



*4801 Business Park Blvd | Hobbs NM  
88240 | 575-393-5905*

## **REMEDIATION SUMMARY & DEFERRED SITE CLOSURE REQUEST**

**MEWBOURNE OIL COMPANY  
RED HILLS WATER MANAGEMENT SYSTEM  
Lea County, New Mexico  
Unit Letter "M" (SW/SW), Section 15, Township 26 South, Range 32 East  
Latitude 32.037082 North, Longitude -103.669238 West  
NMOCD Reference #1RP-5604**

Prepared For:

New Mexico Oil Conservation Division  
District 1  
1625 N. French Street  
Hobbs, New Mexico 88240

Prepared By:

Mewbourne Oil Company  
4801 Business Park Blvd  
Hobbs, New Mexico 88240

**January, 2020**

A handwritten signature in black ink, appearing to read "Robbie Runnels", is written over a horizontal line.

Robbie Runnels  
Environmental Specialist

## TABLE OF CONTENTS

1.0 INTRODUCTION & BACKGROUND INFORMATION.....	1
2.0 NMOC SITE CLASSIFICATION.....	2
3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES.....	3
4.0 QA/QC PROCEDURES.....	4
4.1 Soil Sampling.....	4
4.2 Decontamination of Equipment.....	4
4.3 Laboratory Protocol.....	4
5.0 SITE CLOSURE REQUEST.....	5
6.0 LIMITATIONS.....	6
7.0 DISTRIBUTION.....	7

## FIGURES

Figure 1 – Site Location Map

Figure 2 – Site & Sample Location Map

Figure 3 – Excavation Map

Figure 4 – Depth to Groundwater Wells

## TABLES

Table 1 – Concentrations of Benzene, BTEX, TPH & Chloride in Soil

## APPENDICES

Appendix A – Photographs

Appendix B – Laboratory Analytical Reports

Appendix C – Release Notification and Corrective Action (Form C-141)

## 1.0 INTRODUCTION & BACKGROUND INFORMATION

Mewbourne Oil Company (Mewbourne), has prepared this *Remediation Summary & Deferred Site Closure Request* for the release site known as Red Hills Water Management System (1RP-5604). The legal description of the release site is Unit Letter "M" (SW/SW) of Section 15, Township 26 South of Range 32 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.037082° North latitude and -103.669238° West longitude. The property affected by the release is owned by the Department of Interior – Bureau of Land Management (BLM). A "Site Location Map" is provided as Figure 1.

On June 25<sup>th</sup>, 2019, Mewbourne discovered a release of an estimated one-thousand, eight-hundred (1,800) barrels (bbls) of produced water when a fused connection developed a crack. Approximately one-thousand, three hundred and thirty (1,330) bbls were recovered. The release impacted an estimated seventy-five thousand and forty (75,040) square feet (ft<sup>2</sup>) of pipeline right-of-way and road with an additional five-thousand, six hundred (5,600) square feet (ft<sup>2</sup>) of adjacent pasture area. New Mexico Oil Conservation Division (NMOCD) was notified of the release on June 26<sup>th</sup>, 2019, and an initial C-141 was submitted to NMOCD on July 5<sup>th</sup>, 2019, for approval.

Initial sampling began on August 1<sup>st</sup>, 2019. Twenty (20) soil sample points were established (SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, SP9, SP10, SP11, SP12, SP13, SP14, SP15, SP16, SP17, SP18, SP19, SP20) and soil samples were retrieved at various depths. The soil samples were field screened and clean samples were submitted to an NMOCD approved and certified laboratory for confirmation analyses. Concentration of chloride, gasoline range organics (GRO) and diesel range organics (DRO) were analyzed in addition to benzene, toluene, ethyl-benzene, and xylenes (BTEX). Vertical delineation was completed for all sample points for all constituents of interest.

Locations of the soil sample collection areas are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical results are summarized in Table 1, "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Laboratory analytical reports are provided in Appendix C.

The Form C-141 is provided as Appendix D. General photographs of the release site and remediation activities are provided as Appendix A.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated that three (3) wells were in an adjacent section (S-1, 26-S, 31-E) to Section 36 of Township 25 South in Range 31 East. The average DGW for the 3 wells is three-hundred thirty-five (335) feet bgs. Utilizing the United States Geological Survey (USGS) website for groundwater, two wells were found to be in an adjacent section with an average depth to water of two-hundred eighty-eight (288) feet bgs. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately two-hundred eighty-five (285) and. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated no records of any water wells within the section of the release or immediate surrounding area. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

There are no surface water bodies within one thousand (1000) feet of the release. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Red Hills Water Management System (2RP-5455) release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) are as follows:

- Benzene – 10 mg/kg
- Benzene, ethylbenzene, toluene, and xylenes (BTEX) – 50 mg/kg
- Total petroleum hydrocarbons (TPH) – 2,500 mg/kg
- Chloride – 20,000 mg/kg

As remediation is taking place in the pasture area, the soil remediation level for chloride concentration is 600 mg/kg for the first four (4) feet.



### 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On July 10<sup>th</sup>, 2019, remediation activities began.

Excavated soil was stockpiled on site on a six (6) mil polypropylene plastic liner before being transferred to an approved NMOCD permitted facility for final disposal.

The floor of the excavation still exhibited contaminant concentrations above the NMOCD recommended remediation action levels for chlorides at four (4) feet bgs. The floor of the excavation was fitted with a twenty (20) mil, impermeable, polyethylene plastic liner. A cushion of sand was installed approximately six (6) inches both above and below the liner to protect it during installation and backfilling activities.

The plastic liner is an engineered control that serves to inhibit vertical migration of contaminants both upward to the vegetative zone and downward to the underlying groundwater, if any.

Composite wall soil samples were retrieved at intervals of approximately fifty (50) feet along the perimeter. Each composite wall sample did not represent greater than two-hundred (200) square feet of wall. Analytical results indicate that the vertical delineation was completed in that only the wall soil sample adjacent to the pipeline right-of-way was above the remediation concentration level for chlorides.

The remaining portion of the excavation was backfilled with locally purchased, non-impacted material. The clean topsoil was compacted, and contoured to fit the surrounding topography.

The disturbed area will be seeded with the land owner approved seed mix at such a time it is conducive for germination.

## **4.0 QA/QC PROCEDURES**

### **4.1 Soil Sampling**

Soil Samples were delivered to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of BTEX, TPH, and/or chloride concentrations using the methods described below. Soil samples were analyzed for BTEX, TPH, and/or chloride concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method SW 846-8021b (TCLP - SW-8260B)
- TPH concentrations in accordance with modified EPA Method SW 846-8015M
- Chloride concentrations in accordance with EPA Method 300.1

### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

## 5.0 SITE CLOSURE REQUEST

Soil samples collected from the Red Hills Water Management System release site were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and chloride were below the Table 1 levels established for the site. Soil exhibiting chloride concentrations above the Table 1 action level were removed above and isolated below a twenty (20) mil liner to protect the vegetative zone above the liner and to restrict the migration of chloride downward towards groundwater.

Mewbourne Oil Company is providing the NMOCD Hobbs District Office a copy of this *Remediation Summary & Deferred Site Closure Request*. Mewbourne ask the NMOCD grant site closure to the Red Hills Water Management System release site and allow a deferral for the impacted area that is on the pipeline right-of-way until such time the pipeline is abandoned.

## 6.0 LIMITATIONS

Mewbourne Oil Company has prepared this *Remediation Summary & Deferred Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Mewbourne has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Mewbourne has not conducted an independent examination of the facts contained in referenced materials and statements. Mewbourne has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Mewbourne has prepared this report in a professional manner, using the degree of skill and care exercised by similar oil company environmental departments and or consultants. Mewbourne notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of the New Mexico Oil Conservation Division as well as Mewbourne Oil Company. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Mewbourne Oil Company.

## **7.0 DISTRIBUTION:**

Copy 1: New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 1)  
1625 N. French Drive  
Hobbs, NM 88240

Copy 2: Jim Amos  
Department of Interior – Bureau of Land Management  
620 E Greene St.  
Carlsbad, NM 88220

Copy 3: Robin Terrell  
Mewbourne Oil Company  
4801 Business Park Blvd  
Hobbs, NM 88240


# FIGURES

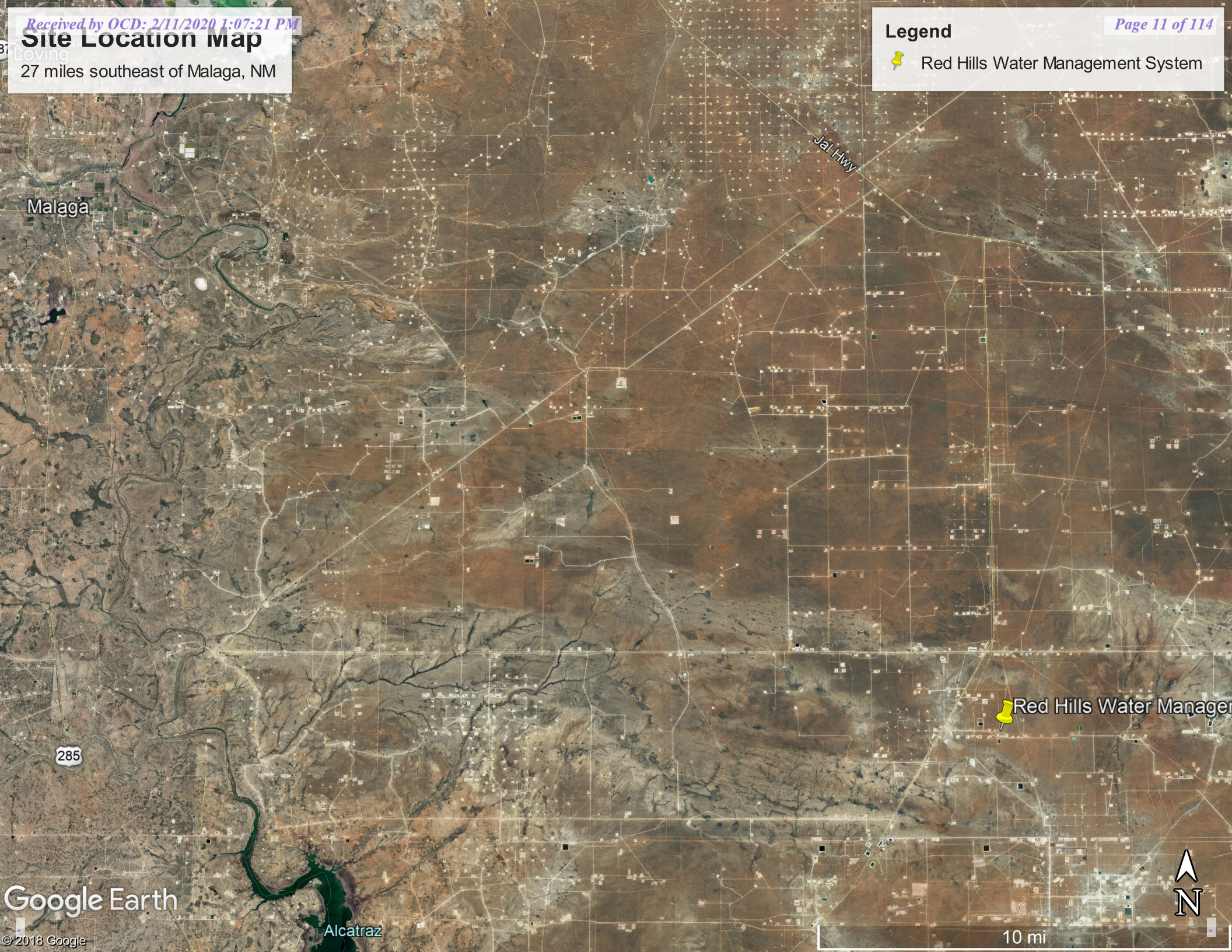


# Site Location Map

27 miles southeast of Malaga, NM

## Legend


 Red Hills Water Management System



Malaga

Jal Hwy

285

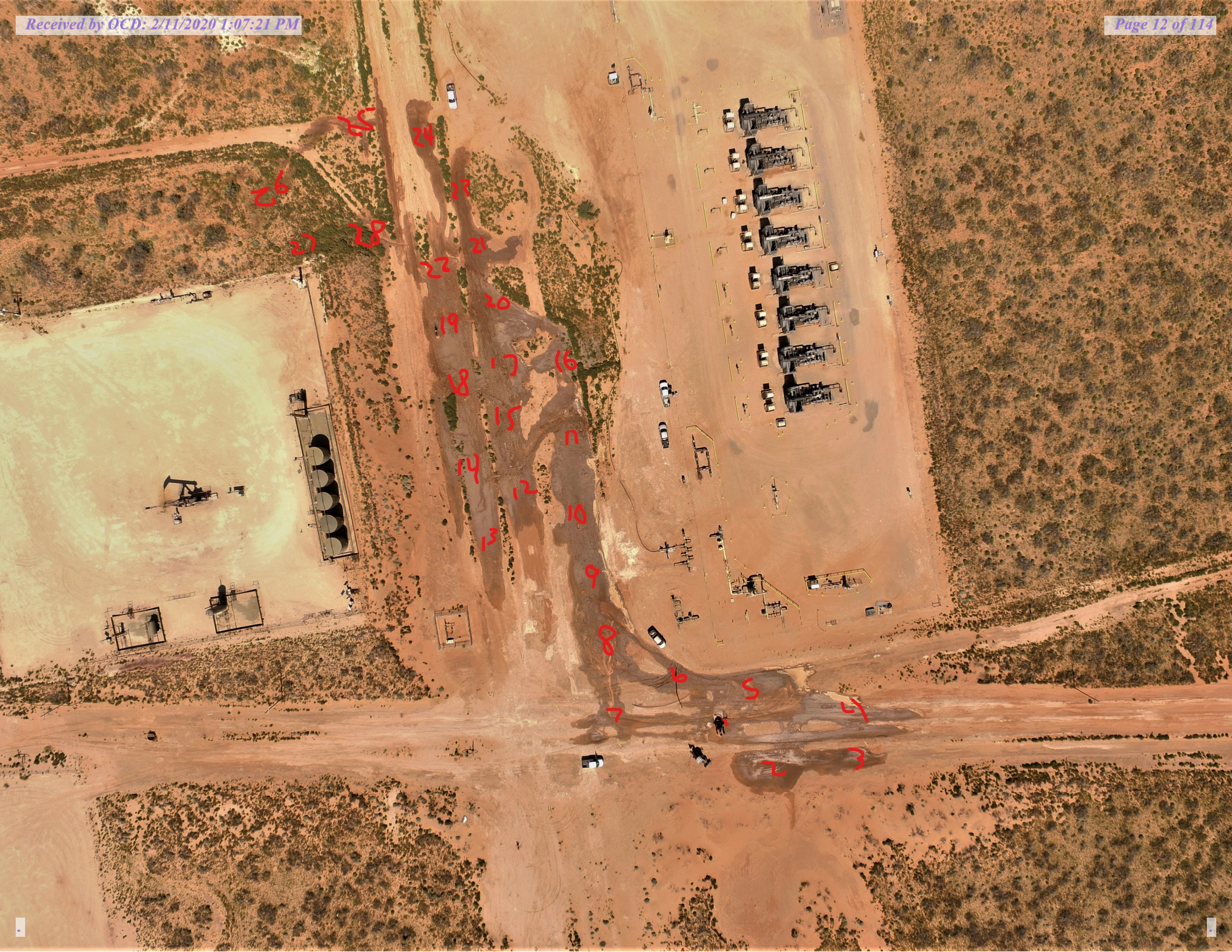
 Red Hills Water Manager

Alcatraz

10 mi















## New Mexico Office of the State Engineer

# Wells with Well Log Information




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

(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	Code	POD Subbasin	County	Source	q	q	q	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
<a href="#">C 02271 POD2</a>		CUB	LE	Shallow	6416 4	3 2 3	21	26S	32E		624348	3544010*	 08/28/1992	09/09/1992	10/28/1992	270	250	W.L. VAN NOY	208
<a href="#">C 02323</a>		C	LE	Shallow	3 2 3	21	26S	32E			624348	3544010*	 05/25/1993	06/16/1993	06/24/1993	405	405	BENTLE, BILLY L.	1292
<a href="#">C 03595 POD1</a>		CUB	LE	Shallow	4 2 3	21	26S	32E			624423	3544045	 09/30/2013	09/30/2013	10/29/2013	280	180	SIRMAN, JOHN (LD)	1654

**Record Count:** 3

**PLSS Search:**

**Section(s):** 21      **Township:** 26S      **Range:** 32E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/17/19 8:16 AM

WELLS WITH WELL LOG INFORMATION

# TABLES

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**  
**MEWBOURNE OIL COMPANY**  
**RED HILLS WATER MANAGEMENT SYSTEM**  
**LEA COUNTY, NEW MEXICO**  
**UL M, SEC 15, T-26-S, R-32-E**  
**NMOCD REFERENCE #: 1RP-5604**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>36</sub> (mg/Kg)	300 CHLORIDE (mg/Kg)	FIELD CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/Kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/Kg)	EXT DRO C <sub>28</sub> -C <sub>36</sub> (mg/Kg)			
SP1 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.7	<48	<62.6	1,000	NA
SP1 @ 10'	10'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	150	NA
SP2 @ 4'	4'	8/1/2019	In-Situ	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<9.9	<50	<64.9	260	NA
SP2 @ 6'	6'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	290	NA
SP3 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<8.4	<42	<55.2	<60	NA
SP4 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.9	<49	<63.6	3,800	NA
SP4 @ 10'	10'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	360	NA
SP5 @ 4'	4'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,700	NA
SP5 @ 14'	14'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	NA
SP6 @ 4'	4'	8/1/2019	In-Situ	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.9	<50	<64.6	220	NA
SP7 @ 4'	4'	8/1/2019	In-Situ	<0.025	<0.049	<0.049	<0.098	0.221	<4.9	<9.5	<48	<62.4	80	NA
SP8 @ 4'	4'	8/1/2019	In-Situ	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.8	<49	<63.6	3,000	NA
SP8 @ 14'	14'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	450	NA
SP9 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.5	<48	<62.4	2,100	NA
SP9 @ 13'	13'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	NA
SP10 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.3	<47	<61.1	780	NA
SP10 @ 13'	13'	8/1/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	310	NA
SP11 @ 4'	4'	8/1/2019	In-Situ	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<9.5	<48	<62.5	2,000	NA
SP11 @ 8'	8'	8/1/2019	In-Situ	<0.025	<0.049	<0.049	<0.099	0.222	<4.9	<10	<50	<64.9	95	NA
SP12 @ 4'	4'	8/1/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.6	<48	<62.5	<59	NA
SP13 @ 4'	4'	8/2/2019	In-Situ	<0.025	<0.049	<0.049	<0.098	0.221	<4.9	<9.4	<47	<105.4	240	NA
SP14 @ 4'	4'	8/2/2019	In-Situ	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<8.5	<42	<55.2	4,900	NA
SP14 @ 8'	8'	8/2/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	560	NA
SP15 @ 4'	4'	8/2/2019	In-Situ	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<7.7	<38	<50.4	<60	NA
SP16 @ 4'	4'	8/2/2019	In-Situ	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.1	<46	60.1	220	NA
SP17 @ 4'	4'	8/2/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.8	<49	<63.6	200	NA
SP18 @ 4'	4'	8/2/2019	In-Situ	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.9	<49	<63.9	<60	NA
SP19 @ 4'	4'	8/2/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.9	<50	<64.8	3,800	NA
SP19 @ 13'	13'	8/2/2019	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.6	<48	<62.5	<60	NA
SP20 @ 4'	4'	8/2/2019	In-Situ	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,900	NA
SP23 @ 23'	23'	8/2/2019	In-Situ	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.3	<47	<60.1	85	NA
Wall 1	Various	10/15/2019	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<7.4	<37	<49.3	<60	NA
Wall 2	Various	10/15/2019	Composite	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<8.8	<44	<57.4	<60	NA
Wall 3	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.3	<46	<60.1	300	NA
Wall 4	Various	10/15/2019	Composite	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.0	<45	<58.7	170	NA
Wall 5	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<8.0	<40	<52.8	76	NA
Wall 6	Various	10/15/2019	Composite	<0.025	<0.049	<0.049	<0.099	0.222	<4.9	<8.0	<40	<52.9	180	NA
Wall 7	Various	10/15/2019	Composite	<0.025	<0.050	<0.050	<0.10	<0.255	<5.0	<8.4	<42	<55.4	300	NA
Wall 8	Various	10/15/2019	Composite	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<8.1	<40	<53.0	<60	NA
Wall 9	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.1	<46	<59.9	<60	NA
Wall 10	Various	10/15/2019	Composite	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.8	<49	<63.7	210	NA
Wall 11	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<8.8	<44	<57.6	560	NA
Wall 12	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.0	<45	<58.8	2,900	NA
Wall 13	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.9	<8.8	<44	<57.7	1,400	NA

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**  
**MEWBOURNE OIL COMPANY**  
**RED HILLS WATER MANAGEMENT SYSTEM**  
**LEA COUNTY, NEW MEXICO**  
**UL M, SEC 15, T-26-S, R-32-E**  
**NMOCD REFERENCE #: 1RP-5604**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>36</sub> (mg/Kg)	300 CHLORIDE (mg/Kg)	FIELD CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/Kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/Kg)	EXT DRO C <sub>28</sub> -C <sub>36</sub> (mg/Kg)			
Wall 14	Various	10/15/2019	Composite	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.8	<49	<63.5	1,400	NA
Wall 15	Various	10/15/2019	Composite	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.0	<45	<58.6	<61	NA
Wall 16	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<8.2	<41	<54.0	<59	NA
Wall 17	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.1	<46	<59.9	<60	NA
Wall 18	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<8.9	<45	<59.7	620	NA
Wall 19	Various	10/15/2019	Composite	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.5	<48	<61.2	340	NA
Wall 20	Various	10/15/2019	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.6	<48	<61.4	1,100	NA
Floor 1	4'	10/15/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<10	<50	<64.9	310	NA
Floor 2	4'	10/15/2019	In-Situ	<0.025	<0.049	<0.049	<0.099	0.222	<4.9	<9.8	<49	<63.7	3,100	NA
Floor 3	4'	10/15/2019	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.7	<48	<62.6	1,200	NA
Floor 4	4'	10/15/2019	In-Situ	<0.025	<0.049	<0.049	<0.098	0.221	<4.9	<9.1	<46	<60.0	<60	NA
Floor 5	4'	10/15/2019	In-Situ	<0.025	<0.049	<0.049	<0.099	0.222	<4.9	<9.2	<46	<60.1	<60	NA
Floor 6	4'	10/15/2019	In-Situ	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<10	<50	<64.9	2,200	NA
Floor 7	4'	10/15/2019	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<8.5	<43	<56.3	470	NA
Floor 8	4'	10/15/2019	In-Situ	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.5	<48	<62.1	130	NA
NMOCD Regulatory Standard				10				50				2,500	600	

# APPENDICES

# APPENDIX – A

## Photo Documentation



## Red Hills Water Management System – 1RP-5604

32.037082, -103.669238



Release area, facing west

6/26/19



Release area, facing north

6/26/19



Remediation, facing south

10/16/19



Remediation, facing north

10/16/19



## Red Hills Water Management System – 1RP-5604

32.037082, -103.669238



Release area, facing southeast

10/21/19



Release area, facing south

10/21/19



Backfilled, facing west

2/3/20



Remediation, facing north east

2/3/20

# APPENDIX – B

## Analytical Reports





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

August 13, 2019

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

RE: Red Hills Water Station 12 inch Bebo

OrderNo.: 1908229

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 31 sample(s) on 8/6/2019 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP1 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 8:55:00 AM

Lab ID: 1908229-001

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	1000	60		mg/Kg	20	8/8/2019 2:40:02 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/8/2019 4:03:35 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 4:03:35 PM	46643
Surr: DNOP	97.7	70-130		%Rec	1	8/8/2019 4:03:35 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 3:20:16 PM	46628
Surr: BFB	98.8	77.4-118		%Rec	1	8/8/2019 3:20:16 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 3:20:16 PM	46628
Toluene	ND	0.049		mg/Kg	1	8/8/2019 3:20:16 PM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 3:20:16 PM	46628
Xylenes, Total	ND	0.097		mg/Kg	1	8/8/2019 3:20:16 PM	46628
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	8/8/2019 3:20:16 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**Lab Order **1908229**Date Reported: **8/13/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP1 @ 10**Project:** Red Hills Water Station 12 inch Bebo**Collection Date:** 8/1/2019 9:00:00 AM**Lab ID:** 1908229-002**Matrix:** SOIL**Received Date:** 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	150	59		mg/Kg	20	8/6/2019 10:47:34 PM	46621

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP2 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 9:20:00 AM

Lab ID: 1908229-003

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	260	60		mg/Kg	20	8/8/2019 2:52:27 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2019 5:10:29 PM	46643
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 5:10:29 PM	46643
Surr: DNOP	101	70-130		%Rec	1	8/8/2019 5:10:29 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/8/2019 5:38:49 PM	46628
Surr: BFB	99.4	77.4-118		%Rec	1	8/8/2019 5:38:49 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/8/2019 5:38:49 PM	46628
Toluene	ND	0.050		mg/Kg	1	8/8/2019 5:38:49 PM	46628
Ethylbenzene	ND	0.050		mg/Kg	1	8/8/2019 5:38:49 PM	46628
Xylenes, Total	ND	0.10		mg/Kg	1	8/8/2019 5:38:49 PM	46628
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	8/8/2019 5:38:49 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP2 @ 6

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 9:24:00 AM

Lab ID: 1908229-004

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	290	60		mg/Kg	20	8/6/2019 10:59:59 PM	46621

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP3 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 9:39:00 AM

Lab ID: 1908229-005

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/8/2019 3:04:51 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	8/8/2019 5:32:56 PM	46643
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	8/8/2019 5:32:56 PM	46643
Surr: DNOP	95.3	70-130		%Rec	1	8/8/2019 5:32:56 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/8/2019 6:47:56 PM	46628
Surr: BFB	99.3	77.4-118		%Rec	1	8/8/2019 6:47:56 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 6:47:56 PM	46628
Toluene	ND	0.048		mg/Kg	1	8/8/2019 6:47:56 PM	46628
Ethylbenzene	ND	0.048		mg/Kg	1	8/8/2019 6:47:56 PM	46628
Xylenes, Total	ND	0.096		mg/Kg	1	8/8/2019 6:47:56 PM	46628
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	8/8/2019 6:47:56 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP4 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 10:01:00 AM

Lab ID: 1908229-006

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	3800	150		mg/Kg	50	8/8/2019 11:55:15 PM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2019 5:55:12 PM	46643
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 5:55:12 PM	46643
Surr: DNOP	97.5	70-130		%Rec	1	8/8/2019 5:55:12 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2019 7:10:58 PM	46628
Surr: BFB	98.9	77.4-118		%Rec	1	8/8/2019 7:10:58 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 7:10:58 PM	46628
Toluene	ND	0.047		mg/Kg	1	8/8/2019 7:10:58 PM	46628
Ethylbenzene	ND	0.047		mg/Kg	1	8/8/2019 7:10:58 PM	46628
Xylenes, Total	ND	0.094		mg/Kg	1	8/8/2019 7:10:58 PM	46628
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	8/8/2019 7:10:58 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP4 @ 10

Project: Red Hills Water Station 12 inch BeboP

Collection Date: 8/1/2019 10:08:00 AM

Lab ID: 1908229-007

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	360	60		mg/Kg	20	8/7/2019 4:07:14 PM	46644

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order **1908229**Date Reported: **8/13/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP5 @ 4**Project:** Red Hills Water Station 12 inch Bebo**Collection Date:** 8/1/2019 10:31:00 AM**Lab ID:** 1908229-008**Matrix:** SOIL**Received Date:** 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	3700	150		mg/Kg	50	8/9/2019 12:07:39 AM	46655

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP5 @ 14

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 10:49:00 AM

Lab ID: 1908229-009

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	81	60		mg/Kg	20	8/8/2019 3:42:05 AM	46655

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP6 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 11:02:00 AM

Lab ID: 1908229-010

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	220	60		mg/Kg	20	8/8/2019 4:19:17 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2019 6:17:46 PM	46643
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 6:17:46 PM	46643
Surr: DNOP	99.0	70-130		%Rec	1	8/8/2019 6:17:46 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2019 7:33:57 PM	46628
Surr: BFB	99.5	77.4-118		%Rec	1	8/8/2019 7:33:57 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	8/8/2019 7:33:57 PM	46628
Toluene	ND	0.047		mg/Kg	1	8/8/2019 7:33:57 PM	46628
Ethylbenzene	ND	0.047		mg/Kg	1	8/8/2019 7:33:57 PM	46628
Xylenes, Total	ND	0.094		mg/Kg	1	8/8/2019 7:33:57 PM	46628
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	8/8/2019 7:33:57 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP7 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 11:17:00 AM

Lab ID: 1908229-011

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	80	60		mg/Kg	20	8/8/2019 4:31:41 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/8/2019 6:40:14 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 6:40:14 PM	46643
Surr: DNOP	98.3	70-130		%Rec	1	8/8/2019 6:40:14 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 7:56:56 PM	46628
Surr: BFB	95.6	77.4-118		%Rec	1	8/8/2019 7:56:56 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/8/2019 7:56:56 PM	46628
Toluene	ND	0.049		mg/Kg	1	8/8/2019 7:56:56 PM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 7:56:56 PM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/8/2019 7:56:56 PM	46628
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	8/8/2019 7:56:56 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP8 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 11:39:00 AM

Lab ID: 1908229-012

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	3000	150		mg/Kg	50	8/9/2019 12:20:04 AM	46655
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/8/2019 7:02:48 PM	46643
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 7:02:48 PM	46643
Surr: DNOP	98.5	70-130		%Rec	1	8/8/2019 7:02:48 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 8:19:54 PM	46628
Surr: BFB	96.2	77.4-118		%Rec	1	8/8/2019 8:19:54 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/8/2019 8:19:54 PM	46628
Toluene	ND	0.049		mg/Kg	1	8/8/2019 8:19:54 PM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 8:19:54 PM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/8/2019 8:19:54 PM	46628
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	8/8/2019 8:19:54 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP8 @ 14

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 11:55:00 AM

Lab ID: 1908229-013

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	450	60		mg/Kg	20	8/8/2019 4:56:30 AM	46655

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP9 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 12:30:00 PM

Lab ID: 1908229-014

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	2100	60		mg/Kg	20	8/8/2019 1:34:46 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/8/2019 7:25:15 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 7:25:15 PM	46643
Surr: DNOP	98.7	70-130		%Rec	1	8/8/2019 7:25:15 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 8:42:49 PM	46628
Surr: BFB	95.2	77.4-118		%Rec	1	8/8/2019 8:42:49 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 8:42:49 PM	46628
Toluene	ND	0.049		mg/Kg	1	8/8/2019 8:42:49 PM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 8:42:49 PM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/8/2019 8:42:49 PM	46628
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	8/8/2019 8:42:49 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order **1908229**Date Reported: **8/13/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP9 @ 13**Project:** Red Hills Water Station 12 inch BeboP**Collection Date:** 8/1/2019 12:47:00 PM**Lab ID:** 1908229-015**Matrix:** SOIL**Received Date:** 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	110	60		mg/Kg	20	8/8/2019 1:47:11 PM	46667

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP10 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 1:17:00 PM

Lab ID: 1908229-016

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	780	60		mg/Kg	20	8/8/2019 2:24:24 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/8/2019 7:47:41 PM	46643
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/8/2019 7:47:41 PM	46643
Surr: DNOP	100	70-130		%Rec	1	8/8/2019 7:47:41 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/8/2019 9:05:47 PM	46628
Surr: BFB	97.2	77.4-118		%Rec	1	8/8/2019 9:05:47 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 9:05:47 PM	46628
Toluene	ND	0.048		mg/Kg	1	8/8/2019 9:05:47 PM	46628
Ethylbenzene	ND	0.048		mg/Kg	1	8/8/2019 9:05:47 PM	46628
Xylenes, Total	ND	0.097		mg/Kg	1	8/8/2019 9:05:47 PM	46628
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	8/8/2019 9:05:47 PM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP10 @ 13

Project: Red Hills Water Station 12 inch BeboP

Collection Date: 8/1/2019 1:37:00 PM

Lab ID: 1908229-017

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	310	60		mg/Kg	20	8/8/2019 2:36:49 PM	46667

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP11 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 2:02:00 PM

Lab ID: 1908229-018

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	2000	60		mg/Kg	20	8/8/2019 2:49:14 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/8/2019 8:09:56 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 8:09:56 PM	46643
Surr: DNOP	103	70-130		%Rec	1	8/8/2019 8:09:56 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/8/2019 9:28:44 PM	46628
Surr: BFB	98.3	77.4-118		%Rec	1	8/8/2019 9:28:44 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/8/2019 9:28:44 PM	46628
Toluene	ND	0.050		mg/Kg	1	8/8/2019 9:28:44 PM	46628
Ethylbenzene	ND	0.050		mg/Kg	1	8/8/2019 9:28:44 PM	46628
Xylenes, Total	ND	0.10		mg/Kg	1	8/8/2019 9:28:44 PM	46628
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	8/8/2019 9:28:44 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP12 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 2:18:00 PM

Lab ID: 1908229-019

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	59		mg/Kg	20	8/8/2019 3:01:38 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/8/2019 8:32:11 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 8:32:11 PM	46643
Surr: DNOP	94.7	70-130		%Rec	1	8/8/2019 8:32:11 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 9:51:40 PM	46628
Surr: BFB	97.8	77.4-118		%Rec	1	8/8/2019 9:51:40 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2019 9:51:40 PM	46628
Toluene	ND	0.049		mg/Kg	1	8/8/2019 9:51:40 PM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 9:51:40 PM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/8/2019 9:51:40 PM	46628
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	8/8/2019 9:51:40 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP13 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 8:09:00 AM

Lab ID: 1908229-020

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	240	60		mg/Kg	20	8/8/2019 4:03:41 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/8/2019 8:54:44 PM	46643
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/8/2019 8:54:44 PM	46643
Surr: DNOP	95.4	70-130		%Rec	1	8/8/2019 8:54:44 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	49		mg/Kg	1	8/8/2019 11:00:34 PM	46628
Surr: BFB	97.3	77.4-118		%Rec	1	8/8/2019 11:00:34 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.25		mg/Kg	1	8/8/2019 11:00:34 PM	46628
Toluene	ND	0.49		mg/Kg	1	8/8/2019 11:00:34 PM	46628
Ethylbenzene	ND	0.49		mg/Kg	1	8/8/2019 11:00:34 PM	46628
Xylenes, Total	ND	0.98		mg/Kg	1	8/8/2019 11:00:34 PM	46628
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	1	8/8/2019 11:00:34 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP14 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 8:28:00 AM

Lab ID: 1908229-021

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	4900	300		mg/Kg	100	8/9/2019 10:44:46 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	8/8/2019 9:17:09 PM	46643
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	8/8/2019 9:17:09 PM	46643
Surr: DNOP	96.1	70-130		%Rec	1	8/8/2019 9:17:09 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2019 11:23:27 PM	46628
Surr: BFB	98.3	77.4-118		%Rec	1	8/8/2019 11:23:27 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/8/2019 11:23:27 PM	46628
Toluene	ND	0.047		mg/Kg	1	8/8/2019 11:23:27 PM	46628
Ethylbenzene	ND	0.047		mg/Kg	1	8/8/2019 11:23:27 PM	46628
Xylenes, Total	ND	0.094		mg/Kg	1	8/8/2019 11:23:27 PM	46628
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	8/8/2019 11:23:27 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



**Analytical Report**Lab Order **1908229**Date Reported: **8/13/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP14 @ 8**Project:** Red Hills Water Station 12 inch Bebo**Collection Date:** 8/2/2019 8:32:00 AM**Lab ID:** 1908229-022**Matrix:** SOIL**Received Date:** 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	560	60		mg/Kg	20	8/8/2019 3:26:51 PM	46669

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP15 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 8:45:00 AM

Lab ID: 1908229-023

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/8/2019 3:39:16 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	7.7		mg/Kg	1	8/8/2019 9:39:28 PM	46643
Motor Oil Range Organics (MRO)	ND	38		mg/Kg	1	8/8/2019 9:39:28 PM	46643
Surr: DNOP	96.0	70-130		%Rec	1	8/8/2019 9:39:28 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2019 11:46:24 PM	46628
Surr: BFB	99.6	77.4-118		%Rec	1	8/8/2019 11:46:24 PM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	8/8/2019 11:46:24 PM	46628
Toluene	ND	0.047		mg/Kg	1	8/8/2019 11:46:24 PM	46628
Ethylbenzene	ND	0.047		mg/Kg	1	8/8/2019 11:46:24 PM	46628
Xylenes, Total	ND	0.094		mg/Kg	1	8/8/2019 11:46:24 PM	46628
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	8/8/2019 11:46:24 PM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP16 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 8:36:00 AM

Lab ID: 1908229-024

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	220	59		mg/Kg	20	8/8/2019 3:51:40 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/8/2019 10:01:55 PM	46643
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2019 10:01:55 PM	46643
Surr: DNOP	96.8	70-130		%Rec	1	8/8/2019 10:01:55 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/9/2019 12:09:18 AM	46628
Surr: BFB	100	77.4-118		%Rec	1	8/9/2019 12:09:18 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/9/2019 12:09:18 AM	46628
Toluene	ND	0.050		mg/Kg	1	8/9/2019 12:09:18 AM	46628
Ethylbenzene	ND	0.050		mg/Kg	1	8/9/2019 12:09:18 AM	46628
Xylenes, Total	ND	0.099		mg/Kg	1	8/9/2019 12:09:18 AM	46628
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	8/9/2019 12:09:18 AM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP17 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 9:07:00 AM

Lab ID: 1908229-025

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	200	60		mg/Kg	20	8/8/2019 4:28:30 PM	46667
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/8/2019 10:46:20 PM	46643
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 10:46:20 PM	46643
Surr: DNOP	84.7	70-130		%Rec	1	8/8/2019 10:46:20 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/9/2019 12:32:23 AM	46628
Surr: BFB	99.6	77.4-118		%Rec	1	8/9/2019 12:32:23 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/9/2019 12:32:23 AM	46628
Toluene	ND	0.049		mg/Kg	1	8/9/2019 12:32:23 AM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/9/2019 12:32:23 AM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/9/2019 12:32:23 AM	46628
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	8/9/2019 12:32:23 AM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP18 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 10:37:00 AM

Lab ID: 1908229-026

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/8/2019 4:04:04 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2019 11:08:48 PM	46643
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 11:08:48 PM	46643
Surr: DNOP	95.7	70-130		%Rec	1	8/8/2019 11:08:48 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/9/2019 12:55:20 AM	46628
Surr: BFB	98.5	77.4-118		%Rec	1	8/9/2019 12:55:20 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/9/2019 12:55:20 AM	46628
Toluene	ND	0.050		mg/Kg	1	8/9/2019 12:55:20 AM	46628
Ethylbenzene	ND	0.050		mg/Kg	1	8/9/2019 12:55:20 AM	46628
Xylenes, Total	ND	0.099		mg/Kg	1	8/9/2019 12:55:20 AM	46628
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	8/9/2019 12:55:20 AM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP19 @ 4

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 10:18:00 AM

Lab ID: 1908229-027

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	3800	150		mg/Kg	50	8/9/2019 10:57:10 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2019 11:31:12 PM	46643
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 11:31:12 PM	46643
Surr: DNOP	98.6	70-130		%Rec	1	8/8/2019 11:31:12 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/9/2019 1:18:13 AM	46628
Surr: BFB	98.2	77.4-118		%Rec	1	8/9/2019 1:18:13 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/9/2019 1:18:13 AM	46628
Toluene	ND	0.049		mg/Kg	1	8/9/2019 1:18:13 AM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/9/2019 1:18:13 AM	46628
Xylenes, Total	ND	0.098		mg/Kg	1	8/9/2019 1:18:13 AM	46628
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	8/9/2019 1:18:13 AM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP19 @ 13

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 10:38:00 PM

Lab ID: 1908229-028

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/8/2019 4:28:54 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/8/2019 11:53:29 PM	46643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 11:53:29 PM	46643
Surr: DNOP	98.8	70-130		%Rec	1	8/8/2019 11:53:29 PM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/9/2019 1:41:23 AM	46628
Surr: BFB	97.0	77.4-118		%Rec	1	8/9/2019 1:41:23 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/9/2019 1:41:23 AM	46628
Toluene	ND	0.049		mg/Kg	1	8/9/2019 1:41:23 AM	46628
Ethylbenzene	ND	0.049		mg/Kg	1	8/9/2019 1:41:23 AM	46628
Xylenes, Total	ND	0.097		mg/Kg	1	8/9/2019 1:41:23 AM	46628
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	8/9/2019 1:41:23 AM	46628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**Lab Order **1908229**Date Reported: **8/13/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP20 @ 4**Project:** Red Hills Water Station 12 inch Bebo**Collection Date:** 8/2/2019 9:27:00 AM**Lab ID:** 1908229-029**Matrix:** SOIL**Received Date:** 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	4900	150		mg/Kg	50	8/9/2019 11:09:36 PM	46669

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP20 @ 23

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/2/2019 9:47:00 AM

Lab ID: 1908229-030

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	85	60		mg/Kg	20	8/8/2019 4:53:42 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/9/2019 12:15:56 AM	46643
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/9/2019 12:15:56 AM	46643
Surr: DNOP	99.4	70-130		%Rec	1	8/9/2019 12:15:56 AM	46643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/9/2019 2:04:32 AM	46628
Surr: BFB	97.8	77.4-118		%Rec	1	8/9/2019 2:04:32 AM	46628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/9/2019 2:04:32 AM	46628
Toluene	ND	0.048		mg/Kg	1	8/9/2019 2:04:32 AM	46628
Ethylbenzene	ND	0.048		mg/Kg	1	8/9/2019 2:04:32 AM	46628
Xylenes, Total	ND	0.096		mg/Kg	1	8/9/2019 2:04:32 AM	46628
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	8/9/2019 2:04:32 AM	46628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1908229

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP 11@8

Project: Red Hills Water Station 12 inch Bebo

Collection Date: 8/1/2019 2:02:00 PM

Lab ID: 1908229-031

Matrix: SOIL

Received Date: 8/6/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	95	60		mg/Kg	20	8/8/2019 5:06:06 PM	46669
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/9/2019 5:50:22 AM	46649
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/9/2019 5:50:22 AM	46649
Surr: DNOP	105	70-130		%Rec	1	8/9/2019 5:50:22 AM	46649
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/8/2019 9:52:06 PM	46639
Surr: BFB	95.7	77.4-118		%Rec	1	8/8/2019 9:52:06 PM	46639
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/8/2019 9:52:06 PM	46639
Toluene	ND	0.049		mg/Kg	1	8/8/2019 9:52:06 PM	46639
Ethylbenzene	ND	0.049		mg/Kg	1	8/8/2019 9:52:06 PM	46639
Xylenes, Total	ND	0.099		mg/Kg	1	8/8/2019 9:52:06 PM	46639
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	8/8/2019 9:52:06 PM	46639

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1908229

13-Aug-19

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebop

Sample ID: <b>MB-46621</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46621</b>	RunNo: <b>61950</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/6/2019</b>	SeqNo: <b>2101175</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-46621</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46621</b>	RunNo: <b>61950</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/6/2019</b>	SeqNo: <b>2101176</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.5	90	110			

Sample ID: <b>MB-46644</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46644</b>	RunNo: <b>61958</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/7/2019</b>	SeqNo: <b>2102630</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-46644</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46644</b>	RunNo: <b>61958</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/7/2019</b>	SeqNo: <b>2102631</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

Sample ID: <b>MB-46655</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46655</b>	RunNo: <b>61958</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/7/2019</b>	SeqNo: <b>2102689</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-46655</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46655</b>	RunNo: <b>61958</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/7/2019</b>	SeqNo: <b>2102690</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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 Quantitative 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#: 1908229

13-Aug-19

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebop

Sample ID: <b>MB-46667</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46667</b>	RunNo: <b>61996</b>								
Prep Date: <b>8/8/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103915</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-46667</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46667</b>	RunNo: <b>61996</b>								
Prep Date: <b>8/8/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103916</b> Units: <b>mg/Kg</b>								
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			

Sample ID: <b>MB-46669</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46669</b>	RunNo: <b>61993</b>								
Prep Date: <b>8/8/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104085</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-46669</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46669</b>	RunNo: <b>61993</b>								
Prep Date: <b>8/8/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104086</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	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 Quantitative 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#: 1908229

13-Aug-19

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebo

Sample ID: <b>1908229-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>SP1 @ 4</b>	Batch ID: <b>46643</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104126</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.1	45.45	0	94.4	57	142			
Surr: DNOP	4.2		4.545		92.9	70	130			

Sample ID: <b>1908229-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>SP1 @ 4</b>	Batch ID: <b>46643</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104127</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.7	48.73	0	96.6	57	142	9.51	20	
Surr: DNOP	4.6		4.873		93.7	70	130	0	0	

Sample ID: <b>LCS-46643</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46643</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104158</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: <b>LCS-46649</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46649</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/9/2019</b>	SeqNo: <b>2104161</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	63.9	124			
Surr: DNOP	4.8		5.000		96.8	70	130			

Sample ID: <b>MB-46643</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46643</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2104164</b> Units: <b>mg/Kg</b>								
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	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 Quantitative 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#: **1908229****13-Aug-19**

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebo

Sample ID: <b>MB-46649</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46649</b>	RunNo: <b>61951</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/9/2019</b>	SeqNo: <b>2104167</b>		Units: <b>mg/Kg</b>						
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	11		10.00		107	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 Quantitative 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#: 1908229

13-Aug-19

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebop

Sample ID: <b>MB-46628</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103332</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.1	77.4	118			

Sample ID: <b>LCS-46628</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103333</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.1	80	120			
Surr: BFB	1200		1000		115	77.4	118			

Sample ID: <b>1908229-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SP1 @ 4</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103335</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.83	0	97.8	69.1	142			
Surr: BFB	1100		953.3		116	77.4	118			

Sample ID: <b>1908229-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SP1 @ 4</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103336</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.6	23.13	0	93.3	69.1	142	7.73	20	
Surr: BFB	1100		925.1		114	77.4	118	0	0	

Sample ID: <b>MB-46639</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46639</b>	RunNo: <b>61991</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103397</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		106	77.4	118			

Sample ID: <b>LCS-46639</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46639</b>	RunNo: <b>61991</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103398</b> Units: <b>mg/Kg</b>								
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 Quantitative 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#: 1908229

13-Aug-19

Client: Mewbourne Oil Company

Project: Red Hills Water Station 12 inch Bebop

Sample ID: LCS-46639	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 46639	RunNo: 61991								
Prep Date: 8/7/2019	Analysis Date: 8/8/2019	SeqNo: 2103398	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	80	120			
Surr: BFB	1200		1000		118	77.4	118			

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 Quantitative 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#: 1908229

13-Aug-19

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebo

Sample ID: <b>MB-46628</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103364</b>			Units: <b>mg/Kg</b>					
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	0.95		1.000		95.2	80	120			

Sample ID: <b>LCS-46628</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103365</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.2	80	120			
Toluene	0.93	0.050	1.000	0	93.0	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.8	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120			

Sample ID: <b>1908229-003AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>SP2 @ 4</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103368</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0.006142	97.7	63.9	127			
Toluene	1.0	0.050	1.000	0	103	69.9	131			
Ethylbenzene	1.1	0.050	1.000	0	107	71	132			
Xylenes, Total	3.2	0.10	3.000	0	107	71.8	131			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	80	120			

Sample ID: <b>1908229-003AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>SP2 @ 4</b>	Batch ID: <b>46628</b>	RunNo: <b>61992</b>								
Prep Date: <b>8/6/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103369</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	0.9921	0.006142	92.6	63.9	127	6.15	20	
Toluene	0.96	0.050	0.9921	0	97.1	69.9	131	6.28	20	
Ethylbenzene	1.0	0.050	0.9921	0	101	71	132	6.78	20	
Xylenes, Total	3.0	0.099	2.976	0	101	71.8	131	7.03	20	
Surr: 4-Bromofluorobenzene	1.0		0.9921		101	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 Quantitative 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#: **1908229****13-Aug-19**

**Client:** Mewbourne Oil Company  
**Project:** Red Hills Water Station 12 inch Bebop

Sample ID: <b>MB-46639</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>46639</b>	RunNo: <b>61991</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103431</b>	Units: <b>mg/Kg</b>							
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		106	80	120			

Sample ID: <b>LCS-46639</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>46639</b>	RunNo: <b>61991</b>								
Prep Date: <b>8/7/2019</b>	Analysis Date: <b>8/8/2019</b>	SeqNo: <b>2103432</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.9	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

**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 Quantitative 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  
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 COM

Work Order Number: 1908229

RcptNo: 1

Received By: Desiree Dominguez 8/6/2019 9:00:00 AM

Completed By: Michelle Garcia 8/6/2019 10:45:15 AM

Reviewed By: LB 8/6/19

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
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: \_\_\_\_\_  
( $\leq 2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: DAD 8/6/19

### Special Handling (if applicable)

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

Person Notified:	Robbie Runnels	Date:	8/6/19
By Whom:	Leah Bacc	Via:	<input type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	Extra Sample not listed on COC		
Client Instructions:	Add to COC		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			
2	6.0	Good	Yes			





[www.hallenvironmental.com](http://www.hallenvironmental.com)

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

## Analysis Request

<b>Chain-of-Custody Record</b>			
Client: Mewbourne Oil Company			
Mailing Address:			
Phone #:			
email or Fax#:			
QA/QC Package:			
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)			
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other			
<input type="checkbox"/> EDD (Type)			
Turn-Around Time: <u>5 day</u> <input type="checkbox"/> Standard <input type="checkbox"/> Rush			
Project Name:			
Red Hills Water Station 12-Inch Bebo			
Project #:			
Project Manager:			
Robbie Runnels			
Sampler:    Kenny Angel <input checked="" type="checkbox"/> Onsite <input type="checkbox"/> Yes <input type="checkbox"/> No			
# of Coolers (2)    4.3 - 0.3 = 4.5% Cooler Temp (including CF)    6.3 - 0.3 = 6.0%			
HEAL No. <u>1908229</u>			
Date	Time	Matrix	Sample Name
8-19	1:55	S	SP8Q14
8-19	12:30	S	SP9Q4
8-19	12:47	S	SP9Q13
8-19	1:17	S	SP10Q4
8-19	1:37	S	SP10Q13
8-19	2:02	S	SP11Q4
8-19	2:18	S	SP12Q4
8-19	8:09	S	SP13Q4
8-19	8:28	S	SP14Q4
8-19	8:32	S	SP14Q8
8-19	8:45	S	SP15Q4
8-19	8:56	S	SP16Q4
Received by: <u>MLH</u> Date:    8/16/19    Time:    9:00 Received by: <u>DB</u> Date:    8/16/19    Time:    9:00			

If necessary, samples submitted to Hail 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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 31, 2019

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

RE: Red Hill 12 Inch

OrderNo.: 1910D13

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 28 sample(s) on 10/24/2019 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 1

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:00:00 AM

Lab ID: 1910D13-001

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/25/2019 7:16:38 PM	48381
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	7.4		mg/Kg	1	10/25/2019 7:52:15 PM	48372
Motor Oil Range Organics (MRO)	ND	37		mg/Kg	1	10/25/2019 7:52:15 PM	48372
Surr: DNOP	79.5	70-130		%Rec	1	10/25/2019 7:52:15 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 5:49:42 PM	48361
Surr: BFB	82.2	77.4-118		%Rec	1	10/25/2019 5:49:42 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 5:49:42 PM	48361
Toluene	ND	0.049		mg/Kg	1	10/25/2019 5:49:42 PM	48361
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 5:49:42 PM	48361
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 5:49:42 PM	48361
Surr: 4-Bromofluorobenzene	86.2	80-120		%Rec	1	10/25/2019 5:49:42 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 2

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:05:00 AM

Lab ID: 1910D13-002

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/25/2019 8:30:41 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/25/2019 8:14:14 PM	48372
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/25/2019 8:14:14 PM	48372
Surr: DNOP	72.5	70-130		%Rec	1	10/25/2019 8:14:14 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/25/2019 6:12:59 PM	48361
Surr: BFB	84.3	77.4-118		%Rec	1	10/25/2019 6:12:59 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 6:12:59 PM	48361
Toluene	ND	0.046		mg/Kg	1	10/25/2019 6:12:59 PM	48361
Ethylbenzene	ND	0.046		mg/Kg	1	10/25/2019 6:12:59 PM	48361
Xylenes, Total	ND	0.092		mg/Kg	1	10/25/2019 6:12:59 PM	48361
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	10/25/2019 6:12:59 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 3

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:10:00 AM

Lab ID: 1910D13-003

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	300	60		mg/Kg	20	10/25/2019 9:07:44 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/25/2019 8:36:12 PM	48372
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2019 8:36:12 PM	48372
Surr: DNOP	74.0	70-130		%Rec	1	10/25/2019 8:36:12 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 6:36:11 PM	48361
Surr: BFB	81.0	77.4-118		%Rec	1	10/25/2019 6:36:11 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 6:36:11 PM	48361
Toluene	ND	0.048		mg/Kg	1	10/25/2019 6:36:11 PM	48361
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 6:36:11 PM	48361
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2019 6:36:11 PM	48361
Surr: 4-Bromofluorobenzene	85.6	80-120		%Rec	1	10/25/2019 6:36:11 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 4

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:15:00 AM

Lab ID: 1910D13-004

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	170	60		mg/Kg	20	10/25/2019 9:20:03 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/25/2019 8:57:59 PM	48372
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2019 8:57:59 PM	48372
Surr: DNOP	75.9	70-130		%Rec	1	10/25/2019 8:57:59 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2019 6:59:28 PM	48361
Surr: BFB	83.1	77.4-118		%Rec	1	10/25/2019 6:59:28 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 6:59:28 PM	48361
Toluene	ND	0.047		mg/Kg	1	10/25/2019 6:59:28 PM	48361
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2019 6:59:28 PM	48361
Xylenes, Total	ND	0.093		mg/Kg	1	10/25/2019 6:59:28 PM	48361
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	10/25/2019 6:59:28 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 5

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:20:00 AM

Lab ID: 1910D13-005

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	76	60		mg/Kg	20	10/25/2019 9:32:24 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.0		mg/Kg	1	10/25/2019 9:19:59 PM	48372
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	10/25/2019 9:19:59 PM	48372
Surr: DNOP	74.1	70-130		%Rec	1	10/25/2019 9:19:59 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 7:22:45 PM	48361
Surr: BFB	87.6	77.4-118		%Rec	1	10/25/2019 7:22:45 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 7:22:45 PM	48361
Toluene	ND	0.048		mg/Kg	1	10/25/2019 7:22:45 PM	48361
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 7:22:45 PM	48361
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2019 7:22:45 PM	48361
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	10/25/2019 7:22:45 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 6

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:25:00 AM

Lab ID: 1910D13-006

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	180	60		mg/Kg	20	10/25/2019 9:44:44 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.0		mg/Kg	1	10/25/2019 9:41:50 PM	48372
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	10/25/2019 9:41:50 PM	48372
Surr: DNOP	82.2	70-130		%Rec	1	10/25/2019 9:41:50 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 7:46:00 PM	48361
Surr: BFB	85.1	77.4-118		%Rec	1	10/25/2019 7:46:00 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/25/2019 7:46:00 PM	48361
Toluene	ND	0.049		mg/Kg	1	10/25/2019 7:46:00 PM	48361
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 7:46:00 PM	48361
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2019 7:46:00 PM	48361
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	10/25/2019 7:46:00 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 7

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:30:00 AM

Lab ID: 1910D13-007

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	300	60		mg/Kg	20	10/25/2019 9:57:03 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	10/25/2019 10:03:47 PM	48372
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/25/2019 10:03:47 PM	48372
Surr: DNOP	79.8	70-130		%Rec	1	10/25/2019 10:03:47 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2019 8:09:14 PM	48361
Surr: BFB	85.2	77.4-118		%Rec	1	10/25/2019 8:09:14 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/25/2019 8:09:14 PM	48361
Toluene	ND	0.050		mg/Kg	1	10/25/2019 8:09:14 PM	48361
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2019 8:09:14 PM	48361
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2019 8:09:14 PM	48361
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	10/25/2019 8:09:14 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 8

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:35:00 AM

Lab ID: 1910D13-008

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/25/2019 10:09:23 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.1		mg/Kg	1	10/25/2019 10:25:29 PM	48372
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	10/25/2019 10:25:29 PM	48372
Surr: DNOP	76.6	70-130		%Rec	1	10/25/2019 10:25:29 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 8:32:21 PM	48361
Surr: BFB	88.7	77.4-118		%Rec	1	10/25/2019 8:32:21 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 8:32:21 PM	48361
Toluene	ND	0.049		mg/Kg	1	10/25/2019 8:32:21 PM	48361
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 8:32:21 PM	48361
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2019 8:32:21 PM	48361
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	10/25/2019 8:32:21 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 9

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:40:00 AM

Lab ID: 1910D13-009

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/25/2019 10:21:43 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	10/25/2019 10:47:24 PM	48372
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2019 10:47:24 PM	48372
Surr: DNOP	77.7	70-130		%Rec	1	10/25/2019 10:47:24 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 8:55:35 PM	48361
Surr: BFB	85.5	77.4-118		%Rec	1	10/25/2019 8:55:35 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 8:55:35 PM	48361
Toluene	ND	0.048		mg/Kg	1	10/25/2019 8:55:35 PM	48361
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 8:55:35 PM	48361
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 8:55:35 PM	48361
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	10/25/2019 8:55:35 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 10

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 10:00:00 AM

Lab ID: 1910D13-010

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	210	60		mg/Kg	20	10/25/2019 10:58:44 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/25/2019 11:09:20 PM	48372
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2019 11:09:20 PM	48372
Surr: DNOP	79.1	70-130		%Rec	1	10/25/2019 11:09:20 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 9:19:10 PM	48361
Surr: BFB	94.4	77.4-118		%Rec	1	10/25/2019 9:19:10 PM	48361
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 9:19:10 PM	48361
Toluene	ND	0.049		mg/Kg	1	10/25/2019 9:19:10 PM	48361
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 9:19:10 PM	48361
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2019 9:19:10 PM	48361
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	10/25/2019 9:19:10 PM	48361

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 11

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 10:10:00 AM

Lab ID: 1910D13-011

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	560	59		mg/Kg	20	10/25/2019 11:11:04 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/25/2019 11:31:09 PM	48372
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/25/2019 11:31:09 PM	48372
Surr: DNOP	75.0	70-130		%Rec	1	10/25/2019 11:31:09 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 11:04:35 AM	48366
Surr: BFB	93.9	77.4-118		%Rec	1	10/25/2019 11:04:35 AM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 11:04:35 AM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 11:04:35 AM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 11:04:35 AM	48366
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 11:04:35 AM	48366
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	10/25/2019 11:04:35 AM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 12

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 10:15:00 AM

Lab ID: 1910D13-012

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	2900	150		mg/Kg	50	10/28/2019 5:25:32 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/25/2019 11:52:53 PM	48372
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2019 11:52:53 PM	48372
Surr: DNOP	81.0	70-130		%Rec	1	10/25/2019 11:52:53 PM	48372
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 12:13:00 PM	48366
Surr: BFB	96.2	77.4-118		%Rec	1	10/25/2019 12:13:00 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 12:13:00 PM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 12:13:00 PM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 12:13:00 PM	48366
Xylenes, Total	ND	0.095		mg/Kg	1	10/25/2019 12:13:00 PM	48366
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	10/25/2019 12:13:00 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 13

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 10:20:00 AM

Lab ID: 1910D13-013

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1400	60		mg/Kg	20	10/25/2019 11:35:44 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/25/2019 6:48:43 PM	48373
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/25/2019 6:48:43 PM	48373
Surr: DNOP	105	70-130		%Rec	1	10/25/2019 6:48:43 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 1:21:24 PM	48366
Surr: BFB	95.6	77.4-118		%Rec	1	10/25/2019 1:21:24 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 1:21:24 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 1:21:24 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 1:21:24 PM	48366
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 1:21:24 PM	48366
Surr: 4-Bromofluorobenzene	95.0	80-120		%Rec	1	10/25/2019 1:21:24 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 14

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-014

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1400	60		mg/Kg	20	10/25/2019 11:48:04 PM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/25/2019 8:25:52 PM	48373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2019 8:25:52 PM	48373
Surr: DNOP	105	70-130		%Rec	1	10/25/2019 8:25:52 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2019 1:44:09 PM	48366
Surr: BFB	97.0	77.4-118		%Rec	1	10/25/2019 1:44:09 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 1:44:09 PM	48366
Toluene	ND	0.047		mg/Kg	1	10/25/2019 1:44:09 PM	48366
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2019 1:44:09 PM	48366
Xylenes, Total	ND	0.094		mg/Kg	1	10/25/2019 1:44:09 PM	48366
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	10/25/2019 1:44:09 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 15

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-015

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	61		mg/Kg	20	10/26/2019 12:00:25 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/25/2019 8:49:58 PM	48373
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2019 8:49:58 PM	48373
Surr: DNOP	105	70-130		%Rec	1	10/25/2019 8:49:58 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/25/2019 2:06:50 PM	48366
Surr: BFB	96.4	77.4-118		%Rec	1	10/25/2019 2:06:50 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 2:06:50 PM	48366
Toluene	ND	0.046		mg/Kg	1	10/25/2019 2:06:50 PM	48366
Ethylbenzene	ND	0.046		mg/Kg	1	10/25/2019 2:06:50 PM	48366
Xylenes, Total	ND	0.092		mg/Kg	1	10/25/2019 2:06:50 PM	48366
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	10/25/2019 2:06:50 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 16

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-016

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	59		mg/Kg	20	10/26/2019 12:12:45 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.2		mg/Kg	1	10/25/2019 9:14:10 PM	48373
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	10/25/2019 9:14:10 PM	48373
Surr: DNOP	114	70-130		%Rec	1	10/25/2019 9:14:10 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 2:29:42 PM	48366
Surr: BFB	93.6	77.4-118		%Rec	1	10/25/2019 2:29:42 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 2:29:42 PM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 2:29:42 PM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 2:29:42 PM	48366
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 2:29:42 PM	48366
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	10/25/2019 2:29:42 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 17

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-017

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/26/2019 12:25:06 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	10/25/2019 9:38:12 PM	48373
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2019 9:38:12 PM	48373
Surr: DNOP	110	70-130		%Rec	1	10/25/2019 9:38:12 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 2:52:38 PM	48366
Surr: BFB	92.9	77.4-118		%Rec	1	10/25/2019 2:52:38 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 2:52:38 PM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 2:52:38 PM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 2:52:38 PM	48366
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2019 2:52:38 PM	48366
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	10/25/2019 2:52:38 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 18

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-018

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	620	60		mg/Kg	20	10/26/2019 12:37:27 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	10/25/2019 10:02:21 PM	48373
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2019 10:02:21 PM	48373
Surr: DNOP	106	70-130		%Rec	1	10/25/2019 10:02:21 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 3:15:36 PM	48366
Surr: BFB	90.1	77.4-118		%Rec	1	10/25/2019 3:15:36 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 3:15:36 PM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 3:15:36 PM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 3:15:36 PM	48366
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2019 3:15:36 PM	48366
Surr: 4-Bromofluorobenzene	89.3	80-120		%Rec	1	10/25/2019 3:15:36 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 19

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-019

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	340	60		mg/Kg	20	10/26/2019 12:49:47 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/25/2019 10:26:22 PM	48373
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2019 10:26:22 PM	48373
Surr: DNOP	109	70-130		%Rec	1	10/25/2019 10:26:22 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2019 6:18:23 PM	48366
Surr: BFB	88.3	77.4-118		%Rec	1	10/25/2019 6:18:23 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 6:18:23 PM	48366
Toluene	ND	0.047		mg/Kg	1	10/25/2019 6:18:23 PM	48366
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2019 6:18:23 PM	48366
Xylenes, Total	ND	0.093		mg/Kg	1	10/25/2019 6:18:23 PM	48366
Surr: 4-Bromofluorobenzene	88.0	80-120		%Rec	1	10/25/2019 6:18:23 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 20

Project: Red Hill 12 Inch

Collection Date: 10/15/2019

Lab ID: 1910D13-020

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1100	60		mg/Kg	20	10/26/2019 1:26:48 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/25/2019 10:50:33 PM	48373
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2019 10:50:33 PM	48373
Surr: DNOP	107	70-130		%Rec	1	10/25/2019 10:50:33 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2019 6:41:19 PM	48366
Surr: BFB	91.1	77.4-118		%Rec	1	10/25/2019 6:41:19 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 6:41:19 PM	48366
Toluene	ND	0.048		mg/Kg	1	10/25/2019 6:41:19 PM	48366
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2019 6:41:19 PM	48366
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2019 6:41:19 PM	48366
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	10/25/2019 6:41:19 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 1

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:40:00 AM

Lab ID: 1910D13-021

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	310	60		mg/Kg	20	10/26/2019 1:39:09 AM	48400
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/25/2019 11:14:32 PM	48373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/25/2019 11:14:32 PM	48373
Surr: DNOP	99.3	70-130		%Rec	1	10/25/2019 11:14:32 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 7:04:13 PM	48366
Surr: BFB	92.5	77.4-118		%Rec	1	10/25/2019 7:04:13 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 7:04:13 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 7:04:13 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 7:04:13 PM	48366
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2019 7:04:13 PM	48366
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	10/25/2019 7:04:13 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 2

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:45:00 AM

Lab ID: 1910D13-022

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	3100	150		mg/Kg	50	10/29/2019 6:01:09 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/25/2019 11:38:37 PM	48373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2019 11:38:37 PM	48373
Surr: DNOP	101	70-130		%Rec	1	10/25/2019 11:38:37 PM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 7:27:07 PM	48366
Surr: BFB	91.0	77.4-118		%Rec	1	10/25/2019 7:27:07 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/25/2019 7:27:07 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 7:27:07 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 7:27:07 PM	48366
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2019 7:27:07 PM	48366
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	10/25/2019 7:27:07 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 3

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 9:50:00 AM

Lab ID: 1910D13-023

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1200	60		mg/Kg	20	10/28/2019 1:04:56 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/26/2019 12:02:35 AM	48373
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/26/2019 12:02:35 AM	48373
Surr: DNOP	101	70-130		%Rec	1	10/26/2019 12:02:35 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 7:49:57 PM	48366
Surr: BFB	91.8	77.4-118		%Rec	1	10/25/2019 7:49:57 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 7:49:57 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 7:49:57 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 7:49:57 PM	48366
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 7:49:57 PM	48366
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	10/25/2019 7:49:57 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 4

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 11:40:00 AM

Lab ID: 1910D13-024

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/28/2019 1:42:10 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	10/26/2019 12:26:46 AM	48373
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/26/2019 12:26:46 AM	48373
Surr: DNOP	98.8	70-130		%Rec	1	10/26/2019 12:26:46 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 8:12:47 PM	48366
Surr: BFB	93.3	77.4-118		%Rec	1	10/25/2019 8:12:47 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/25/2019 8:12:47 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 8:12:47 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 8:12:47 PM	48366
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2019 8:12:47 PM	48366
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	10/25/2019 8:12:47 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 5

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 11:45:00 AM

Lab ID: 1910D13-025

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	10/28/2019 1:54:34 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	10/26/2019 12:50:43 AM	48373
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/26/2019 12:50:43 AM	48373
Surr: DNOP	96.9	70-130		%Rec	1	10/26/2019 12:50:43 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 8:35:36 PM	48366
Surr: BFB	94.8	77.4-118		%Rec	1	10/25/2019 8:35:36 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/25/2019 8:35:36 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 8:35:36 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 8:35:36 PM	48366
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2019 8:35:36 PM	48366
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	10/25/2019 8:35:36 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 6

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 11:50:00 AM

Lab ID: 1910D13-026

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	2200	150		mg/Kg	50	10/29/2019 6:13:33 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/26/2019 1:14:42 AM	48373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2019 1:14:42 AM	48373
Surr: DNOP	102	70-130		%Rec	1	10/26/2019 1:14:42 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 8:58:17 PM	48366
Surr: BFB	97.1	77.4-118		%Rec	1	10/25/2019 8:58:17 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 8:58:17 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 8:58:17 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 8:58:17 PM	48366
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2019 8:58:17 PM	48366
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	10/25/2019 8:58:17 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 7

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 11:55:00 AM

Lab ID: 1910D13-027

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	470	59		mg/Kg	20	10/28/2019 2:19:23 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	10/26/2019 1:38:40 AM	48373
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/26/2019 1:38:40 AM	48373
Surr: DNOP	104	70-130		%Rec	1	10/26/2019 1:38:40 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2019 9:21:13 PM	48366
Surr: BFB	92.6	77.4-118		%Rec	1	10/25/2019 9:21:13 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/25/2019 9:21:13 PM	48366
Toluene	ND	0.049		mg/Kg	1	10/25/2019 9:21:13 PM	48366
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2019 9:21:13 PM	48366
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2019 9:21:13 PM	48366
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	10/25/2019 9:21:13 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1910D13

Date Reported: 10/31/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 8

Project: Red Hill 12 Inch

Collection Date: 10/15/2019 11:35:00 AM

Lab ID: 1910D13-028

Matrix: SOIL

Received Date: 10/24/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	130	61		mg/Kg	20	10/28/2019 2:31:48 PM	48411
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/26/2019 2:02:42 AM	48373
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/26/2019 2:02:42 AM	48373
Surr: DNOP	99.5	70-130		%Rec	1	10/26/2019 2:02:42 AM	48373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/25/2019 9:44:08 PM	48366
Surr: BFB	94.2	77.4-118		%Rec	1	10/25/2019 9:44:08 PM	48366
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/25/2019 9:44:08 PM	48366
Toluene	ND	0.046		mg/Kg	1	10/25/2019 9:44:08 PM	48366
Ethylbenzene	ND	0.046		mg/Kg	1	10/25/2019 9:44:08 PM	48366
Xylenes, Total	ND	0.092		mg/Kg	1	10/25/2019 9:44:08 PM	48366
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	10/25/2019 9:44:08 PM	48366

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>MB-48381</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48381</b>	RunNo: <b>63975</b>								
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189535</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-48381</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48381</b>	RunNo: <b>63975</b>								
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189536</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	100	90	110			

Sample ID: <b>MB-48400</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48400</b>	RunNo: <b>63975</b>								
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189577</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-48400</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48400</b>	RunNo: <b>63975</b>								
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189578</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	101	90	110			

Sample ID: <b>MB-48411</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48411</b>	RunNo: <b>64043</b>								
Prep Date: <b>10/28/2019</b>	Analysis Date: <b>10/28/2019</b>	SeqNo: <b>2190880</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-48411</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48411</b>	RunNo: <b>64043</b>								
Prep Date: <b>10/28/2019</b>	Analysis Date: <b>10/28/2019</b>	SeqNo: <b>2190881</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>LCS-48372</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48372</b>	RunNo: <b>63970</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189206</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.6	63.9	124			
Surr: DNOP	4.4		5.000		87.7	70	130			

Sample ID: <b>MB-48372</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48372</b>	RunNo: <b>63970</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189207</b> Units: <b>mg/Kg</b>								
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	9.4		10.00		93.6	70	130			

Sample ID: <b>1910D13-013AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 13</b>	Batch ID: <b>48373</b>	RunNo: <b>63969</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189224</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.8	48.97	0	99.7	57	142			
Surr: DNOP	4.7		4.897		95.2	70	130			

Sample ID: <b>1910D13-013AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 13</b>	Batch ID: <b>48373</b>	RunNo: <b>63969</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189225</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.9	49.26	0	101	57	142	1.83	20	
Surr: DNOP	4.8		4.926		96.8	70	130	0	0	

Sample ID: <b>LCS-48373</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48373</b>	RunNo: <b>63969</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189241</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.7	63.9	124			
Surr: DNOP	4.5		5.000		90.2	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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>MB-48373</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48373</b>	RunNo: <b>63969</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2189242</b>			Units: <b>mg/Kg</b>					
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	10		10.00		102	70	130			

Sample ID: <b>LCS-48402</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48402</b>	RunNo: <b>64037</b>								
Prep Date: <b>10/28/2019</b>	Analysis Date: <b>10/29/2019</b>	SeqNo: <b>2191039</b>			Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.6	70	130			

Sample ID: <b>MB-48402</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48402</b>	RunNo: <b>64037</b>								
Prep Date: <b>10/28/2019</b>	Analysis Date: <b>10/29/2019</b>	SeqNo: <b>2191040</b>			Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.8	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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>MB-48366</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188844</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.1	77.4	118			

Sample ID: <b>LCS-48366</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188845</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.5	80	120			
Surr: BFB	1000		1000		103	77.4	118			

Sample ID: <b>1910D13-011AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>Wall 11</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188847</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.37	0	110	69.1	142			
Surr: BFB	1000		974.7		108	77.4	118			

Sample ID: <b>1910D13-011AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>Wall 11</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188848</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.8	23.92	0	114	69.1	142	1.94	20	
Surr: BFB	1100		956.9		110	77.4	118	0	0	

Sample ID: <b>MB-48361</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48361</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188906</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.2	77.4	118			

Sample ID: <b>LCS-48361</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48361</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188907</b> Units: <b>mg/Kg</b>								
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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>LCS-48361</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>48361</b>			RunNo: <b>63980</b>						
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>			SeqNo: <b>2188907</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.8	80	120			
Surr: BFB	990		1000		99.2	77.4	118			

Sample ID: <b>MB-48375</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>48375</b>			RunNo: <b>63980</b>						
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>			SeqNo: <b>2188928</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.1	77.4	118			

Sample ID: <b>LCS-48375</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>48375</b>			RunNo: <b>63980</b>						
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>			SeqNo: <b>2188929</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	77.4	118			

Sample ID: <b>MB-48395</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>48395</b>			RunNo: <b>63988</b>						
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/26/2019</b>			SeqNo: <b>2189060</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.1	77.4	118			

Sample ID: <b>LCS-48395</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>48395</b>			RunNo: <b>63988</b>						
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/26/2019</b>			SeqNo: <b>2189061</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	77.4	118			

**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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>MB-48366</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188874</b> Units: <b>mg/Kg</b>								
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	0.96		1.000		96.1	80	120			

Sample ID: <b>LCS-48366</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188875</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.4	80	120			
Toluene	0.92	0.050	1.000	0	91.9	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.6	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.2	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	80	120			

Sample ID: <b>1910D13-012AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>Wall 12</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188878</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9756	0.01027	99.5	76	123			
Toluene	1.0	0.049	0.9756	0.009952	106	80.3	127			
Ethylbenzene	1.1	0.049	0.9756	0.01055	108	80.2	131			
Xylenes, Total	3.2	0.098	2.927	0.02917	107	78	133			
Surr: 4-Bromofluorobenzene	0.96		0.9756		98.3	80	120			

Sample ID: <b>1910D13-012AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>Wall 12</b>	Batch ID: <b>48366</b>	RunNo: <b>63981</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188879</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9506	0.01027	98.4	76	123	3.71	20	
Toluene	1.0	0.048	0.9506	0.009952	105	80.3	127	3.59	20	
Ethylbenzene	1.0	0.048	0.9506	0.01055	107	80.2	131	3.49	20	
Xylenes, Total	3.1	0.095	2.852	0.02917	106	78	133	3.32	20	
Surr: 4-Bromofluorobenzene	0.93		0.9506		98.0	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 Quantitative 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#: 1910D13

31-Oct-19

**Client:** Mewbourne Oil Company**Project:** Red Hill 12 Inch

Sample ID: <b>MB-48361</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48361</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188953</b>	Units: <b>mg/Kg</b>							
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	0.92		1.000		91.7	80	120			

Sample ID: <b>LCS-48361</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48361</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188954</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	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	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: <b>MB-48375</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48375</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188976</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		88.7	80	120			

Sample ID: <b>LCS-48375</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>48375</b>	RunNo: <b>63980</b>								
Prep Date: <b>10/24/2019</b>	Analysis Date: <b>10/25/2019</b>	SeqNo: <b>2188977</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.8	80	120			

Sample ID: <b>MB-48395</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>48395</b>	RunNo: <b>63988</b>								
Prep Date: <b>10/25/2019</b>	Analysis Date: <b>10/26/2019</b>	SeqNo: <b>2189088</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		92.9	80	120			

**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 Quantitative 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#: 1910D13  
31-Oct-19

Client: Mewbourne Oil Company  
Project: Red Hill 12 Inch

Sample ID: <b>LCS-48395</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>48395</b>		RunNo: <b>63988</b>						
Prep Date: <b>10/25/2019</b>		Analysis Date: <b>10/26/2019</b>		SeqNo: <b>2189089</b>			Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		93.6	80	120			

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 Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

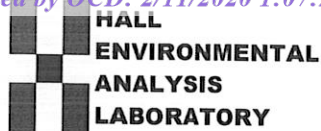
Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit



Hall Environmental Analysis Laboratory  
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 COM

Work Order Number: 1910D13

RcptNo: 1

Received By: Juan Rojas

10/24/2019 9:15:00 AM

Completed By: Erin Melendrez

10/24/2019 10:00:32 AM

Reviewed By:

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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
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: DAD 10/24/19

Special Handling (if applicable)

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

Person Notified: R. RunnesDate: 10/24/19By Whom: Leah BacaVia: ☒ eMail ☐ Phone ☐ Fax ☐ In PersonRegarding: Collection time discrepancies between bottle and CUCClient Instructions: Will report times from CUC

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			
2	2.3	Good	Yes			
3	1.4	Good	Yes			





## Chain-of-Custody Record

Client: Newbome

Mailing Address:

on file

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:

Red Hills 12"

Project #:

Project Manager:

Robbie Runnels

Sampler:

On Ice: ☐ Yes ☐ No

# of Coolers:

Cooler Temp (including CF): 7.3 - 0.2 - 2.1 (°C)

Container Type and #

Preservative Type

Soil/ice

-013

-014

-015

-016

-017

-018

-019

-020

-021

-022

-023

-024

Floor 1

Floor 2

Floor 3

Floor 4

1140

Date: 10/23/19

Time: 1:30

Relinquished by: Maryanne

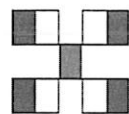
Date: 10/23/19

Time: 1140

Relinquished by: Maryanne

Date: 10/23/19

Time: 1140

HALL ENVIRONMENTAL  
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

TPH:8015D(GRO / DRO / MRO) ☒

8081 Pesticides/8082 PCB's ☐

EDB (Method 504.1) ☐

PAHs by 8310 or 8270SIMS ☐

RCRA 8 Metals ☐

Cl, F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub> ☐

8260 (VOA) ☐

8270 (Semi-VOA) ☐

Total Coliform (Present/Absent) ☐

BTX / MTBE / TMB's (8021)

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Remarks:

per Lab - Analyze BTEX/GRO/PAH/Chloride

for all samples of 10/25

## Chain-of-Custody Record

Client: HydromaxMailing Address: on file

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 ☐ RushProject Name: Reckitt 219121061

Project #: \_\_\_\_\_

Project Manager: Robbie Runnels

Sampler: \_\_\_\_\_

On Ice: ☒ Yes ☐ No

# of Coolers: \_\_\_\_\_

Cooler Temp (including CF): 2.3-0.2-2.1 (°C)

Container Type and #

Preservative Type

HEAL No. 1910D183

EQUIPMENT

-025

-026

-027

-028

91

ice

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

↓

Date: 10/23/19 Time: 11:30Relinquished by: MarylandDate: 10/23/19 Time: 11:30Relinquished by: MarylandReceived by: [Signature]Date: 10/23/19 Time: 16:30Received by: [Signature]Date: 10/24/19 Time: 9:15Remarks: per Labbie - Analyze for BTEX/GRO/DR/MRO/PCBs for all samples. 10/25/19

## Analysis Request

BTEX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)



# APPENDIX – C

## 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	
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 32.037082

Longitude -103.669238

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Red Hills Recycle Facility	Site Type Recycle Facility
Date Release Discovered 6/25/2019 @ 19:00	API# (if applicable) N/A

Unit Letter	Section	Township	Range	County
M	15	26S	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 1,800	Volume Recovered (bbls) 1,330
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release 12" poly transfer line cracked between two fuses.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)? Notice was given to Rick Rickman on 6/26/2019 at 13:54 by phone from Robbie Runnels.	

## Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Robbie Runnels</u>	Title: <u>Environmental Representative</u>
Signature: _____	Date: <u>6/27/2019</u>
email: <u>rrunnels@mewbourne.com</u>	Telephone: <u>575-393-5905</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	
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?	<u>+278</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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 Representative\_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_runnels@mewbourne.com\_\_\_\_\_ Telephone: \_575-393-5905\_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	
Facility ID	
Application ID	

## 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 Representative\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_rrunnels@mewbourne.com\_ Telephone: \_\_575-393-5905\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Robbie Runnels Title: Environmental Representative

Signature: 

Date: 2/4/2020

email: rrunnels@mewbourne.com Telephone: 575-393-5905

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_