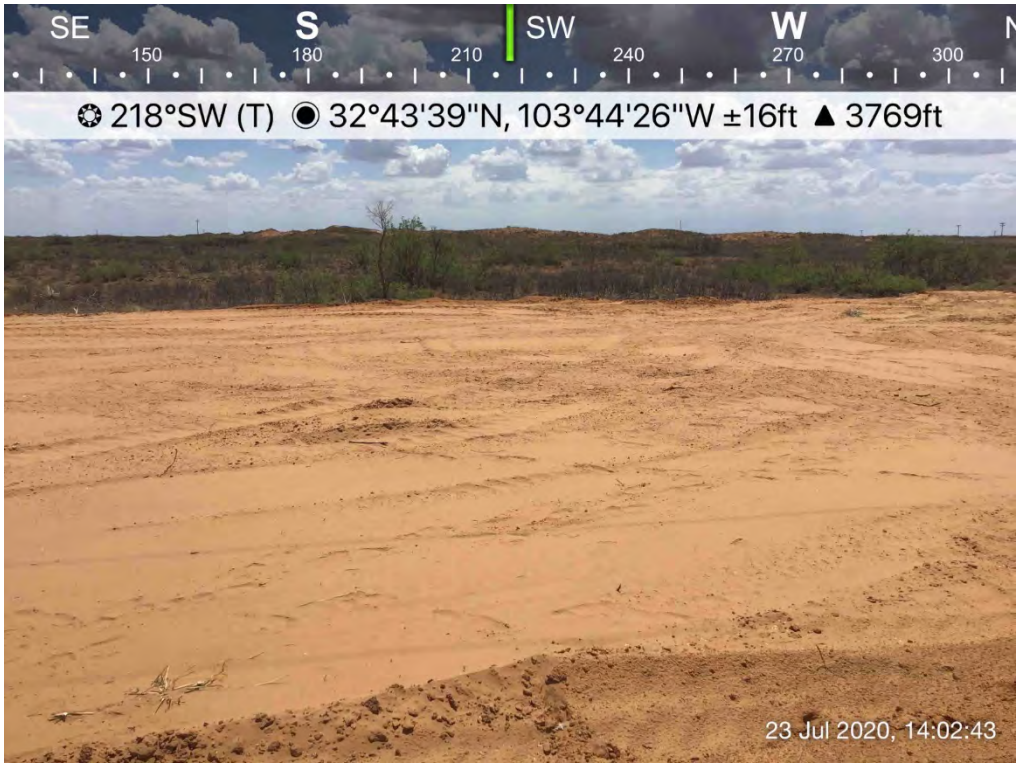
Backfilled Excavation (Looking East-Southeast)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E



Backfilled Excavation (Looking Southeast)



Backfilled Excavation (Looking Southwest)

Mewbourne Oil Company – QPQBSU

Unit Letter "N" (SE/SW), Section 23, Township 18S, Range 32E

Backfilled Excavation (Looking West)

Backfilled Excavation (Looking South-Southeast)

Appendix C
Closure Criteria Justification

TABLE 2
CLOSURE CRITERIA JUSTIFICATION

MEWBOURNE OIL COMPANY
QPQBSU
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: NRM2015753993

Groundwater, Water Wells & Other Water Sources	
Depth to groundwater (ft)?	200
Horizontal distance (ft) from all water sources within 0.5 miles?	2,035
Within 500' of a spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No
Within 1,000' of any fresh water well or spring?	No
Surface Water	
Horizontal distance (ft) to nearest significant watercourse?	>1,000
Within 300' of any continuously flowing watercourse or any other significant watercourse?	No
Within 200' of any lakebed, sinkhole or playa lake?	No
Human-Occupied, Environmental & Other Areas	
Within incorporated municipal boundaries or within a defined municipal fresh water well field?	No
Within 300' of an occupied permanent residence, school, hospital, institution or church?	No
Within 300' of a wetland?	No
Within the area overlying a subsurface mine?	No
Within an unstable area?	No
Within a 100-year floodplain?	No

Closure Criteria (mg/kg)*				
Benzene	**BTEX**	**GRO + DRO**	**TPH**	**Chloride**
10	50	1,000	2,500	20,000

*Numerical limits or natural background level, whichever is greater

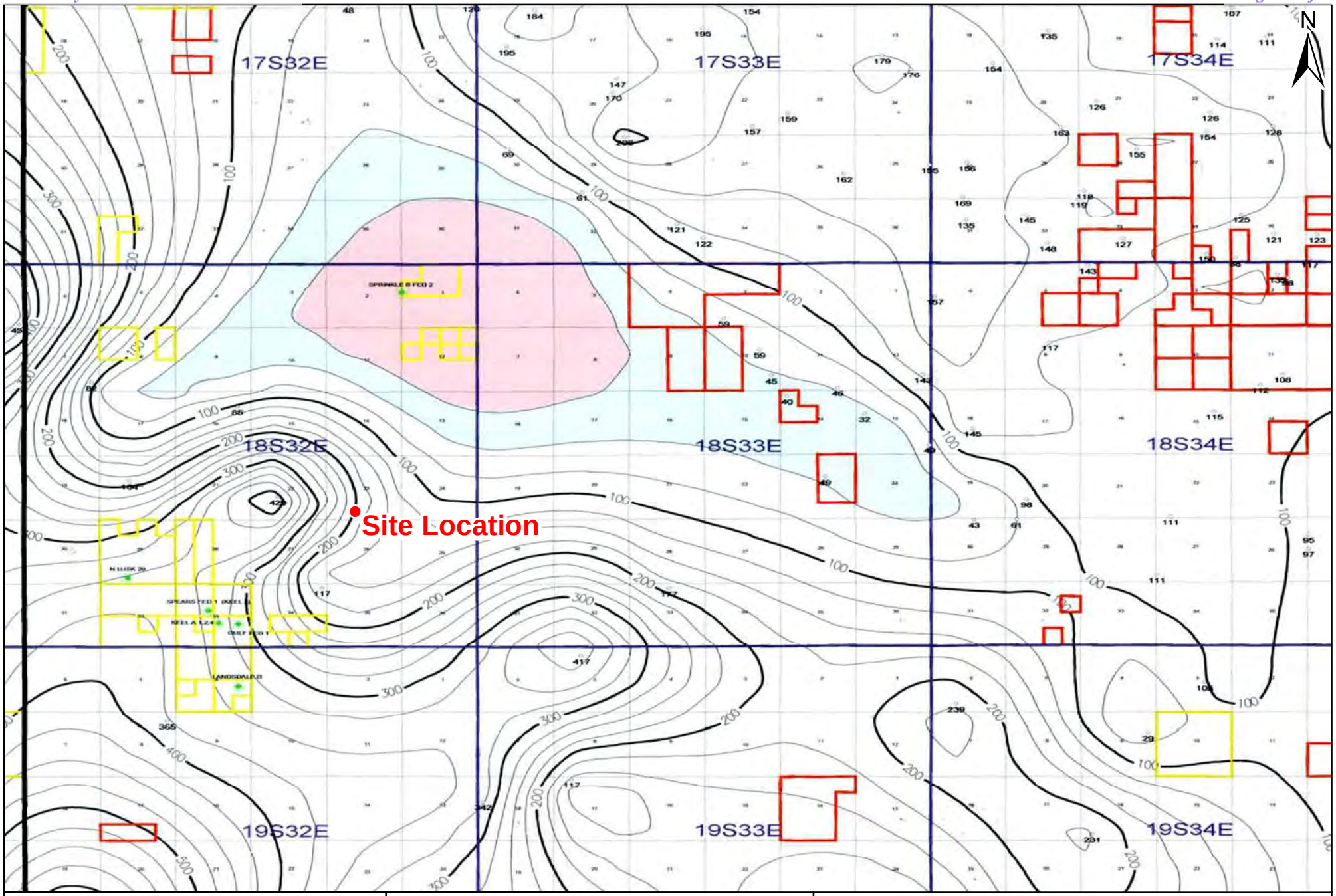
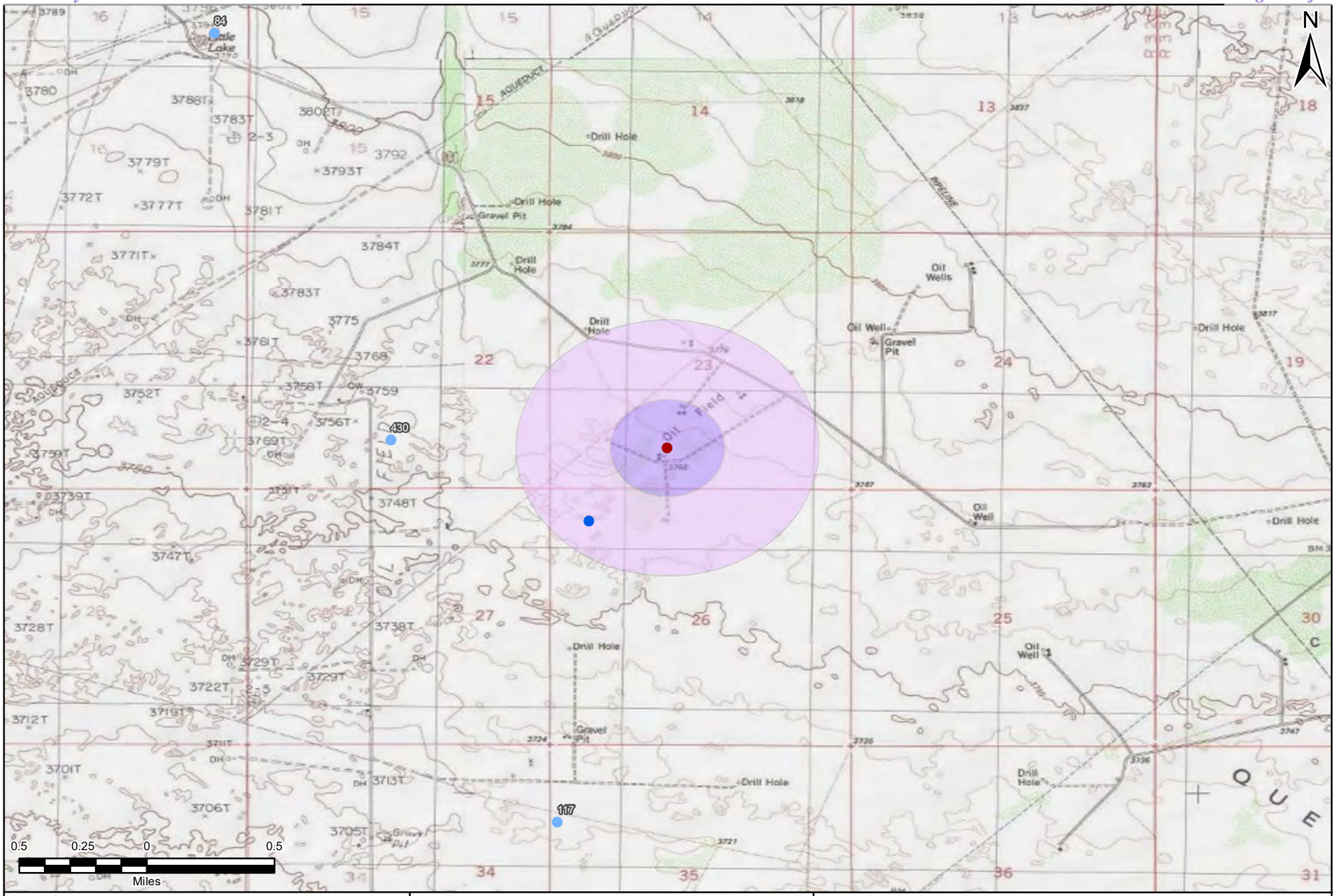


Figure 3
Depth-to-Groundwater Trend Map
Mewbourne Oil Company
QPQBSU
Lea County, New Mexico
NMOCD Reference #: NRM2015753993

TRINITY OILFIELD SERVICES

Trinity Oilfield Services & Rentals, LLC
P.O. Box 2587
Hobbs, NM 88241

Drawn By: BJA	Checked By: JEH
August 24, 2020	Scale: 1" = 2mi



Legend

- 1,000-ft Radius
- 0.5-mi Radius
- FEMA 100-Year Flood Zone
- Municipal Boundary
- Site Location
- NMOSE Depth to Water (ft)
- USGS Depth to Water (ft Avg.)

Figure 4
Vicinity & Wellhead Protection Area Map
Mewbourne Oil Company
QPQBSU
Lea County, New Mexico
NMOCD Reference #: NRM2015753993

TRINITY OILFIELD SERVICES

Trinity Oilfield Services & Rentals, LLC
P.O. Box 2587
Hobbs, NM 88241

Drawn By: BJA	Checked By: JEH
August 24, 2020	Scale: 1" = 0.5mi

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00677	CP	LE	1	1	26	18S	32E		617750	3621373*	569	700		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 618135 **Northing (Y):** 3621793.16 **Radius:** 804.67

***UTM location was derived from PLSS - see Help**

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324224103444101

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324224103444101 18S.32E.34.22200

Lea County, New Mexico
Latitude 32°42'24", Longitude 103°44'41" NAD27
Land-surface elevation 3,723 feet above NAVD88
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1965-12-08		D	117.42			2		U		U	
1968-03-18		D	117.46			2		U		U	
1971-04-06		D	117.46			2		U		U	
1976-05-21		D	117.39			2		U		U	
1981-03-12		D	117.28			2		U		U	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324342103451501

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324342103451501 18S.32E.22.32322

Lea County, New Mexico
Latitude 32°43'42", Longitude 103°45'15" NAD27
Land-surface elevation 3,761 feet above NAVD88
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-18		D	431.60			2		U		U	
1971-04-06		D	434.41			2		U		U	
1976-05-21		D	427.89			2		U		U	
1981-03-12		D	428.24			2		U		U	
1986-03-25		D	429.49			2		U		U	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324458103454301

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324458103454301 18S.32E.16.22433

Lea County, New Mexico
Latitude 32°45'05", Longitude 103°45'51" NAD27
Land-surface elevation 3,796.00 feet above NGVD29
The depth of the well is 100 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-18		D	84.18			2		U		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
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Appendix D
Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 06, 2020

Robbie Runnels

Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
TEL: (575) 393-5905
FAX:

RE: QPQASU Water Flood Facility OrderNo.: 2006A30

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 56 sample(s) on 6/19/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-001 **Matrix:** SOIL

Client Sample ID: SP-1 Comp
Collection Date: 6/8/2020 10:00:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	270	60		mg/Kg	20	6/24/2020 4:29:03 PM	53275
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 5:26:39 AM	53183
Surr: BFB	105	70-130		%Rec	1	6/22/2020 5:26:39 AM	53183
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 3:19:51 AM	53187
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 3:19:51 AM	53187
Surr: DNOP	83.4	55.1-146		%Rec	1	6/21/2020 3:19:51 AM	53187
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 5:26:39 AM	53183
Toluene	ND	0.049		mg/Kg	1	6/22/2020 5:26:39 AM	53183
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 5:26:39 AM	53183
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 5:26:39 AM	53183
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	6/22/2020 5:26:39 AM	53183
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	6/22/2020 5:26:39 AM	53183
Surr: Dibromofluoromethane	100	70-130		%Rec	1	6/22/2020 5:26:39 AM	53183
Surr: Toluene-d8	100	70-130		%Rec	1	6/22/2020 5:26:39 AM	53183

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP-1 @2'
Project: QPQASU Water Flood Facility **Collection Date:** 6/11/2020 1:15:00 PM
Lab ID: 2006A30-002 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	3800	150		mg/Kg	50	6/26/2020 4:17:57 AM	53275
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 5:56:04 AM	53183
Surr: BFB	105	70-130		%Rec	1	6/22/2020 5:56:04 AM	53183
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2020 8:41:29 AM	53194
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 8:41:29 AM	53194
Surr: DNOP	161	55.1-146	S	%Rec	1	6/21/2020 8:41:29 AM	53194
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 5:56:04 AM	53183
Toluene	ND	0.049		mg/Kg	1	6/22/2020 5:56:04 AM	53183
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 5:56:04 AM	53183
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 5:56:04 AM	53183
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%Rec	1	6/22/2020 5:56:04 AM	53183
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/22/2020 5:56:04 AM	53183
Surr: Dibromofluoromethane	94.5	70-130		%Rec	1	6/22/2020 5:56:04 AM	53183
Surr: Toluene-d8	96.5	70-130		%Rec	1	6/22/2020 5:56:04 AM	53183

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-2 Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/8/2020 10:05:00 AM
Lab ID: 2006A30-003 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	270	60		mg/Kg	20	6/25/2020 11:58:28 AM	53303
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 6:25:44 AM	53183
Surr: BFB	108	70-130		%Rec	1	6/22/2020 6:25:44 AM	53183
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/21/2020 9:11:20 AM	53194
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/21/2020 9:11:20 AM	53194
Surr: DNOP	96.0	55.1-146		%Rec	1	6/21/2020 9:11:20 AM	53194
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 6:25:44 AM	53183
Toluene	ND	0.050		mg/Kg	1	6/22/2020 6:25:44 AM	53183
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 6:25:44 AM	53183
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 6:25:44 AM	53183
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	6/22/2020 6:25:44 AM	53183
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	6/22/2020 6:25:44 AM	53183
Surr: Dibromofluoromethane	94.6	70-130		%Rec	1	6/22/2020 6:25:44 AM	53183
Surr: Toluene-d8	100	70-130		%Rec	1	6/22/2020 6:25:44 AM	53183

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-2 @3'
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 9:20:00 AM
Lab ID: 2006A30-004 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	6400	300		mg/Kg	100	6/26/2020 7:48:55 AM	53303
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 6:55:38 AM	53183
Surr: BFB	107	70-130		%Rec	1	6/22/2020 6:55:38 AM	53183
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 9:21:19 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:21:19 AM	53194
Surr: DNOP	115	55.1-146		%Rec	1	6/21/2020 9:21:19 AM	53194
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 6:55:38 AM	53183
Toluene	ND	0.049		mg/Kg	1	6/22/2020 6:55:38 AM	53183
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 6:55:38 AM	53183
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 6:55:38 AM	53183
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	6/22/2020 6:55:38 AM	53183
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	6/22/2020 6:55:38 AM	53183
Surr: Dibromofluoromethane	96.9	70-130		%Rec	1	6/22/2020 6:55:38 AM	53183
Surr: Toluene-d8	101	70-130		%Rec	1	6/22/2020 6:55:38 AM	53183

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-3 Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/8/2020 10:30:00 AM
Lab ID: 2006A30-005 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	280	60		mg/Kg	20	6/25/2020 12:23:10 PM	53303
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 7:24:54 AM	53183
Surr: BFB	107	70-130		%Rec	1	6/22/2020 7:24:54 AM	53183
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2020 9:31:19 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:31:19 AM	53194
Surr: DNOP	72.2	55.1-146		%Rec	1	6/21/2020 9:31:19 AM	53194
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 7:24:54 AM	53183
Toluene	ND	0.050		mg/Kg	1	6/22/2020 7:24:54 AM	53183
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 7:24:54 AM	53183
Xylenes, Total	ND	0.10		mg/Kg	1	6/22/2020 7:24:54 AM	53183
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	6/22/2020 7:24:54 AM	53183
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	6/22/2020 7:24:54 AM	53183
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	6/22/2020 7:24:54 AM	53183
Surr: Toluene-d8	102	70-130		%Rec	1	6/22/2020 7:24:54 AM	53183

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-006 **Matrix:** SOIL

Client Sample ID: SP-3 @3'
Collection Date: 6/11/2020 9:30:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2200	150		mg/Kg	50	6/26/2020 8:26:08 AM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 9:41:22 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:41:22 AM	53194
Surr: DNOP	110	55.1-146		%Rec	1	6/21/2020 9:41:22 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 12:18:36 AM	53186
Surr: BFB	81.9	66.6-105		%Rec	1	6/21/2020 12:18:36 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 12:18:36 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 12:18:36 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 12:18:36 AM	53186
Xylenes, Total	ND	0.10		mg/Kg	1	6/21/2020 12:18:36 AM	53186
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/21/2020 12:18:36 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-4 Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/8/2020 10:45:00 AM
Lab ID: 2006A30-007 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	6800	300		mg/Kg	100	6/26/2020 4:59:00 AM	53278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 9:51:22 AM	53194
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2020 9:51:22 AM	53194
Surr: DNOP	100	55.1-146		%Rec	1	6/21/2020 9:51:22 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 1:29:46 AM	53186
Surr: BFB	79.5	66.6-105		%Rec	1	6/21/2020 1:29:46 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 1:29:46 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 1:29:46 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 1:29:46 AM	53186
Xylenes, Total	ND	0.10		mg/Kg	1	6/21/2020 1:29:46 AM	53186
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/21/2020 1:29:46 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP-4 @2'
Project: QPQASU Water Flood Facility **Collection Date:** 6/11/2020 9:40:00 AM
Lab ID: 2006A30-008 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	9100	300		mg/Kg	100	6/26/2020 4:46:35 AM	53278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/21/2020 10:01:30 AM	53194
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 10:01:30 AM	53194
Surr: DNOP	131	55.1-146		%Rec	1	6/21/2020 10:01:30 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 2:40:32 AM	53186
Surr: BFB	82.2	66.6-105		%Rec	1	6/21/2020 2:40:32 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 2:40:32 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 2:40:32 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 2:40:32 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 2:40:32 AM	53186
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/21/2020 2:40:32 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-5 Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/8/2020 11:00:00 AM
Lab ID: 2006A30-009 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	270	60		mg/Kg	20	6/25/2020 12:05:49 AM	53278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2020 10:11:34 AM	53194
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 10:11:34 AM	53194
Surr: DNOP	100	55.1-146		%Rec	1	6/21/2020 10:11:34 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 4:14:01 AM	53186
Surr: BFB	82.8	66.6-105		%Rec	1	6/21/2020 4:14:01 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 4:14:01 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 4:14:01 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 4:14:01 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 4:14:01 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 4:14:01 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-010 **Matrix:** SOIL

Client Sample ID: SP-5 @3'
Collection Date: 6/11/2020 10:00:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	60		mg/Kg	20	6/25/2020 12:18:10 AM	53278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2020 10:21:36 AM	53194
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 10:21:36 AM	53194
Surr: DNOP	129	55.1-146		%Rec	1	6/21/2020 10:21:36 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 4:37:21 AM	53186
Surr: BFB	83.3	66.6-105		%Rec	1	6/21/2020 4:37:21 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 4:37:21 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 4:37:21 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 4:37:21 AM	53186
Xylenes, Total	ND	0.10		mg/Kg	1	6/21/2020 4:37:21 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 4:37:21 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-011 **Matrix:** SOIL

Client Sample ID: SP-6 Floor Comp.
Collection Date: 6/11/2020 10:05:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	62	60		mg/Kg	20	6/25/2020 12:47:51 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 10:31:39 AM	53194
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 10:31:39 AM	53194
Surr: DNOP	118	55.1-146		%Rec	1	6/21/2020 10:31:39 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 5:00:49 AM	53186
Surr: BFB	83.3	66.6-105		%Rec	1	6/21/2020 5:00:49 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2020 5:00:49 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 5:00:49 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 5:00:49 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 5:00:49 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 5:00:49 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-012 **Matrix:** SOIL

Client Sample ID: SP-6 @1'
Collection Date: 6/11/2020 10:00:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 1:24:55 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	26	9.5		mg/Kg	1	6/21/2020 10:41:53 AM	53194
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 10:41:53 AM	53194
Surr: DNOP	113	55.1-146		%Rec	1	6/21/2020 10:41:53 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 5:24:24 AM	53186
Surr: BFB	83.7	66.6-105		%Rec	1	6/21/2020 5:24:24 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 5:24:24 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 5:24:24 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 5:24:24 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 5:24:24 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 5:24:24 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-7 Floor Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/10/2020 8:00:00 AM
Lab ID: 2006A30-013 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	5600	300		mg/Kg	100	6/26/2020 8:38:33 AM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	21	9.7		mg/Kg	1	6/23/2020 9:50:21 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/23/2020 9:50:21 AM	53194
Surr: DNOP	126	55.1-146		%Rec	1	6/23/2020 9:50:21 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 5:47:57 AM	53186
Surr: BFB	82.5	66.6-105		%Rec	1	6/21/2020 5:47:57 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 5:47:57 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 5:47:57 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 5:47:57 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 5:47:57 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 5:47:57 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-7 @ 8'
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 11:00:00 AM
Lab ID: 2006A30-014 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	60		mg/Kg	20	6/25/2020 2:39:00 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	12	9.3		mg/Kg	1	6/23/2020 9:59:57 AM	53194
Motor Oil Range Organics (MRO)	64	46		mg/Kg	1	6/23/2020 9:59:57 AM	53194
Surr: DNOP	127	55.1-146		%Rec	1	6/23/2020 9:59:57 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 6:11:32 AM	53186
Surr: BFB	80.9	66.6-105		%Rec	1	6/21/2020 6:11:32 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 6:11:32 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 6:11:32 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 6:11:32 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 6:11:32 AM	53186
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/21/2020 6:11:32 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-7 E. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 11:05:00 AM
Lab ID: 2006A30-015 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 2:51:21 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 11:12:17 AM	53194
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 11:12:17 AM	53194
Surr: DNOP	115	55.1-146		%Rec	1	6/21/2020 11:12:17 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 6:35:01 AM	53186
Surr: BFB	83.0	66.6-105		%Rec	1	6/21/2020 6:35:01 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 6:35:01 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 6:35:01 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 6:35:01 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 6:35:01 AM	53186
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/21/2020 6:35:01 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-7 W. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 11:10:00 AM
Lab ID: 2006A30-016 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 3:03:42 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 11:22:37 AM	53194
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 11:22:37 AM	53194
Surr: DNOP	78.2	55.1-146		%Rec	1	6/21/2020 11:22:37 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 6:58:25 AM	53186
Surr: BFB	80.5	66.6-105		%Rec	1	6/21/2020 6:58:25 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 6:58:25 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 6:58:25 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 6:58:25 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 6:58:25 AM	53186
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/21/2020 6:58:25 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-8 Floor Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/10/2020 8:10:00 AM
Lab ID: 2006A30-017 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	5200	300		mg/Kg	100	6/26/2020 8:50:57 AM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/23/2020 10:09:38 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/23/2020 10:09:38 AM	53194
Surr: DNOP	118	55.1-146		%Rec	1	6/23/2020 10:09:38 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 7:21:55 AM	53186
Surr: BFB	82.8	66.6-105		%Rec	1	6/21/2020 7:21:55 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2020 7:21:55 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 7:21:55 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 7:21:55 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 7:21:55 AM	53186
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/21/2020 7:21:55 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-018 **Matrix:** SOIL

Client Sample ID: SP-8 W. Comp.
Collection Date: 6/11/2020 10:20:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 3:28:24 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/21/2020 11:43:49 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 11:43:49 AM	53194
Surr: DNOP	100	55.1-146		%Rec	1	6/21/2020 11:43:49 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 7:45:33 AM	53186
Surr: BFB	82.7	66.6-105		%Rec	1	6/21/2020 7:45:33 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 7:45:33 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 7:45:33 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 7:45:33 AM	53186
Xylenes, Total	ND	0.10		mg/Kg	1	6/21/2020 7:45:33 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 7:45:33 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-8 E. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 10:25:00 AM
Lab ID: 2006A30-019 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 3:40:44 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 11:54:26 AM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 11:54:26 AM	53194
Surr: DNOP	104	55.1-146		%Rec	1	6/21/2020 11:54:26 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 9:20:21 AM	53186
Surr: BFB	85.0	66.6-105		%Rec	1	6/21/2020 9:20:21 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2020 9:20:21 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 9:20:21 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 9:20:21 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 9:20:21 AM	53186
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/21/2020 9:20:21 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-020 **Matrix:** SOIL

Client Sample ID: SP-8 @ 8'
Collection Date: 6/11/2020 10:15:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	120	60		mg/Kg	20	6/25/2020 3:53:05 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	18	10		mg/Kg	1	6/23/2020 11:04:58 AM	53194
Motor Oil Range Organics (MRO)	72	50		mg/Kg	1	6/23/2020 11:04:58 AM	53194
Surr: DNOP	113	55.1-146		%Rec	1	6/23/2020 11:04:58 AM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 9:44:13 AM	53186
Surr: BFB	83.9	66.6-105		%Rec	1	6/21/2020 9:44:13 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 9:44:13 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 9:44:13 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 9:44:13 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 9:44:13 AM	53186
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/21/2020 9:44:13 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-9 Floor Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:20:00 AM
Lab ID: 2006A30-021 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	430	60		mg/Kg	20	6/25/2020 4:30:09 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 12:15:44 PM	53194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 12:15:44 PM	53194
Surr: DNOP	79.5	55.1-146		%Rec	1	6/21/2020 12:15:44 PM	53194
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 10:07:58 AM	53186
Surr: BFB	80.2	66.6-105		%Rec	1	6/21/2020 10:07:58 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 10:07:58 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 10:07:58 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 10:07:58 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 10:07:58 AM	53186
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/21/2020 10:07:58 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-9 E. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 1:00:00 PM
Lab ID: 2006A30-022 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	290	60		mg/Kg	20	6/25/2020 4:42:30 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	30	9.9		mg/Kg	1	6/23/2020 10:29:08 AM	53197
Motor Oil Range Organics (MRO)	160	50		mg/Kg	1	6/23/2020 10:29:08 AM	53197
Surr: DNOP	135	55.1-146		%Rec	1	6/23/2020 10:29:08 AM	53197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 10:31:25 AM	53186
Surr: BFB	81.2	66.6-105		%Rec	1	6/21/2020 10:31:25 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2020 10:31:25 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 10:31:25 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 10:31:25 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 10:31:25 AM	53186
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/21/2020 10:31:25 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-9 S. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 1:05:00 PM
Lab ID: 2006A30-023 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	110	60		mg/Kg	20	6/25/2020 4:54:50 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2020 3:22:00 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 3:22:00 PM	53197
Surr: DNOP	74.6	55.1-146		%Rec	1	6/21/2020 3:22:00 PM	53197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 10:55:03 AM	53186
Surr: BFB	81.6	66.6-105		%Rec	1	6/21/2020 10:55:03 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 10:55:03 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 10:55:03 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 10:55:03 AM	53186
Xylenes, Total	ND	0.10		mg/Kg	1	6/21/2020 10:55:03 AM	53186
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/21/2020 10:55:03 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-024 **Matrix:** SOIL

Client Sample ID: SP-9 N. Comp
Collection Date: 6/16/2020 1:10:00 PM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	260	59		mg/Kg	20	6/25/2020 5:07:13 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	25	9.4		mg/Kg	1	6/23/2020 10:58:42 AM	53197
Motor Oil Range Organics (MRO)	130	47		mg/Kg	1	6/23/2020 10:58:42 AM	53197
Surr: DNOP	117	55.1-146		%Rec	1	6/23/2020 10:58:42 AM	53197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 11:18:34 AM	53186
Surr: BFB	78.1	66.6-105		%Rec	1	6/21/2020 11:18:34 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2020 11:18:34 AM	53186
Toluene	ND	0.049		mg/Kg	1	6/21/2020 11:18:34 AM	53186
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 11:18:34 AM	53186
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2020 11:18:34 AM	53186
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/21/2020 11:18:34 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-025 **Matrix:** SOIL

Client Sample ID: SP-10 Floor Comp
Collection Date: 6/10/2020 8:30:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	60		mg/Kg	20	6/25/2020 5:19:33 PM	53303
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 3:42:34 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 3:42:34 PM	53197
Surr: DNOP	109	55.1-146		%Rec	1	6/21/2020 3:42:34 PM	53197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/21/2020 11:42:11 AM	53186
Surr: BFB	82.1	66.6-105		%Rec	1	6/21/2020 11:42:11 AM	53186
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 11:42:11 AM	53186
Toluene	ND	0.050		mg/Kg	1	6/21/2020 11:42:11 AM	53186
Ethylbenzene	ND	0.050		mg/Kg	1	6/21/2020 11:42:11 AM	53186
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 11:42:11 AM	53186
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/21/2020 11:42:11 AM	53186

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-026 **Matrix:** SOIL

Client Sample ID: SP-10 @ 14'
Collection Date: 6/17/2020 1:05:00 PM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 5:31:54 PM	53303
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 9:56:19 PM	53192
Surr: BFB	97.6	70-130		%Rec	1	6/21/2020 9:56:19 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/21/2020 3:52:54 PM	53197
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2020 3:52:54 PM	53197
Surr: DNOP	97.7	55.1-146		%Rec	1	6/21/2020 3:52:54 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 9:56:19 PM	53192
Toluene	ND	0.049		mg/Kg	1	6/21/2020 9:56:19 PM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 9:56:19 PM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 9:56:19 PM	53192
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	6/21/2020 9:56:19 PM	53192
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	6/21/2020 9:56:19 PM	53192
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/21/2020 9:56:19 PM	53192
Surr: Toluene-d8	105	70-130		%Rec	1	6/21/2020 9:56:19 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-10 S. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/17/2020 9:00:00 AM
Lab ID: 2006A30-027 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	340	60		mg/Kg	20	6/25/2020 6:08:57 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2020 11:21:43 PM	53192
Surr: BFB	97.9	70-130		%Rec	1	6/21/2020 11:21:43 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 4:03:15 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 4:03:15 PM	53197
Surr: DNOP	97.7	55.1-146		%Rec	1	6/21/2020 4:03:15 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/21/2020 11:21:43 PM	53192
Toluene	ND	0.049		mg/Kg	1	6/21/2020 11:21:43 PM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2020 11:21:43 PM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/21/2020 11:21:43 PM	53192
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/21/2020 11:21:43 PM	53192
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/21/2020 11:21:43 PM	53192
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/21/2020 11:21:43 PM	53192
Surr: Toluene-d8	102	70-130		%Rec	1	6/21/2020 11:21:43 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-10 N. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/17/2020 9:05:00 AM
Lab ID: 2006A30-028 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 7:10:42 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/22/2020 2:41:16 AM	53192
Surr: BFB	96.5	70-130		%Rec	1	6/22/2020 2:41:16 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 4:13:36 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 4:13:36 PM	53197
Surr: DNOP	134	55.1-146		%Rec	1	6/21/2020 4:13:36 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 2:41:16 AM	53192
Toluene	ND	0.048		mg/Kg	1	6/22/2020 2:41:16 AM	53192
Ethylbenzene	ND	0.048		mg/Kg	1	6/22/2020 2:41:16 AM	53192
Xylenes, Total	ND	0.097		mg/Kg	1	6/22/2020 2:41:16 AM	53192
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/22/2020 2:41:16 AM	53192
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	6/22/2020 2:41:16 AM	53192
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	6/22/2020 2:41:16 AM	53192
Surr: Toluene-d8	105	70-130		%Rec	1	6/22/2020 2:41:16 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-029 **Matrix:** SOIL

Client Sample ID: SP-11 Floor Comp
Collection Date: 6/10/2020 8:40:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	240	60		mg/Kg	20	6/25/2020 7:47:44 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 3:09:46 AM	53192
Surr: BFB	94.1	70-130		%Rec	1	6/22/2020 3:09:46 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2020 4:23:59 PM	53197
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2020 4:23:59 PM	53197
Surr: DNOP	106	55.1-146		%Rec	1	6/21/2020 4:23:59 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 3:09:46 AM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 3:09:46 AM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 3:09:46 AM	53192
Xylenes, Total	ND	0.10		mg/Kg	1	6/22/2020 3:09:46 AM	53192
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	6/22/2020 3:09:46 AM	53192
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	6/22/2020 3:09:46 AM	53192
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	6/22/2020 3:09:46 AM	53192
Surr: Toluene-d8	102	70-130		%Rec	1	6/22/2020 3:09:46 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-030 **Matrix:** SOIL

Client Sample ID: SP-11 @ 14'
Collection Date: 6/17/2020 1:10:00 PM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 8:00:05 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 3:38:19 AM	53192
Surr: BFB	96.9	70-130		%Rec	1	6/22/2020 3:38:19 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 4:34:22 PM	53197
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 4:34:22 PM	53197
Surr: DNOP	101	55.1-146		%Rec	1	6/21/2020 4:34:22 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 3:38:19 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 3:38:19 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 3:38:19 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 3:38:19 AM	53192
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	6/22/2020 3:38:19 AM	53192
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	6/22/2020 3:38:19 AM	53192
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/22/2020 3:38:19 AM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 3:38:19 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-11 N. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/17/2020 9:15:00 AM
Lab ID: 2006A30-031 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 8:12:26 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 4:06:43 AM	53192
Surr: BFB	93.0	70-130		%Rec	1	6/22/2020 4:06:43 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 4:44:45 PM	53197
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 4:44:45 PM	53197
Surr: DNOP	113	55.1-146		%Rec	1	6/21/2020 4:44:45 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 4:06:43 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 4:06:43 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 4:06:43 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 4:06:43 AM	53192
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/22/2020 4:06:43 AM	53192
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	6/22/2020 4:06:43 AM	53192
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/22/2020 4:06:43 AM	53192
Surr: Toluene-d8	101	70-130		%Rec	1	6/22/2020 4:06:43 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-11 S. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/17/2020 9:10:00 AM
Lab ID: 2006A30-032 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2400	150		mg/Kg	50	6/26/2020 9:03:21 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 4:35:16 AM	53192
Surr: BFB	99.0	70-130		%Rec	1	6/22/2020 4:35:16 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/21/2020 4:55:09 PM	53197
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 4:55:09 PM	53197
Surr: DNOP	142	55.1-146		%Rec	1	6/21/2020 4:55:09 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 4:35:16 AM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 4:35:16 AM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 4:35:16 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 4:35:16 AM	53192
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/22/2020 4:35:16 AM	53192
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	6/22/2020 4:35:16 AM	53192
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	6/22/2020 4:35:16 AM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 4:35:16 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-033 **Matrix:** SOIL

Client Sample ID: SP-12 Floor Comp
Collection Date: 6/11/2020 10:25:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	4300	150		mg/Kg	50	6/26/2020 9:15:46 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 5:03:47 AM	53192
Surr: BFB	90.9	70-130		%Rec	1	6/22/2020 5:03:47 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 5:05:45 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 5:05:45 PM	53197
Surr: DNOP	122	55.1-146		%Rec	1	6/21/2020 5:05:45 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 5:03:47 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 5:03:47 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 5:03:47 AM	53192
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 5:03:47 AM	53192
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/22/2020 5:03:47 AM	53192
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	6/22/2020 5:03:47 AM	53192
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/22/2020 5:03:47 AM	53192
Surr: Toluene-d8	98.7	70-130		%Rec	1	6/22/2020 5:03:47 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-034 **Matrix:** SOIL

Client Sample ID: SP-12 @ 2'
Collection Date: 6/11/2020 8:30:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 9:14:09 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 5:32:09 AM	53192
Surr: BFB	94.7	70-130		%Rec	1	6/22/2020 5:32:09 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 5:16:21 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 5:16:21 PM	53197
Surr: DNOP	118	55.1-146		%Rec	1	6/21/2020 5:16:21 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 5:32:09 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 5:32:09 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 5:32:09 AM	53192
Xylenes, Total	ND	0.097		mg/Kg	1	6/22/2020 5:32:09 AM	53192
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/22/2020 5:32:09 AM	53192
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	6/22/2020 5:32:09 AM	53192
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/22/2020 5:32:09 AM	53192
Surr: Toluene-d8	106	70-130		%Rec	1	6/22/2020 5:32:09 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-035 **Matrix:** SOIL

Client Sample ID: SP-13 Floor Comp
Collection Date: 6/11/2020 10:30:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	9400	300		mg/Kg	100	6/26/2020 9:28:10 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 6:00:41 AM	53192
Surr: BFB	96.2	70-130		%Rec	1	6/22/2020 6:00:41 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2020 5:26:55 PM	53197
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 5:26:55 PM	53197
Surr: DNOP	106	55.1-146		%Rec	1	6/21/2020 5:26:55 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 6:00:41 AM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 6:00:41 AM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 6:00:41 AM	53192
Xylenes, Total	ND	0.10		mg/Kg	1	6/22/2020 6:00:41 AM	53192
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/22/2020 6:00:41 AM	53192
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	6/22/2020 6:00:41 AM	53192
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/22/2020 6:00:41 AM	53192
Surr: Toluene-d8	105	70-130		%Rec	1	6/22/2020 6:00:41 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-036 **Matrix:** SOIL

Client Sample ID: SP-13 @ 3'
Collection Date: 6/11/2020 8:40:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 9:38:50 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 6:29:17 AM	53192
Surr: BFB	94.2	70-130		%Rec	1	6/22/2020 6:29:17 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2020 5:37:28 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 5:37:28 PM	53197
Surr: DNOP	135	55.1-146		%Rec	1	6/21/2020 5:37:28 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 6:29:17 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 6:29:17 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 6:29:17 AM	53192
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 6:29:17 AM	53192
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/22/2020 6:29:17 AM	53192
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	6/22/2020 6:29:17 AM	53192
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/22/2020 6:29:17 AM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 6:29:17 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-037 **Matrix:** SOIL

Client Sample ID: SP-14 @ 3'
Collection Date: 6/11/2020 8:50:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 9:51:11 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 6:57:48 AM	53192
Surr: BFB	98.7	70-130		%Rec	1	6/22/2020 6:57:48 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 5:48:00 PM	53197
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 5:48:00 PM	53197
Surr: DNOP	142	55.1-146		%Rec	1	6/21/2020 5:48:00 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 6:57:48 AM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 6:57:48 AM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 6:57:48 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 6:57:48 AM	53192
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	6/22/2020 6:57:48 AM	53192
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	6/22/2020 6:57:48 AM	53192
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/22/2020 6:57:48 AM	53192
Surr: Toluene-d8	106	70-130		%Rec	1	6/22/2020 6:57:48 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-038 **Matrix:** SOIL

Client Sample ID: SP-14 Floor Comp.
Collection Date: 6/11/2020 10:40:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2300	150		mg/Kg	50	6/26/2020 9:40:35 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 7:26:14 AM	53192
Surr: BFB	96.5	70-130		%Rec	1	6/22/2020 7:26:14 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/21/2020 5:58:30 PM	53197
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/21/2020 5:58:30 PM	53197
Surr: DNOP	97.2	55.1-146		%Rec	1	6/21/2020 5:58:30 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 7:26:14 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 7:26:14 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 7:26:14 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 7:26:14 AM	53192
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%Rec	1	6/22/2020 7:26:14 AM	53192
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	6/22/2020 7:26:14 AM	53192
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/22/2020 7:26:14 AM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 7:26:14 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-15 @ 8'
Project: QPQASU Water Flood Facility
Collection Date: 6/15/2020 9:35:00 AM
Lab ID: 2006A30-039 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1700	60		mg/Kg	20	6/25/2020 10:15:53 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 7:54:52 AM	53192
Surr: BFB	92.9	70-130		%Rec	1	6/22/2020 7:54:52 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	32	9.4		mg/Kg	1	6/23/2020 11:08:38 AM	53197
Motor Oil Range Organics (MRO)	56	47		mg/Kg	1	6/23/2020 11:08:38 AM	53197
Surr: DNOP	138	55.1-146		%Rec	1	6/23/2020 11:08:38 AM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 7:54:52 AM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 7:54:52 AM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 7:54:52 AM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 7:54:52 AM	53192
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	6/22/2020 7:54:52 AM	53192
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	6/22/2020 7:54:52 AM	53192
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/22/2020 7:54:52 AM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 7:54:52 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-040 **Matrix:** SOIL

Client Sample ID: SP-15 N.Comp
Collection Date: 6/15/2020 9:00:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	290	59		mg/Kg	20	6/25/2020 10:28:14 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 8:23:28 AM	53192
Surr: BFB	94.0	70-130		%Rec	1	6/22/2020 8:23:28 AM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/21/2020 6:19:28 PM	53197
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/21/2020 6:19:28 PM	53197
Surr: DNOP	139	55.1-146		%Rec	1	6/21/2020 6:19:28 PM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 8:23:28 AM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 8:23:28 AM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 8:23:28 AM	53192
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 8:23:28 AM	53192
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/22/2020 8:23:28 AM	53192
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	6/22/2020 8:23:28 AM	53192
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/22/2020 8:23:28 AM	53192
Surr: Toluene-d8	105	70-130		%Rec	1	6/22/2020 8:23:28 AM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-041 **Matrix:** SOIL

Client Sample ID: SP-15 Floor Comp.
Collection Date: 6/10/2020 8:15:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	7400	300		mg/Kg	100	6/26/2020 9:52:59 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 2:04:47 PM	53192
Surr: BFB	96.5	70-130		%Rec	1	6/22/2020 2:04:47 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	260	50		mg/Kg	5	6/23/2020 11:45:24 AM	53197
Motor Oil Range Organics (MRO)	320	250		mg/Kg	5	6/23/2020 11:45:24 AM	53197
Surr: DNOP	103	55.1-146		%Rec	5	6/23/2020 11:45:24 AM	53197
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 2:04:47 PM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 2:04:47 PM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 2:04:47 PM	53192
Xylenes, Total	ND	0.099		mg/Kg	1	6/22/2020 2:04:47 PM	53192
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/22/2020 2:04:47 PM	53192
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	6/22/2020 2:04:47 PM	53192
Surr: Dibromofluoromethane	108	70-130		%Rec	1	6/22/2020 2:04:47 PM	53192
Surr: Toluene-d8	107	70-130		%Rec	1	6/22/2020 2:04:47 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-15 E. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 1:15:00 PM
Lab ID: 2006A30-042 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 10:52:55 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 2:33:32 PM	53192
Surr: BFB	95.0	70-130		%Rec	1	6/22/2020 2:33:32 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 7:31:26 PM	53201
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 7:31:26 PM	53201
Surr: DNOP	98.4	55.1-146		%Rec	1	6/21/2020 7:31:26 PM	53201
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 2:33:32 PM	53192
Toluene	ND	0.049		mg/Kg	1	6/22/2020 2:33:32 PM	53192
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 2:33:32 PM	53192
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 2:33:32 PM	53192
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/22/2020 2:33:32 PM	53192
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	6/22/2020 2:33:32 PM	53192
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/22/2020 2:33:32 PM	53192
Surr: Toluene-d8	104	70-130		%Rec	1	6/22/2020 2:33:32 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-043 **Matrix:** SOIL

Client Sample ID: SP-15 S. Comp
Collection Date: 6/15/2020 9:10:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	59		mg/Kg	20	6/25/2020 11:05:17 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 3:02:23 PM	53192
Surr: BFB	102	70-130		%Rec	1	6/22/2020 3:02:23 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2020 8:02:16 PM	53201
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 8:02:16 PM	53201
Surr: DNOP	92.2	55.1-146		%Rec	1	6/21/2020 8:02:16 PM	53201
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 3:02:23 PM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 3:02:23 PM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 3:02:23 PM	53192
Xylenes, Total	ND	0.10		mg/Kg	1	6/22/2020 3:02:23 PM	53192
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/22/2020 3:02:23 PM	53192
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	6/22/2020 3:02:23 PM	53192
Surr: Dibromofluoromethane	107	70-130		%Rec	1	6/22/2020 3:02:23 PM	53192
Surr: Toluene-d8	105	70-130		%Rec	1	6/22/2020 3:02:23 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-16 @ 8'
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 1:56:00 PM
Lab ID: 2006A30-044 **Matrix:** SOIL **Received Date:** 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 11:42:18 PM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	24	5.0		mg/Kg	1	6/22/2020 3:31:15 PM	53192
Surr: BFB	99.5	70-130		%Rec	1	6/22/2020 3:31:15 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	660	9.4		mg/Kg	1	6/23/2020 11:38:30 AM	53201
Motor Oil Range Organics (MRO)	340	47		mg/Kg	1	6/23/2020 11:38:30 AM	53201
Surr: DNOP	187	55.1-146	S	%Rec	1	6/23/2020 11:38:30 AM	53201
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 3:31:15 PM	53192
Toluene	0.34	0.050		mg/Kg	1	6/22/2020 3:31:15 PM	53192
Ethylbenzene	0.62	0.050		mg/Kg	1	6/22/2020 3:31:15 PM	53192
Xylenes, Total	1.6	0.10		mg/Kg	1	6/22/2020 3:31:15 PM	53192
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	6/22/2020 3:31:15 PM	53192
Surr: 4-Bromofluorobenzene	70.2	70-130		%Rec	1	6/22/2020 3:31:15 PM	53192
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/22/2020 3:31:15 PM	53192
Surr: Toluene-d8	108	70-130		%Rec	1	6/22/2020 3:31:15 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-045 **Matrix:** SOIL

Client Sample ID: SP-16 Floor Comp
Collection Date: 6/10/2020 9:00:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	5000	300		mg/Kg	100	6/26/2020 10:05:23 AM	53312
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/22/2020 4:00:07 PM	53192
Surr: BFB	98.2	70-130		%Rec	1	6/22/2020 4:00:07 PM	53192
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/23/2020 11:58:28 AM	53201
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/23/2020 11:58:28 AM	53201
Surr: DNOP	115	55.1-146		%Rec	1	6/23/2020 11:58:28 AM	53201
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 4:00:07 PM	53192
Toluene	ND	0.050		mg/Kg	1	6/22/2020 4:00:07 PM	53192
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2020 4:00:07 PM	53192
Xylenes, Total	ND	0.10		mg/Kg	1	6/22/2020 4:00:07 PM	53192
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/22/2020 4:00:07 PM	53192
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	6/22/2020 4:00:07 PM	53192
Surr: Dibromofluoromethane	117	70-130		%Rec	1	6/22/2020 4:00:07 PM	53192
Surr: Toluene-d8	109	70-130		%Rec	1	6/22/2020 4:00:07 PM	53192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-16 S. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 11:20:00 AM
Lab ID: 2006A30-046 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	240	60		mg/Kg	20	6/26/2020 12:07:00 AM	53312
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 8:33:00 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 8:33:00 PM	53201
Surr: DNOP	97.7	55.1-146		%Rec	1	6/21/2020 8:33:00 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/22/2020 6:16:42 PM	53196
Surr: BFB	89.2	66.6-105		%Rec	1	6/22/2020 6:16:42 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 6:16:42 PM	53196
Toluene	ND	0.048		mg/Kg	1	6/22/2020 6:16:42 PM	53196
Ethylbenzene	ND	0.048		mg/Kg	1	6/22/2020 6:16:42 PM	53196
Xylenes, Total	ND	0.095		mg/Kg	1	6/22/2020 6:16:42 PM	53196
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/22/2020 6:16:42 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-16 N.Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:25:00 AM
Lab ID: 2006A30-047 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	3800	150		mg/Kg	50	6/26/2020 10:17:48 AM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	24	9.6		mg/Kg	1	6/21/2020 8:43:16 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 8:43:16 PM	53201
Surr: DNOP	77.4	55.1-146		%Rec	1	6/21/2020 8:43:16 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/22/2020 7:28:40 PM	53196
Surr: BFB	85.7	66.6-105		%Rec	1	6/22/2020 7:28:40 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/22/2020 7:28:40 PM	53196
Toluene	ND	0.046		mg/Kg	1	6/22/2020 7:28:40 PM	53196
Ethylbenzene	ND	0.046		mg/Kg	1	6/22/2020 7:28:40 PM	53196
Xylenes, Total	ND	0.093		mg/Kg	1	6/22/2020 7:28:40 PM	53196
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/22/2020 7:28:40 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-17 @ 6'
Project: QPQASU Water Flood Facility
Collection Date: 6/11/2020 1:50:00 PM
Lab ID: 2006A30-048 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 4:30:42 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	360	9.9		mg/Kg	1	6/23/2020 12:08:31 PM	53201
Motor Oil Range Organics (MRO)	180	49		mg/Kg	1	6/23/2020 12:08:31 PM	53201
Surr: DNOP	121	55.1-146		%Rec	1	6/23/2020 12:08:31 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	14	12		mg/Kg	5	6/22/2020 8:40:21 PM	53196
Surr: BFB	107	66.6-105	S	%Rec	5	6/22/2020 8:40:21 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	6/22/2020 8:40:21 PM	53196
Toluene	0.42	0.24		mg/Kg	5	6/22/2020 8:40:21 PM	53196
Ethylbenzene	0.57	0.24		mg/Kg	5	6/22/2020 8:40:21 PM	53196
Xylenes, Total	1.3	0.47		mg/Kg	5	6/22/2020 8:40:21 PM	53196
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	5	6/22/2020 8:40:21 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-17 Floor Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/10/2020 9:10:00 AM
Lab ID: 2006A30-049 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 4:43:07 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/21/2020 9:03:35 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:03:35 PM	53201
Surr: DNOP	90.4	55.1-146		%Rec	1	6/21/2020 9:03:35 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/22/2020 9:04:09 PM	53196
Surr: BFB	86.5	66.6-105		%Rec	1	6/22/2020 9:04:09 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 9:04:09 PM	53196
Toluene	ND	0.047		mg/Kg	1	6/22/2020 9:04:09 PM	53196
Ethylbenzene	ND	0.047		mg/Kg	1	6/22/2020 9:04:09 PM	53196
Xylenes, Total	ND	0.095		mg/Kg	1	6/22/2020 9:04:09 PM	53196
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/22/2020 9:04:09 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-17 S. Comp
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:05:00 AM
Lab ID: 2006A30-050 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 4:55:32 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2020 9:13:52 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:13:52 PM	53201
Surr: DNOP	92.2	55.1-146		%Rec	1	6/21/2020 9:13:52 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/22/2020 9:27:52 PM	53196
Surr: BFB	83.8	66.6-105		%Rec	1	6/22/2020 9:27:52 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/22/2020 9:27:52 PM	53196
Toluene	ND	0.049		mg/Kg	1	6/22/2020 9:27:52 PM	53196
Ethylbenzene	ND	0.049		mg/Kg	1	6/22/2020 9:27:52 PM	53196
Xylenes, Total	ND	0.098		mg/Kg	1	6/22/2020 9:27:52 PM	53196
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/22/2020 9:27:52 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-17 N. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:00:00 AM
Lab ID: 2006A30-051 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	59		mg/Kg	20	6/25/2020 5:07:56 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/21/2020 9:24:01 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:24:01 PM	53201
Surr: DNOP	88.4	55.1-146		%Rec	1	6/21/2020 9:24:01 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/22/2020 9:51:34 PM	53196
Surr: BFB	83.4	66.6-105		%Rec	1	6/22/2020 9:51:34 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 9:51:34 PM	53196
Toluene	ND	0.048		mg/Kg	1	6/22/2020 9:51:34 PM	53196
Ethylbenzene	ND	0.048		mg/Kg	1	6/22/2020 9:51:34 PM	53196
Xylenes, Total	ND	0.096		mg/Kg	1	6/22/2020 9:51:34 PM	53196
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/22/2020 9:51:34 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-18 N. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:10:00 AM
Lab ID: 2006A30-052 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	6/25/2020 5:20:20 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2020 9:34:08 PM	53201
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2020 9:34:08 PM	53201
Surr: DNOP	91.4	55.1-146		%Rec	1	6/21/2020 9:34:08 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/22/2020 10:15:19 PM	53196
Surr: BFB	85.5	66.6-105		%Rec	1	6/22/2020 10:15:19 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	6/22/2020 10:15:19 PM	53196
Toluene	ND	0.046		mg/Kg	1	6/22/2020 10:15:19 PM	53196
Ethylbenzene	ND	0.046		mg/Kg	1	6/22/2020 10:15:19 PM	53196
Xylenes, Total	ND	0.092		mg/Kg	1	6/22/2020 10:15:19 PM	53196
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/22/2020 10:15:19 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-053 **Matrix:** SOIL

Client Sample ID: SP-18 Floor Comp
Collection Date: 6/10/2020 9:20:00 AM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	120	60		mg/Kg	20	6/25/2020 5:57:34 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2020 9:44:24 PM	53201
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2020 9:44:24 PM	53201
Surr: DNOP	90.8	55.1-146		%Rec	1	6/21/2020 9:44:24 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/22/2020 10:38:54 PM	53196
Surr: BFB	83.2	66.6-105		%Rec	1	6/22/2020 10:38:54 PM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/22/2020 10:38:54 PM	53196
Toluene	ND	0.047		mg/Kg	1	6/22/2020 10:38:54 PM	53196
Ethylbenzene	ND	0.047		mg/Kg	1	6/22/2020 10:38:54 PM	53196
Xylenes, Total	ND	0.094		mg/Kg	1	6/22/2020 10:38:54 PM	53196
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/22/2020 10:38:54 PM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2006A30-054 **Matrix:** SOIL

Client Sample ID: SP-18 @ 2'
Collection Date: 6/11/2020 1:30:00 PM
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 6:09:58 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2020 9:54:40 PM	53201
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 9:54:40 PM	53201
Surr: DNOP	88.6	55.1-146		%Rec	1	6/21/2020 9:54:40 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/23/2020 12:13:04 AM	53196
Surr: BFB	92.4	66.6-105		%Rec	1	6/23/2020 12:13:04 AM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/23/2020 12:13:04 AM	53196
Toluene	ND	0.048		mg/Kg	1	6/23/2020 12:13:04 AM	53196
Ethylbenzene	ND	0.048		mg/Kg	1	6/23/2020 12:13:04 AM	53196
Xylenes, Total	0.10	0.096		mg/Kg	1	6/23/2020 12:13:04 AM	53196
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	6/23/2020 12:13:04 AM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-18 S. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/16/2020 8:15:00 AM
Lab ID: 2006A30-055 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2020 6:22:23 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/21/2020 10:04:57 PM	53201
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/21/2020 10:04:57 PM	53201
Surr: DNOP	90.5	55.1-146		%Rec	1	6/21/2020 10:04:57 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/23/2020 12:36:38 AM	53196
Surr: BFB	81.1	66.6-105		%Rec	1	6/23/2020 12:36:38 AM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/23/2020 12:36:38 AM	53196
Toluene	ND	0.047		mg/Kg	1	6/23/2020 12:36:38 AM	53196
Ethylbenzene	ND	0.047		mg/Kg	1	6/23/2020 12:36:38 AM	53196
Xylenes, Total	ND	0.094		mg/Kg	1	6/23/2020 12:36:38 AM	53196
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/23/2020 12:36:38 AM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2006A30**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP-18 W. Comp.
Project: QPQASU Water Flood Facility
Collection Date: 6/10/2020 8:20:00 AM
Lab ID: 2006A30-056 **Matrix:** SOIL
Received Date: 6/19/2020 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	350	60		mg/Kg	20	6/25/2020 6:34:48 PM	53316
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	6/21/2020 10:15:04 PM	53201
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2020 10:15:04 PM	53201
Surr: DNOP	88.5	55.1-146		%Rec	1	6/21/2020 10:15:04 PM	53201
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/23/2020 1:00:03 AM	53196
Surr: BFB	79.9	66.6-105		%Rec	1	6/23/2020 1:00:03 AM	53196
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/23/2020 1:00:03 AM	53196
Toluene	ND	0.048		mg/Kg	1	6/23/2020 1:00:03 AM	53196
Ethylbenzene	ND	0.048		mg/Kg	1	6/23/2020 1:00:03 AM	53196
Xylenes, Total	ND	0.097		mg/Kg	1	6/23/2020 1:00:03 AM	53196
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/23/2020 1:00:03 AM	53196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53275** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **53275** RunNo: **69865**
Prep Date: **6/24/2020** Analysis Date: **6/24/2020** SeqNo: **2426931** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53275** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **53275** RunNo: **69865**
Prep Date: **6/24/2020** Analysis Date: **6/24/2020** SeqNo: **2426932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	90	110			

Sample ID: **MB-53278** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **53278** RunNo: **69865**
Prep Date: **6/24/2020** Analysis Date: **6/24/2020** SeqNo: **2426967** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53278** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **53278** RunNo: **69865**
Prep Date: **6/24/2020** Analysis Date: **6/24/2020** SeqNo: **2426968** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.3	90	110			

Sample ID: **MB-53303** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **53303** RunNo: **69914**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2427847** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53303** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **53303** RunNo: **69914**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2427848** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53312** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **53312** RunNo: **69914**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2427877** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53312** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **53312** RunNo: **69914**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2427878** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Sample ID: **MB-53316** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **53316** RunNo: **69924**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2428614** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53316** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **53316** RunNo: **69924**
Prep Date: **6/25/2020** Analysis Date: **6/25/2020** SeqNo: **2428615** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **LCS-53187** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **53187** RunNo: **69768**
Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2422440** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	119	70	130			
Surr: DNOP	6.5		5.000		131	55.1	146			

Sample ID: **MB-53187** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53187** RunNo: **69768**
Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2422443** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		115	55.1	146			

Sample ID: **MB-53194** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53194** RunNo: **69777**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422585** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		126	55.1	146			

Sample ID: **2006A30-002AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-1 @2'** Batch ID: **53194** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422589** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.1	45.29	0	139	47.4	136			S
Surr: DNOP	7.2		4.529		160	55.1	146			S

Sample ID: **2006A30-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-1 @2'** Batch ID: **53194** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422590** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	49.85	0	102	47.4	136	21.3	43.4	
Surr: DNOP	4.5		4.985		89.7	55.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **LCS-53194** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **53194** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422610** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	70	130			
Surr: DNOP	5.6		5.000		112	55.1	146			

Sample ID: **2006A30-042AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-15 E. Comp.** Batch ID: **53201** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422946** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.5	47.71	0	102	47.4	136			
Surr: DNOP	4.3		4.771		89.8	55.1	146			

Sample ID: **2006A30-042AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-15 E. Comp.** Batch ID: **53201** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422947** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.4	46.95	0	102	47.4	136	1.77	43.4	
Surr: DNOP	4.4		4.695		94.0	55.1	146	0	0	

Sample ID: **LCS-53197** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **53197** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422989** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	111	70	130			
Surr: DNOP	5.4		5.000		108	55.1	146			

Sample ID: **LCS-53201** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **53201** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422990** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.1	70	130			
Surr: DNOP	4.5		5.000		89.1	55.1	146			

Sample ID: **MB-53197** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53197** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422992** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53197** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53197** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422992** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		123	55.1	146			

Sample ID: **MB-53201** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53201** RunNo: **69778**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2422993** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.2	55.1	146			

Sample ID: **2006A30-022AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-9 E. Comp** Batch ID: **53197** RunNo: **69821**
Prep Date: **6/20/2020** Analysis Date: **6/23/2020** SeqNo: **2424535** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	74	9.4	46.77	29.66	95.1	47.4	136			
Surr: DNOP	6.8		4.677		144	55.1	146			

Sample ID: **2006A30-022AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-9 E. Comp** Batch ID: **53197** RunNo: **69821**
Prep Date: **6/20/2020** Analysis Date: **6/23/2020** SeqNo: **2424537** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	79	10	49.80	29.66	99.6	47.4	136	6.64	43.4	
Surr: DNOP	7.4		4.980		149	55.1	146	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **mb-53186**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **53186**	RunNo: **69786**
Prep Date: **6/19/2020**	Analysis Date: **6/20/2020**	SeqNo: **2423005** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	800		1000		80.4	66.6	105			

Sample ID: **lcs-53186**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **53186**	RunNo: **69786**
Prep Date: **6/19/2020**	Analysis Date: **6/20/2020**	SeqNo: **2423006** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	80	120			
Surr: BFB	920		1000		91.7	66.6	105			

Sample ID: **2006A30-007AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-4 Comp**	Batch ID: **53186**	RunNo: **69786**
Prep Date: **6/19/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423009** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.80	0	91.3	80	120			
Surr: BFB	890		992.1		89.6	66.6	105			

Sample ID: **2006A30-007AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-4 Comp**	Batch ID: **53186**	RunNo: **69786**
Prep Date: **6/19/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423010** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.65	0	90.1	80	120	1.92	20	
Surr: BFB	900		986.2		90.8	66.6	105	0	0	

Sample ID: **mb-53196**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **53196**	RunNo: **69815**
Prep Date: **6/20/2020**	Analysis Date: **6/22/2020**	SeqNo: **2424140** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		81.8	66.6	105			

Sample ID: **lcs-53196**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **53196**	RunNo: **69815**
Prep Date: **6/20/2020**	Analysis Date: **6/22/2020**	SeqNo: **2424141** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **lcs-53196** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424141** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	80.4	80	120			
Surr: BFB	970		1000		97.1	66.6	105			

Sample ID: **2006a30-047ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-16 N.Comp.** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424144** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.02	0	102	80	120			
Surr: BFB	960		960.6		99.9	66.6	105			

Sample ID: **2006a30-047amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-16 N.Comp.** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424145** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.08	0	106	80	120	4.26	20	
Surr: BFB	960		963.4		99.8	66.6	105	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **mb-53186** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **53186** RunNo: **69786**
Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2423033** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID: **LCS-53186** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **53186** RunNo: **69786**
Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2423034** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID: **2006A30-006AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-3 @3'** Batch ID: **53186** RunNo: **69786**
Prep Date: **6/19/2020** Analysis Date: **6/21/2020** SeqNo: **2423036** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9785	0	105	78.5	119			
Toluene	1.1	0.049	0.9785	0.01387	108	75.7	123			
Ethylbenzene	1.1	0.049	0.9785	0	111	74.3	126			
Xylenes, Total	3.2	0.098	2.935	0.01806	110	72.9	130			
Surr: 4-Bromofluorobenzene	1.0		0.9785		104	80	120			

Sample ID: **2006A30-006AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-3 @3'** Batch ID: **53186** RunNo: **69786**
Prep Date: **6/19/2020** Analysis Date: **6/21/2020** SeqNo: **2423037** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	0.9862	0	84.6	78.5	119	20.9	20	R
Toluene	0.86	0.049	0.9862	0.01387	85.6	75.7	123	21.9	20	R
Ethylbenzene	0.85	0.049	0.9862	0	85.8	74.3	126	24.4	20	R
Xylenes, Total	2.5	0.099	2.959	0.01806	85.1	72.9	130	24.3	20	R
Surr: 4-Bromofluorobenzene	1.0		0.9862		106	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **mb-53196** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424185** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID: **LCS-53196** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424186** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.92	0.050	1.000	0	92.2	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.5	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID: **2006a30-046ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-16 S. Comp.** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424188** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	0.9814	0	100	78.5	119			
Toluene	1.0	0.049	0.9814	0.01046	103	75.7	123			
Ethylbenzene	1.0	0.049	0.9814	0	104	74.3	126			
Xylenes, Total	3.1	0.098	2.944	0	105	72.9	130			
Surr: 4-Bromofluorobenzene	1.1		0.9814		111	80	120			

Sample ID: **2006a30-046amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-16 S. Comp.** Batch ID: **53196** RunNo: **69815**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2424189** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9606	0	102	78.5	119	0.630	20	
Toluene	1.0	0.048	0.9606	0.01046	104	75.7	123	1.24	20	
Ethylbenzene	1.0	0.048	0.9606	0	105	74.3	126	0.903	20	
Xylenes, Total	3.1	0.096	2.882	0	107	72.9	130	0.275	20	
Surr: 4-Bromofluorobenzene	1.0		0.9606		109	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **mb-53183** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **53183** RunNo: **69787**
Prep Date: **6/19/2020** Analysis Date: **6/21/2020** SeqNo: **2423069** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.8	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.8	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID: **lcs-53183** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **53183** RunNo: **69787**
Prep Date: **6/19/2020** Analysis Date: **6/21/2020** SeqNo: **2423070** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.4	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.3	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.50		0.5000		99.4	70	130			

Sample ID: **mb-53192** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **53192** RunNo: **69790**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2423304** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.8	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.55		0.5000		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **lcs-53192** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **53192** RunNo: **69790**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2423305** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	80	120			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		87.9	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		106	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

Sample ID: **2006a30-026ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **SP-10 @ 14'** Batch ID: **53192** RunNo: **69790**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2423474** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9921	0	104	71.1	115			
Toluene	1.1	0.050	0.9921	0	113	79.6	132			
Ethylbenzene	1.2	0.050	0.9921	0	119	83.8	134			
Xylenes, Total	3.7	0.099	2.976	0	123	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.50		0.4960		102	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.4960		99.0	70	130			
Surr: Dibromofluoromethane	0.51		0.4960		102	70	130			
Surr: Toluene-d8	0.53		0.4960		107	70	130			

Sample ID: **2006a30-026amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **SP-10 @ 14'** Batch ID: **53192** RunNo: **69790**
Prep Date: **6/20/2020** Analysis Date: **6/21/2020** SeqNo: **2423475** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9950	0	104	71.1	115	0.374	20	
Toluene	1.0	0.050	0.9950	0	105	79.6	132	7.55	20	
Ethylbenzene	1.1	0.050	0.9950	0	109	83.8	134	8.00	20	
Xylenes, Total	3.3	0.10	2.985	0	111	82.4	132	9.88	20	
Surr: 1,2-Dichloroethane-d4	0.53		0.4975		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.50		0.4975		99.5	70	130	0	0	
Surr: Dibromofluoromethane	0.50		0.4975		99.6	70	130	0	0	
Surr: Toluene-d8	0.51		0.4975		103	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **mb-53183**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **PBS**	Batch ID: **53183**	RunNo: **69787**							
Prep Date: **6/19/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423143**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	540		500.0		107	70	130			

Sample ID: **lcs-53183**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **53183**	RunNo: **69787**							
Prep Date: **6/19/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423144**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.6	70	130			
Surr: BFB	540		500.0		109	70	130			

Sample ID: **mb-53192**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **PBS**	Batch ID: **53192**	RunNo: **69790**							
Prep Date: **6/20/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423439**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	500		500.0		99.3	70	130			

Sample ID: **lcs-53192**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **53192**	RunNo: **69790**							
Prep Date: **6/20/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423440**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	79.0	70	130			
Surr: BFB	480		500.0		96.3	70	130			

Sample ID: **2006a30-027ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **SP-10 S. Comp**	Batch ID: **53192**	RunNo: **69790**							
Prep Date: **6/20/2020**	Analysis Date: **6/22/2020**	SeqNo: **2423459**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.9	24.65	0	77.2	70	130			
Surr: BFB	480		493.1		97.1	70	130			

Sample ID: **2006a30-027amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**							
Client ID: **SP-10 S. Comp**	Batch ID: **53192**	RunNo: **69790**							
Prep Date: **6/20/2020**	Analysis Date: **6/22/2020**	SeqNo: **2423460**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006A30**
07-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **2006a30-027amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **SP-10 S. Comp** Batch ID: **53192** RunNo: **69790**
Prep Date: **6/20/2020** Analysis Date: **6/22/2020** SeqNo: **2423460** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	24.80	0	81.6	70	130	6.13	20	
Surr: BFB	470		496.0		95.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Mewbourne Oil Company Work Order Number: 2006A30 RcptNo: 1

Received By: **Isaiah Ortiz** 6/19/2020 9:35:00 AM I-OX

Completed By: **Juan Rojas** 6/19/2020 10:08:55 AM

Reviewed By: JR 6/19/20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: SPA 6.19.20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good				

Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 days
☒ Standard ☐ Rush

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8-0.1|CF|4.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006430	Analysis Request: Chloride	TPH	BTEX
6/8/20	1000	S	SP-1 Comp.	1	Ice	-001	X	X	X
6/11/20	1315	S	SP-1 @ 2'	1	Ice	-002	X	X	X
6/8/20	1005	S	SP-2 Comp.	1	Ice	-003	X	X	X
6/11/20	0920	S	SP-2 @ 3'	1	Ice	-004	X	X	X
6/8/20	1030	S	SP-3 Comp.	1	Ice	-005	X	X	X
6/11/20	0930	S	SP-3 @ 3'	1	Ice	-006	X	X	X
6/8/20	1045	S	SP-4 Comp.	1	Ice	-007	X	X	X
6/11/20	0940	S	SP-4 @ 2'	1	Ice	-008	X	X	X
6/8/20	1100	S	SP-5 Comp.	1	Ice	-009	X	X	X
6/11/20	1000	S	SP-5 @ 3'	1	Ice	-010	X	X	X
6/11/20	1005	S	SP-6 Floor Comp.	1	Ice	-011	X	X	X
6/11/20	1000	S	SP-6 @ 1'	1	Ice	-012	X	X	X

Date	Time	Relinquished by	Received by	Via	Date	Time
6/18	2:00				6/18/20	1700
6/18/20	1900				6/9/20	0935

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

Please contact Ben Arguijo at (575)390-7208 for any questions or problems with this COC.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day
☒ Standard ☐ Rush

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 4.8 - 0.1 (CF) = 4.7 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006A30	Analysis Request: Chloride	TPH	BTEX
6/10/20	0800	S	SP-7 Floor Comp.	1	Ice	-013	X	X	X
6/11/20	1100	S	SP-7 @ 8'	1	Ice	-014	X	X	X
6/11/20	1105	S	SP-7 E. Comp.	1	Ice	-015	X	X	X
6/11/20	1110	S	SP-7 W. Comp.	1	Ice	-016	X	X	X
6/10/20	0810	S	SP-8 Floor Comp.	1	Ice	-017	X	X	X
6/11/20	1020	S	SP-8 W. Comp.	1	Ice	-018	X	X	X
6/11/20	1025	S	SP-8 E. Comp.	1	Ice	-019	X	X	X
6/11/20	1015	S	SP-8 @ 8'	1	Ice	-020	X	X	X
6/16/20	0820	S	SP-9 Floor Comp.	1	Ice	-021	X	X	X
6/16/20	1300	S	SP-9 E. Comp.	1	Ice	-022	X	X	X
6/16/20	1305	S	SP-9 S. Comp.	1	Ice	-023	X	X	X
6/16/20	1310	S	SP-9 N. Comp.	1	Ice	-024	X	X	X

Date	Time	Relinquished by	Received by	Via	Date	Time
6/18	20	[signature]	[signature]		6/18/20	1400
6/18/20	1900	[signature]	[signature]	Courier	6/19/20	0835

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

Please contact Ben Arguijo at (575)390-7208 for any questions or problems with this COC.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8-0.1(CF) 4.7°C

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www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006A30	Chloride	TPH	BTEX	Analysis Request
6/10/20	0830	S	SP-10 Floor Comp.	1	Ice	-025	X	X	X	
6/17/20	1305	S	SP-10 @ 14'	1	Ice	-026	X	X	X	
6/17/20	0900	S	SP-10 S. Comp.	1	Ice	-027	X	X	X	
6/17/20	0905	S	SP-10 N. Comp.	1	Ice	-028	X	X	X	
6/10/20	0840	S	SP-11 Floor Comp.	1	Ice	-029	X	X	X	
6/17/20	1310	S	SP-11 @ 14'	1	Ice	-030	X	X	X	
6/17/20	0915	S	SP-11 N. Comp.	1	Ice	-031	X	X	X	
6/17/20	0910	S	SP-11 S. Comp.	1	Ice	-032	X	X	X	
6/11/20	1025	S	SP-12 Floor Comp.	1	Ice	-033	X	X	X	
6/11/20	0830	S	SP-12 @ 2'	1	Ice	-034	X	X	X	
6/11/20	1030	S	SP-13 Floor Comp.	1	Ice	-035	X	X	X	
6/11/20	0840	S	SP-13 @ 3'	1	Ice	-036	X	X	X	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/18	2:00				6/18/20	1400
6/18/20	1900			courier	6/19/20	0955

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

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Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 day
☒ Standard ☐ Rush

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8-0.1/CF/4.7 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006430	Analysis Request: Chloride	TPH	BTEX
6/11/20	0850	S	SP-14 @ 3'	1	Ice	-037	X	X	X
6/11/20	1040	S	SP-14 Floor Comp.	1	Ice	-038	X	X	X
6/15/20	0935	S	SP-15 @ 8'	1	Ice	-039	X	X	X
6/15/20	0900	S	SP-15 N. Comp.	1	Ice	-040	X	X	X
6/10/20	0815	S	SP-15 Floor Comp.	1	Ice	-041	X	X	X
6/16/20	1315	S	SP-15 E. Comp.	1	Ice	-042	X	X	X
6/15/20	0910	S	SP-15 S. Comp.	1	Ice	-043	X	X	X
6/11/20	1356	S	SP-16 @ 8'	1	Ice	-044	X	X	X
6/10/20	0900	S	SP-16 Floor Comp.	1	Ice	-045	X	X	X
6/16/20	1120	S	SP-16 N. Comp.	1	Ice	-046	X	X	X
6/16/20	0825	S	SP-16 S. Comp.	1	Ice	-047	X	X	X
6/11/20	1350	S	SP-17 @ 6'	1	Ice	-048	X	X	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/18	1200	[signature]	[signature]		6/18/20	1400
6/18/20	1900	[signature]	[signature]	courier	6/19/20	0935

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

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Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time: 5 days
☑ Standard ☐ Rush_____

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8 -0.1(CF) = 4.7°C

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Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006430	Chloride	TPH	BTEX	Analysis Request
6/10/20	0910	S	SP-17 Floor Comp.	1	Ice	-049	X	X	X	
6/16/20	0805	S	SP-17 S. Comp.	1	Ice	-050	X	X	X	
6/16/20	0800	S	SP-17 N. Comp.	1	Ice	-051	X	X	X	
6/16/20	0810	S	SP-18 N. Comp.	1	Ice	-052	X	X	X	
6/10/20	0920	S	SP-18 Floor Comp.	1	Ice	-053	X	X	X	
6/11/20	1330	S	SP-18 @ 2'	1	Ice	-054	X	X	X	
6/16/20	0815	S	SP-18 S. Comp.	1	Ice	-055	X	X	X	
6/10/20	0820	S	SP-18 W. Comp.	1	Ice	-056	X	X	X	
		S		1	Ice		X	X	X	
		S		1	Ice		X	X	X	
		S		1	Ice		X	X	X	
		S		1	Ice		X	X	X	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/18	2000				6/18/20	1400
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/18/20	1900			courier	6/19/20	0935

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Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time: 5 days
☑ Standard ☐ Rush_____

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8 (0.1CF) 4.7°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006430	Chloride	TPH	BTEX
6/10/20	0910	S	SP-17 Floor Comp.	1	Ice	-049	X	X	X
6/16/20	0805	S	SP-17 S. Comp.	1	Ice	-050	X	X	X
6/16/20	0800	S	SP-17 N. Comp.	1	Ice	-051	X	X	X
6/16/20	0810	S	SP-18 N. Comp.	1	Ice	-052	X	X	X
6/10/20	0920	S	SP-18 Floor Comp.	1	Ice	-053	X	X	X
6/11/20	1330	S	SP-18 @ 2'	1	Ice	-054	X	X	X
6/16/20	0815	S	SP-18 S. Comp.	1	Ice	-055	X	X	X
6/10/20	0820	S	SP-18 W. Comp.	1	Ice	-056	X	X	X
		S		1	Ice		X	X	X
		S		1	Ice		X	X	X
		S		1	Ice		X	X	X
		S		1	Ice		X	X	X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/18	2000	[signature]	[signature]		6/18/20	1400
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/18/20	1900	[signature]	[signature]		6/19/20	0935

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

Please contact Ben Arguijo at (575)390-7208 for any questions or problems with this COC.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 10, 2020

Robbie Runnels

Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
TEL: (575) 393-5905
FAX:

RE: QPQASU Water Flood Facility OrderNo.: 2007092

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/2/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-001 **Matrix:** SOIL

Client Sample ID: SP-1 @ 3'
Collection Date: 6/30/2020 12:48:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	370	60		mg/Kg	20	7/9/2020 7:29:01 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/4/2020 3:47:08 PM	53481
Surr: BFB	97.0	70-130		%Rec	1	7/4/2020 3:47:08 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2020 6:33:37 PM	53484
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2020 6:33:37 PM	53484
Surr: DNOP	60.6	55.1-146		%Rec	1	7/4/2020 6:33:37 PM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	7/4/2020 3:47:08 PM	53481
Toluene	ND	0.048		mg/Kg	1	7/4/2020 3:47:08 PM	53481
Ethylbenzene	ND	0.048		mg/Kg	1	7/4/2020 3:47:08 PM	53481
Xylenes, Total	ND	0.097		mg/Kg	1	7/4/2020 3:47:08 PM	53481
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	7/4/2020 3:47:08 PM	53481
Surr: 4-Bromofluorobenzene	87.6	70-130		%Rec	1	7/4/2020 3:47:08 PM	53481
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	7/4/2020 3:47:08 PM	53481
Surr: Toluene-d8	99.1	70-130		%Rec	1	7/4/2020 3:47:08 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-002 **Matrix:** SOIL

Client Sample ID: SP-2@ 6'
Collection Date: 6/30/2020 1:27:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	680	60		mg/Kg	20	7/9/2020 8:30:45 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/4/2020 4:17:08 PM	53481
Surr: BFB	101	70-130		%Rec	1	7/4/2020 4:17:08 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/4/2020 6:57:56 PM	53484
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2020 6:57:56 PM	53484
Surr: DNOP	58.4	55.1-146		%Rec	1	7/4/2020 6:57:56 PM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	7/4/2020 4:17:08 PM	53481
Toluene	ND	0.050		mg/Kg	1	7/4/2020 4:17:08 PM	53481
Ethylbenzene	ND	0.050		mg/Kg	1	7/4/2020 4:17:08 PM	53481
Xylenes, Total	ND	0.10		mg/Kg	1	7/4/2020 4:17:08 PM	53481
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	1	7/4/2020 4:17:08 PM	53481
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	7/4/2020 4:17:08 PM	53481
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	7/4/2020 4:17:08 PM	53481
Surr: Toluene-d8	97.3	70-130		%Rec	1	7/4/2020 4:17:08 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-003 **Matrix:** SOIL

Client Sample ID: SP-3@ 4'
Collection Date: 6/30/2020 12:47:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	480	60		mg/Kg	20	7/9/2020 8:43:04 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/4/2020 4:47:12 PM	53481
Surr: BFB	99.0	70-130		%Rec	1	7/4/2020 4:47:12 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/4/2020 7:22:28 PM	53484
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2020 7:22:28 PM	53484
Surr: DNOP	60.2	55.1-146		%Rec	1	7/4/2020 7:22:28 PM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	7/4/2020 4:47:12 PM	53481
Toluene	ND	0.049		mg/Kg	1	7/4/2020 4:47:12 PM	53481
Ethylbenzene	ND	0.049		mg/Kg	1	7/4/2020 4:47:12 PM	53481
Xylenes, Total	ND	0.098		mg/Kg	1	7/4/2020 4:47:12 PM	53481
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/4/2020 4:47:12 PM	53481
Surr: 4-Bromofluorobenzene	85.6	70-130		%Rec	1	7/4/2020 4:47:12 PM	53481
Surr: Dibromofluoromethane	96.8	70-130		%Rec	1	7/4/2020 4:47:12 PM	53481
Surr: Toluene-d8	98.3	70-130		%Rec	1	7/4/2020 4:47:12 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-004 **Matrix:** SOIL

Client Sample ID: SP-4@ 3'
Collection Date: 6/30/2020 12:30:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	490	60		mg/Kg	20	7/9/2020 8:55:24 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/4/2020 5:17:19 PM	53481
Surr: BFB	98.2	70-130		%Rec	1	7/4/2020 5:17:19 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/4/2020 7:46:50 PM	53484
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/4/2020 7:46:50 PM	53484
Surr: DNOP	56.3	55.1-146		%Rec	1	7/4/2020 7:46:50 PM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	7/4/2020 5:17:19 PM	53481
Toluene	ND	0.050		mg/Kg	1	7/4/2020 5:17:19 PM	53481
Ethylbenzene	ND	0.050		mg/Kg	1	7/4/2020 5:17:19 PM	53481
Xylenes, Total	ND	0.099		mg/Kg	1	7/4/2020 5:17:19 PM	53481
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	1	7/4/2020 5:17:19 PM	53481
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	7/4/2020 5:17:19 PM	53481
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	7/4/2020 5:17:19 PM	53481
Surr: Toluene-d8	101	70-130		%Rec	1	7/4/2020 5:17:19 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-005 **Matrix:** SOIL

Client Sample ID: SP-9 E.
Collection Date: 6/30/2020 12:55:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	180	60		mg/Kg	20	7/9/2020 9:07:45 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/4/2020 5:47:22 PM	53481
Surr: BFB	101	70-130		%Rec	1	7/4/2020 5:47:22 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	55	9.1		mg/Kg	1	7/7/2020 6:30:45 AM	53484
Motor Oil Range Organics (MRO)	59	46		mg/Kg	1	7/7/2020 6:30:45 AM	53484
Surr: DNOP	94.4	55.1-146		%Rec	1	7/7/2020 6:30:45 AM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.023		mg/Kg	1	7/4/2020 5:47:22 PM	53481
Toluene	ND	0.046		mg/Kg	1	7/4/2020 5:47:22 PM	53481
Ethylbenzene	ND	0.046		mg/Kg	1	7/4/2020 5:47:22 PM	53481
Xylenes, Total	ND	0.092		mg/Kg	1	7/4/2020 5:47:22 PM	53481
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/4/2020 5:47:22 PM	53481
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	7/4/2020 5:47:22 PM	53481
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	7/4/2020 5:47:22 PM	53481
Surr: Toluene-d8	101	70-130		%Rec	1	7/4/2020 5:47:22 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-006 **Matrix:** SOIL

Client Sample ID: SP-9 N.
Collection Date: 6/30/2020 1:00:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	190	60		mg/Kg	20	7/9/2020 9:20:05 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/4/2020 6:17:21 PM	53481
Surr: BFB	97.1	70-130		%Rec	1	7/4/2020 6:17:21 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	56	9.8		mg/Kg	1	7/7/2020 6:54:35 AM	53484
Motor Oil Range Organics (MRO)	60	49		mg/Kg	1	7/7/2020 6:54:35 AM	53484
Surr: DNOP	92.6	55.1-146		%Rec	1	7/7/2020 6:54:35 AM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.023		mg/Kg	1	7/4/2020 6:17:21 PM	53481
Toluene	ND	0.046		mg/Kg	1	7/4/2020 6:17:21 PM	53481
Ethylbenzene	ND	0.046		mg/Kg	1	7/4/2020 6:17:21 PM	53481
Xylenes, Total	ND	0.092		mg/Kg	1	7/4/2020 6:17:21 PM	53481
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/4/2020 6:17:21 PM	53481
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	1	7/4/2020 6:17:21 PM	53481
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	7/4/2020 6:17:21 PM	53481
Surr: Toluene-d8	99.7	70-130		%Rec	1	7/4/2020 6:17:21 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2007092**
Date Reported: **7/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: QPQASU Water Flood Facility
Lab ID: 2007092-007 **Matrix:** SOIL

Client Sample ID: SP-11 S.@ 2'
Collection Date: 6/30/2020 12:40:00 PM
Received Date: 7/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	870	60		mg/Kg	20	7/9/2020 9:32:26 PM	53609
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/4/2020 6:47:17 PM	53481
Surr: BFB	104	70-130		%Rec	1	7/4/2020 6:47:17 PM	53481
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	52	9.7		mg/Kg	1	7/4/2020 9:24:17 PM	53484
Motor Oil Range Organics (MRO)	51	48		mg/Kg	1	7/4/2020 9:24:17 PM	53484
Surr: DNOP	57.4	55.1-146		%Rec	1	7/4/2020 9:24:17 PM	53484
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	7/4/2020 6:47:17 PM	53481
Toluene	ND	0.049		mg/Kg	1	7/4/2020 6:47:17 PM	53481
Ethylbenzene	ND	0.049		mg/Kg	1	7/4/2020 6:47:17 PM	53481
Xylenes, Total	ND	0.098		mg/Kg	1	7/4/2020 6:47:17 PM	53481
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	7/4/2020 6:47:17 PM	53481
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	7/4/2020 6:47:17 PM	53481
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	7/4/2020 6:47:17 PM	53481
Surr: Toluene-d8	101	70-130		%Rec	1	7/4/2020 6:47:17 PM	53481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2007092**
10-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53609**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **53609**	RunNo: **70214**							
Prep Date: **7/9/2020**	Analysis Date: **7/9/2020**	SeqNo: **2440821**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53609**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **53609**	RunNo: **70214**							
Prep Date: **7/9/2020**	Analysis Date: **7/9/2020**	SeqNo: **2440822**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2007092**
10-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **LCS-53484**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **53484**	RunNo: **70104**
Prep Date: **7/2/2020**	Analysis Date: **7/4/2020**	SeqNo: **2436177** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	70	130			
Surr: DNOP	5.1		5.000		103	55.1	146			

Sample ID: **MB-53484**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **53484**	RunNo: **70104**
Prep Date: **7/2/2020**	Analysis Date: **7/4/2020**	SeqNo: **2436180** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		97.6	55.1	146			

Sample ID: **MB-53520**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **53520**	RunNo: **70110**
Prep Date: **7/6/2020**	Analysis Date: **7/7/2020**	SeqNo: **2437862** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		119	55.1	146			

Sample ID: **LCS-53520**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **53520**	RunNo: **70110**
Prep Date: **7/6/2020**	Analysis Date: **7/7/2020**	SeqNo: **2437863** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		119	55.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2007092**
10-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53481**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **53481**	RunNo: **70102**
Prep Date: **7/2/2020**	Analysis Date: **7/3/2020**	SeqNo: **2435895** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		86.3	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID: **LCS-53481**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **53481**	RunNo: **70102**
Prep Date: **7/2/2020**	Analysis Date: **7/3/2020**	SeqNo: **2435896** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	108	80	120			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.4	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		86.7	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.8	70	130			
Surr: Toluene-d8	0.51		0.5000		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2007092**
10-Jul-20

Client: Mewbourne Oil Company
Project: QPQASU Water Flood Facility

Sample ID: **MB-53481**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **53481**	RunNo: **70102**
Prep Date: **7/2/2020**	Analysis Date: **7/3/2020**	SeqNo: **2435961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	490		500.0		97.5	70	130			

Sample ID: **LCS-53481**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **53481**	RunNo: **70102**
Prep Date: **7/2/2020**	Analysis Date: **7/3/2020**	SeqNo: **2435962** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.9	70	130			
Surr: BFB	490		500.0		98.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Mewbourne Oil Company** Work Order Number: **2007092** RcptNo: 1

Received By: **Juan Rojas** **7/2/2020 8:00:00 AM**

Completed By: **Isaiah Ortiz** **7/2/2020 8:43:50 AM**

Reviewed By: AB 7/2/20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: MS 07/02/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Not Present			
2	3.7	Good	Not Present			

Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush 5 day Turn

Project Name:
QPQASU Water Flood Facility

Project #:

Project Manager:
Robbie Runnels

Sampler: Kenny Angel
On Ice: ☑ Yes ☐ No
# of Coolers: 2
Cooler Temp (including CF): 4.2+0.2=4.4
3.5+0.2=3.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2007092	Chloride	TPH	BTEX	Analysis Request
6/30/20	1248	S	SP-1 @ 3'	1	Ice	-001	X	X	X	
6/30/20	1327	S	SP-2 @ 6'	1	Ice	-002	X	X	X	
6/30/20	1247	S	SP-3 @ 4'	1	Ice	-003	X	X	X	
6/30/20	1230	S	SP-4 @ 3'	1	Ice	-004	X	X	X	
6/30/20	1255	S	SP-9 E.	1	Ice	-005	X	X	X	
6/30/20	1300	S	SP-9 ~~W.~~ N per Dan 7/1/20	1	Ice	-006	X	X	X	
6/30/20	1240	S	SP-11 S. @ 2'	1	Ice	-007	X	X	X	

Date	Time	Relinquished by	Received by	Via	Date	Time
7/1	1500				7/1/20	0600
7/1/20	1900			courier	7/2/20	8:00

Remarks: Please email results to rrunnels@mewbourne.com & ben@trinityoilfieldservices.com

Please contact Ben Arguijo at (575)390-7208 for any questions or problems with this COC.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Appendix E
Field Notes

TABLE 3
DELINEATION SAMPLE COORDINATES

MEWBOURNE OIL COMPANY
QPQBSU
LEA COUNTY, NEW MEXICO
NMOCD REF. #: NRM2015753993

ObjectID	Type	Name	Latitude	Longitude
1	Auger Hole	SP-1	32.727692	-103.739432
2	Auger Hole	SP-2	32.727535	-103.739293
3	Auger Hole	SP-3	32.727402	-103.739248
4	Auger Hole	SP-4	32.727254	-103.739274
5	Auger Hole	SP-5	32.727135	-103.739407
6	Auger Hole	SP-6	32.727668	-103.739530
7	Auger Hole	SP-7	32.727530	-103.739628
8	Auger Hole	SP-8	32.727442	-103.739705
9	Auger Hole	SP-9	32.727256	-103.739602
10	Auger Hole	SP-10	32.727336	-103.739730
11	Auger Hole	SP-11	32.727383	-103.739893
12	Auger Hole	SP-11 S.	32.727360	-103.739970
13	Auger Hole	SP-12	32.727412	-103.740151
14	Auger Hole	SP-13	32.727474	-103.740296
15	Auger Hole	SP-14	32.727534	-103.740443
16	Auger Hole	SP-15	32.727531	-103.740593
17	Auger Hole	SP-16	32.727559	-103.740752
18	Auger Hole	SP-17	32.727570	-103.740902
19	Auger Hole	SP-18	32.727573	-103.741064

Job Site: QPQ asu Water ~~Flowline~~
Date: 6/11/2020

Client: Moc

	Sample Name	Time	Depth	Chloride	TPH	Composite (Y/N)
2	SP1 surface	9:45	Sur			
1	SP1 @1	10:00	@1	340		
1	SP1 @2	10:05	@2	272		
2	SP2 surface	10:15	Sur	20244		
2	SP2 @1	10:20	@1ft	3600		
2	SP2 @2	10:25	@2ft	3600		
1	SP2 @3	10:30	3ft	1446		
2	SP3 Sur	11:00	Sur	20244		
1	SP3 @1	11:05	1	1446		
1	SP3 @2	11:30	2	1246		
1	SP3 @3	11:35	3	826		
	~~SP3 @4~~					
	~~SP3 @4~~			6312		
2	SP4 Sur	1:00		~~6872~~		
1	SP4 @1	1:05		8060		
2	SP4 @2	1:10		8060		
2	SP5 Sur	1:15		3608		
2	SP5 @1	1:15		3608		
2	SP5 @2	1:[illegible]		10812		
1	SP6 Sur	1:20		844		
1	SP6 @1	1:25		180		
2	SP7 Sur			4806		
1	SP7 @1			18		
1	SP7 @2			180		
1	SP7 @3			2460		
1	SP8 Sur			1846		
2	SP8 @1			8060		
1	SP8 @2			1304		
2	SP8 @3			3024		
2	SP9 Sur			10302		
1	SP9 @1			1216		
1	SP9 @2			336		
	SP9 @3					

Notes/Comments:

Site Sketch

Job Site: ______________________ Client: Mac

Date: 1/12

Sample Name	Time	Depth	Chloride	TPH	Composite (Y/N)
SP10 surf			8792	Yes	
SP10 @3			551	No	
SP11 @3			[illegible]	No	
SP11 surf			[illegible]	Yes	
SP15 surf			8792	[illegible]	
SP15 @3			8792	[illegible]	
SP17 surf			[illegible]	[illegible]	
SP17 @3			[illegible]	[illegible]	
SP18 surf			844	Yes	
SP18 @3 10			108	No	
SP12 @1			3600	No	
SP12			3600	Yes	
SP18 @2			108	No	
~~SP18 @1~~			180	No	
@3 SP9 West			208	No	
SP9 East			[illegible]	No	
SP10 South			188	No	
SP10 North			180	No	
SP11 North			180	No	
SP11 South			108	No	
[illegible] West			108	No	
[illegible] East			[illegible]	No	
[illegible] West			180	No	
[illegible]			180	No	
[illegible] South			180	No	
6 West			180	No	
6 North			108	No	
9 East			108		
9 North			108		
9 West			108		
15 South			208		
10 North [illegible]			208		
10 Floor			180		

Notes/Comments:

Job Site: Waterflood Client:

Date:

Notes/Comments:

	Sample Name	Time	Depth	Chloride	TPH	Composite (Y/N)
6/3	11 floor			868		
	11 North			108		
	11 South			1108		
	11 West			108		
	SP12			1246		
	SP13			1648		
	SP14			868		
	SP15 North			180		
	SP15 South			108		
	SP15 West			205		
6/4	SP16 floor			180		
	SP16 North			1827		
	SP16 South			1248		
	SP16 North			1248		
	SP17 floor			680		
	SP17 South			205		
	SP17 North			180		
	SP17 floor			420		
	SP18 South			108		
	SP18 North			180		
	SP18 West			108		
	SP18 floor			108		

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1625 N. French Dr., Hobbs, NM 88240
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District II
811 S. First St., Artesia, NM 88210
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 14136

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM88241	14744	14136	C-141

OCD Reviewer	Condition
ceads	NRM2015753993 has been approved, however NRM2015449989 has not been approved because a submittal has not yet been made under that incident number.