



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

**REMEDICATION SUMMARY &  
SITE CLOSURE REQUEST**

**MEWBOURNE OIL COMPANY  
FNR 17 20 W2IP Federal COM 3H  
Eddy County, New Mexico  
Unit Letter "J" (NW/SE), Section 17, Township 23 South, Range 30 East  
Latitude 32.303547 North, Longitude -103.899399 West**

Prepared For:

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

Prepared By:

Mewbourne Oil Company

**April, 2020**

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

Robbie Runnels  
Environmental Specialist

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## 1.0 INTRODUCTION & BACKGROUND INFORMATION

Mewbourne Oil Company (Mewbourne), has prepared this *Remediation Summary & Site Closure Request* for the release site known as FNR 17 20 W2IP Federal COM 3H (FNR). The legal description of the release site is Unit Letter "J" (NW/SE) of Section 17 in Township 23 South of Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.303547° North latitude and -103.899399° 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 December 4<sup>th</sup>, 2019, Mewbourne discovered a release of approximately fifty (50) barrels (bbls) of produced water when a four-inch steel line developed a hole. An estimated ten (10) bbls were recovered. Approximately fifty-seven thousand four-hundred seventy-five (57,475) square feet (ft<sup>2</sup>) of pasture area was impacted. New Mexico Oil Conservation Division (NMOCD) was notified of the release on December 5<sup>th</sup>, 2019, and an initial C-141 was submitted to NMOCD for approval.

Locations of 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 C. 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 no reportable wells for Section 17 of Township 23 South in Range 30 East. Utilizing the United States Geological Survey (USGS) website for groundwater in combination with the NMWRRS for the water wells in adjacent sections on all four sides of the FNR release area, an average depth to ground water (DGW) was determined to be two-hundred forty-one (241) feet below ground surface (bgs). A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater could be encountered at approximately one-hundred sixty (160) feet. Based on the NMOCD-Table 1, this location would allow remediation concentration levels to be 10 mg/kg for Benzene, 50 mg/kg for BTEX, 2,500 mg/kg for TPH, and 20,000 mg/kg for chloride.

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-Table 1, this location would allow remediation concentration levels to be 10 mg/kg for Benzene, 50 mg/kg for BTEX, 2,500 mg/kg for TPH, and 20,000 mg/kg for chloride.

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

Remediation began on January 13<sup>th</sup>, 2020. Initial as well as final sampling began on January 20<sup>th</sup>, 2020. Nineteen (19) soil sample points were established (Floor 1 through Floor 19) and soil samples were retrieved at various depths in the pursuit of vertical as well as horizontal delineation. The soil samples were field screened for chloride concentrations and clean samples were submitted to an NMOCD approved and certified laboratory for confirmation analyses. Chloride, gasoline range organics (GRO), oil range organics (ORO), and diesel range organics (DRO) concentrations were analyzed in addition to benzene, toluene, ethyl-benzene, and xlyenes (BTEX) concentrations.

On January 20<sup>th</sup>, 2020, horizontal delineation composite samples were retrieved to ensure the total impacted area was encompassed within the excavated area. Composite samples represented no more than two-hundred (200) square feet of area. The composite soil samples were retrieved, field screened, and submitted to an NMOCD approved and certified laboratory for confirmation analyses. Laboratory analyses confirms that the site had been delineated horizontally.

Excavated soil was transferred to an approved NMOCD permitted facility for final disposal.

The floor of the excavation still exhibited contaminant concentrations above the Table 1 remediation levels for chlorides four (4) feet bgs. The floor of the excavation was fitted with a twenty (20) mil, impermeable, polyethylene plastic liner. 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. 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 Hall Laboratories, Inc., in Albuquerque, New Mexico, for analyses 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 FNR 17 20 W2IP Federal COM 3H release site were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and chloride were below the Table 1 limits 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 Artesia District Office a copy of this *Remediation Summary & Site Closure Request*. Mewbourne ask the NMOCD grant site closure to the FNR 17 20 W2IP Federal COM 3H release site.

## 6.0 LIMITATIONS

Mewbourne Oil Company has prepared this *Remediation Summary & 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: Victoria Venegas  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 2)  
1301 E. Grand Avenue  
Artesia, NM 88210

Copy 2: Kelsey Wade  
Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

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

# FIGURES

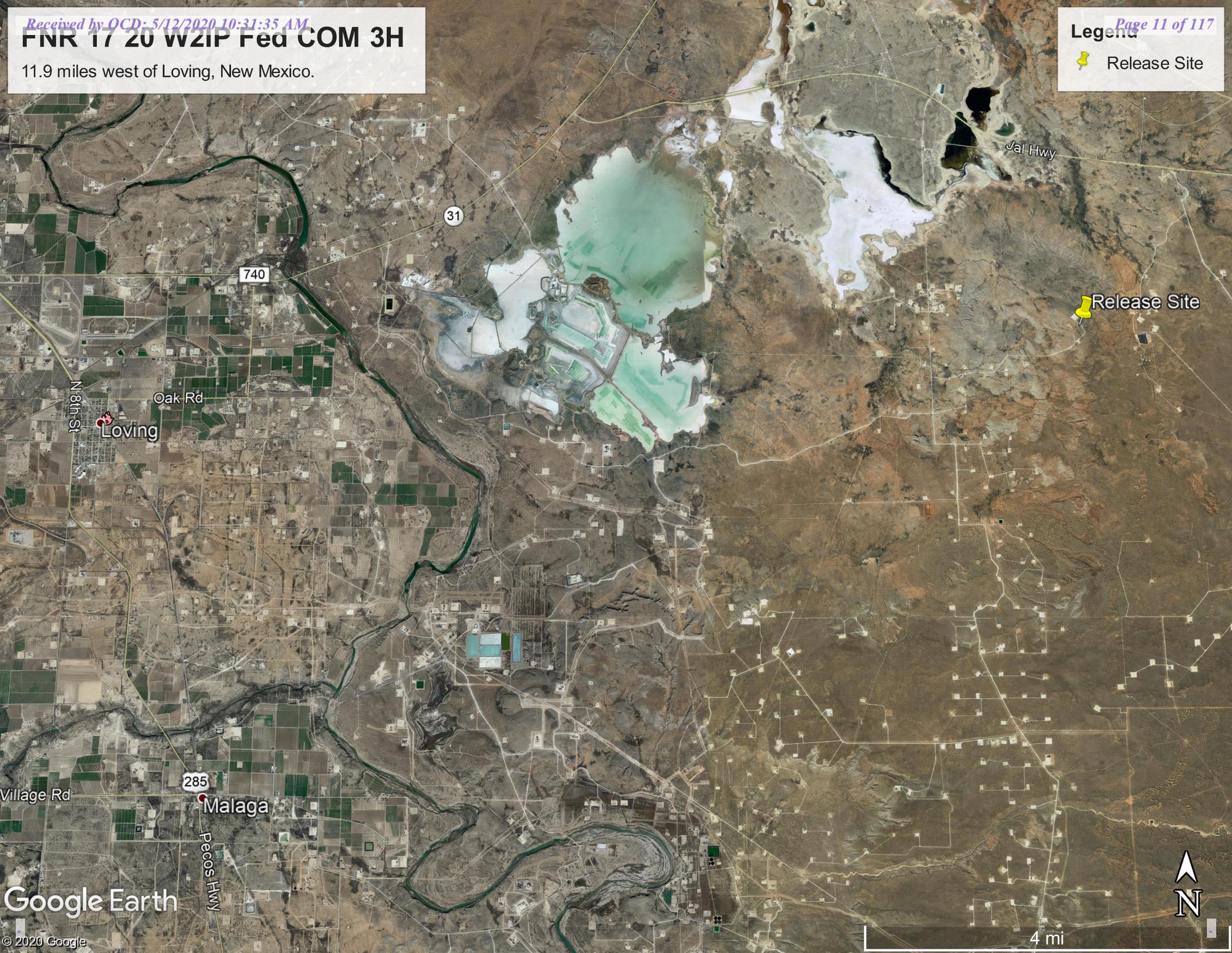
# FNR 17 20 WZIP Fed COM 3H

11.9 miles west of Loving, New Mexico.

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**Legend**

- Release Site







## 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	Subbasin	County	Source	6416 4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
<a href="#">C 03478 POD1</a>		C	ED	Shallow	3	2 1	21	23S 30E	604638	3573670	06/07/2016	06/27/2016	07/11/2016	230	105	JUSTIN MULLINS	
<a href="#">C 04018 POD1</a>		CUB	ED	Shallow	2	2 1	21	23S 30E	604664	3573868	03/24/2017	03/28/2017	09/11/2017	380	179	JUSTIN MULLINS	1737

**Record Count:** 2

**PLSS Search:**

**Section(s):** 21      **Township:** 23S      **Range:** 30E

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3/19/20 8:59 AM

WELLS WITH WELL LOG INFORMATION



## 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	Subbasin	County	Source	64164	4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number	
<a href="#">C 02486</a>		C	ED		3	2	3	19	23S	30E	601304	3572832*	01/26/1996	01/29/1996	03/13/1996	350		COLLIS, ROBERT E. (LD)	1184

Record Count: 1

PLSS Search:

Section(s): 19      Township: 23S      Range: 30E

\*UTM location was derived from PLSS - see Help

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USGS Water Resources

Data Category:	Geographic Area:	GO
Groundwater	New Mexico	

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Groundwater levels for New Mexico

Click to hide state-specific text

### Search Results -- 1 sites found

**Agency code** = usgs

**site\_no list** =

- 321750103531101

**Minimum number of levels** = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 321750103531101 23S.30E.21.12222

**Available data for this site**

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°17'50", Longitude 103°53'11" NAD27

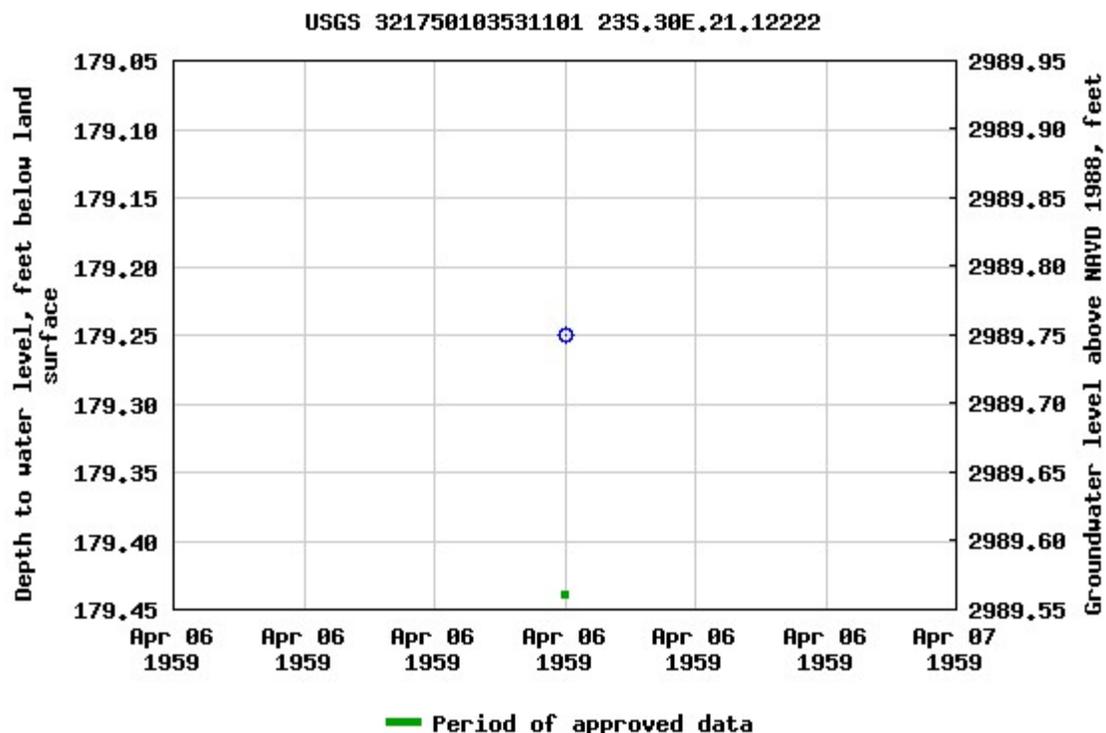
Land-surface elevation 3,169 feet above NAVD88

The depth of the well is 203 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



Breaks in the plot represent a gap of at least one year between field measurements.

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**Title: Groundwater for New Mexico: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2020-03-19 11:09:15 EDT

0.64 0.55 nadww01



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New Mexico Office of the State Engineer  
**Wells with Well Log Information**

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No wells found.

**PLSS Search:**

**Section(s):** 17      **Township:** 23S      **Range:** 30E

---

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WELLS WITH WELL LOG INFORMATION



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## National Water Information System: Web Interface

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Data Category:	Geographic Area:	GO
Groundwater	New Mexico	

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Groundwater levels for New Mexico

Click to hide state-specific text

### Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 321742103552601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 321742103552601 23S.30E.19.123421

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°17'42", Longitude 103°55'26" NAD27

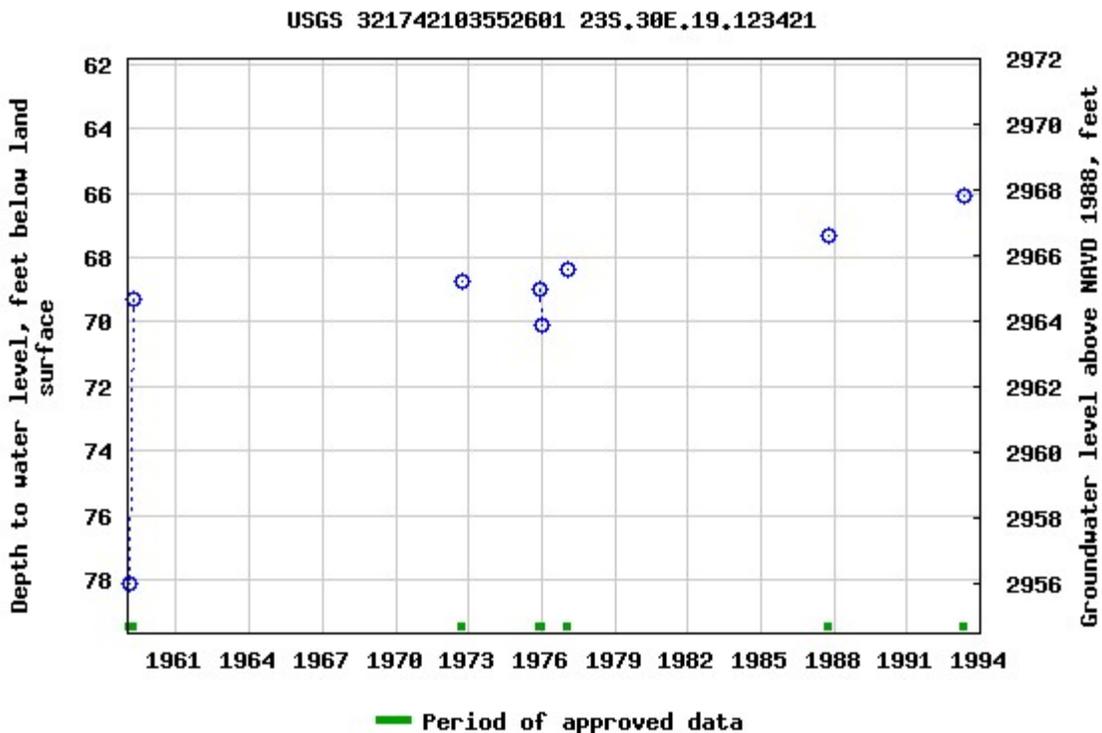
Land-surface elevation 3,034 feet above NAVD88

The depth of the well is 100 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



Breaks in the plot represent a gap of at least one year between field measurements.

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1.25 0.55 nadww01

# TABLES

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**  
**MEWBOURNE OIL COMPANY**  
**FNR 17 20 B21P Federal COM 001**  
**EDDY COUNTY, NEW MEXICO**  
**UL J, SEC 17, T-23-S, R-30-E**

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 1 North	Various	1/20/2020	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.8	<49	<63.6	250	171
Wall 1 East	Various	1/20/2020	Composite	<0.023	<0.046	<0.046	0.092	<0.207	<4.6	<9.3	<47	<60.9	<60	181
Wall 1 West	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.3	<47	<61.3	<60	181
Wall 2 East	Various	1/20/2020	Composite	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.4	<47	<61.3	<60	156
Wall 2 West	Various	1/20/2020	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.6	<48	<62.4	<60	<108
Wall 3 East	Various	1/20/2020	Composite	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.8	<49	<63.5	<60	180
Wall 3 West	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<7.9	<40	<52.9	<60	156
Wall 4 South	Various	1/20/2020	Composite	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.5	<47	<61.4	<60	205
Wall 4 North	Various	1/20/2020	Composite	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<8.1	<41	<53.8	<60	180
Wall 5 South	Various	1/21/2020	Composite	<0.025	<0.049	<0.049	<0.099	<0.221	<4.9	9.3	<42	9.3	120	<108
Wall 5 North	Various	1/21/2020	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.7	<49	<63.6	<60	156
Wall 6 North	Various	1/21/2020	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.5	<47	<61.3	<60	108
Wall 6 South	Various	1/21/2020	Composite	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.1	<46	<59.9	<60	108
Wall 7 North	Various	1/21/2020	Composite	<0.023	<0.047	<0.047	0.093	<0.208	<4.7	<9.7	<48	<62.4	<60	108
Wall 7 South	Various	1/21/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	12	15	<42	27	<60	108
Wall 8 North	Various	1/21/2020	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	57	<48	57	260	108
Wall 8 South	Various	1/21/2020	Composite	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.0	<45	<58.8	1,900	108
Wall 9 North	Various	1/21/2020	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.1	<46	<59.9	<60	180
Wall 9 South	Various	1/21/2020	Composite	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<9.3	<46	<60.3	<60	156
Wall 10 North	Various	1/21/2020	Composite	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.6	<48	<62.5	<60	108
Wall 10 South	Various	1/21/2020	Composite	<0.023	<0.046	<0.046	0.092	<0.207	<4.6	<9.5	<48	<62.1	<60	108
Wall 11 North	Various	1/21/2020	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	14	<48	14	260	188
Wall 11 South	Various	1/21/2020	Composite	<0.025	<0.050	<0.050	<0.10	<0.225	15	34	<47	49	<60	<108
Wall 12 North	Various	1/21/2020	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<10	<50	<64.9	<60	108
Wall 12 South	Various	1/21/2020	Composite	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.8	<49	<62.7	<60	108
Wall 13 North	Various	1/21/2020	Composite	<0.023	<0.046	<0.046	0.093	<0.208	<4.6	<9.7	<49	<63.3	62	156
Wall 13 South	Various	1/21/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.9	<49	<63.9	240	190
Wall 14 North	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	61	<48	61	79	156
Wall 14 South	Various	1/20/2020	Composite	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	23	<49	23	<60	180
Wall 15 North	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<10	<51	<66	<60	<108
Wall 15 South	Various	1/20/2020	Composite	<0.023	<0.046	<0.046	0.093	<0.208	<4.6	52	<47	52	<60	<108
Wall 16 North	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.9	<49	<63.9	<60	156
Wall 16 South	Various	1/20/2020	Composite	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	14	<49	14	<60	<108
Wall 17 North	Various	1/20/2020	Composite	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	34	<48	34	<60	<108
Wall 17 South	Various	1/20/2020	Composite	<0.023	<0.046	<0.046	0.092	<0.207	5.9	<9.9	<49	5.9	<60	<108
Wall 18 North	Various	1/20/2020	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.7	<49	<63.5	<60	<108
Wall 18 South	Various	1/20/2020	Composite	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.6	<48	<62.5	<60	<108
Wall 19 North	Various	1/20/2020	Composite	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.7	<49	<63.5	<60	<108
Wall 19 South	Various	1/20/2020	Composite	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.9	<49	<63.8	<60	<108
Wall 19 West	Various	1/20/2020	Composite	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<10	<50	<64.7	<60	NA
Floor 1	4'	1/20/2020	In-Situ	<0.024	<0.048	<0.048	<0.096	<0.216	46	5,400	1,300	<b>6,746</b>	<b>5,500</b>	3,304
Floor 2	4'	1/20/2020	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	35	2,900	870	<b>3,805</b>	<b>5,800</b>	12,264
Floor 3	4'	1/20/2020	In-Situ	<0.024	<0.047	<0.047	0.23	0.23	8.2	830	220	<b>1,058.2</b>	<b>6,900</b>	4,226
Floor 4	4'	1/20/2020	In-Situ	<0.024	<0.048	<0.048	<0.097	<0.217	15	840	240	<b>1,095</b>	<b>6,100</b>	<108
Floor 5	4'	1/21/2020	In-Situ	<0.12	0.25	0.25	0.49	1.11	40	640	170	<b>850</b>	<b>7,900</b>	8,060
Floor 6	4'	1/21/2020	In-Situ	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.6	<48	<62.4	<b>6,300</b>	5,480

TABLE 1  
 CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL  
 MEWBOURNE OIL COMPANY  
 FNR 17 20 B21P Federal COM 001  
 EDDY COUNTY, NEW MEXICO  
 UL J, SEC 17, T-23-S, R-30-E

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)			
Floor 7	4'	1/21/2020	In-Situ	<0.023	0.055	0.11	3.1	3.265	220	4,700	1,100	6,020	5,000	108
Floor 8	4'	1/21/2020	In-Situ	<0.023	<0.046	0.048	1.7	1.748	180	6,500	2,000	8,680	210	1,888
Floor 9	4'	1/21/2020	In-Situ	<0.023	<0.046	<0.046	0.093	<0.208	4.9	73	<39	77.9	1,400	888
Floor 10	4'	1/21/2020	In-Situ	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	260	87	347	5,100	5,420
Floor 11	4'	1/21/2020	In-Situ	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	200	74	274	9,300	12,029
Floor 12	4'	1/21/2020	In-Situ	<0.024	0.10	0.25	5.1	5.36	94	9,400	1,800	11,294	7,000	5,420
Floor 13	4'	1/21/2020	In-Situ	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	66	<47	66	6,800	5,420
Floor 14	4'	1/20/2020	In-Situ	<0.025	<0.050	<0.050	<0.10	<0.225	5.9	73	<49	78.9	77	<108
Floor 15	4'	1/20/2020	In-Situ	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.6	<48	<62.5	<60	NA
Floor 16	4'	1/20/2020	In-Situ	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.8	<49	<62.7	<60	205
Floor 17	4'	1/20/2020	In-Situ	<0.023	<0.046	<0.046	0.093	<0.208	<4.6	<9.9	<50	<64.5	<60	242
Floor 18	4'	1/20/2020	In-Situ	<0.025	<0.050	<0.050	<0.099	<0.224	18	1700	430	2,148	<60	246
Floor 19	4'	1/20/2020	In-Situ	<0.023	<0.046	<0.046	0.093	<0.208	<4.6	<8.4	<42	<55.0	<60	205
<b>NMOCD Regulatory Standard</b>				<b>10</b>				<b>50</b>				<b>2,500</b>	<b>600</b>	

# APPENDICES

# APPENDIX – A

## Photo Documentation

# FNR 17-20 W2IP Federal COM #3H

Unit Letter J, Section 17, T23S, R30E



Release area facing west

12/5/19



Release area facing southwest

12/5/19



Release area facing southeast

12/5/19



Excavation facing south

1/20/20

# FNR 17-20 W2IP Federal COM #3H

Unit Letter J, Section 17, T23S, R30E



Excavation facing west

1/20/20



Excavation facing north

1/20/20



Backfilled area facing west

1/31/20



Backfilled area facing west

1/31/20

# 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)

January 30, 2020

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

RE: FNR 17 20 B21P Federal Com 1

OrderNo.: 2001907

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 59 sample(s) on 1/23/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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 light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 1 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 8:50:00 AM

Lab ID: 2001907-001

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	250	60		mg/Kg	20	1/24/2020 2:37:08 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/24/2020 10:18:33 PM	50008
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/24/2020 10:18:33 PM	50008
Surr: DNOP	81.3	55.1-146		%Rec	1	1/24/2020 10:18:33 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2020 7:20:56 AM	50005
Surr: BFB	81.1	66.6-105		%Rec	1	1/25/2020 7:20:56 AM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 7:20:56 AM	50005
Toluene	ND	0.048		mg/Kg	1	1/25/2020 7:20:56 AM	50005
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 7:20:56 AM	50005
Xylenes, Total	ND	0.096		mg/Kg	1	1/25/2020 7:20:56 AM	50005
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	1/25/2020 7:20:56 AM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 1 East

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 8:55:00 AM

**Lab ID:** 2001907-002

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 2:49:29 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/24/2020 10:27:29 PM	50008
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/24/2020 10:27:29 PM	50008
Surr: DNOP	84.1	55.1-146		%Rec	1	1/24/2020 10:27:29 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/26/2020 5:50:31 PM	50005
Surr: BFB	86.5	66.6-105		%Rec	1	1/26/2020 5:50:31 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	1/26/2020 5:50:31 PM	50005
Toluene	ND	0.046		mg/Kg	1	1/26/2020 5:50:31 PM	50005
Ethylbenzene	ND	0.046		mg/Kg	1	1/26/2020 5:50:31 PM	50005
Xylenes, Total	ND	0.092		mg/Kg	1	1/26/2020 5:50:31 PM	50005
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	1/26/2020 5:50:31 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 1 West

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:00:00 AM

**Lab ID:** 2001907-003

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 3:01:50 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/24/2020 10:36:24 PM	50008
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/24/2020 10:36:24 PM	50008
Surr: DNOP	78.4	55.1-146		%Rec	1	1/24/2020 10:36:24 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/26/2020 6:13:59 PM	50005
Surr: BFB	83.9	66.6-105		%Rec	1	1/26/2020 6:13:59 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/26/2020 6:13:59 PM	50005
Toluene	ND	0.050		mg/Kg	1	1/26/2020 6:13:59 PM	50005
Ethylbenzene	ND	0.050		mg/Kg	1	1/26/2020 6:13:59 PM	50005
Xylenes, Total	ND	0.099		mg/Kg	1	1/26/2020 6:13:59 PM	50005
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	1/26/2020 6:13:59 PM	50005

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 1

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 9:05:00 AM

Lab ID: 2001907-004

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	5500	300		mg/Kg	100	1/27/2020 6:09:53 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	5400	99		mg/Kg	10	1/28/2020 1:17:20 PM	50008
Motor Oil Range Organics (MRO)	1300	500		mg/Kg	10	1/28/2020 1:17:20 PM	50008
Surr: DNOP	0	55.1-146	S	%Rec	10	1/28/2020 1:17:20 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	46	4.8		mg/Kg	1	1/26/2020 6:37:31 PM	50005
Surr: BFB	343	66.6-105	S	%Rec	1	1/26/2020 6:37:31 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 6:37:31 PM	50005
Toluene	ND	0.048		mg/Kg	1	1/26/2020 6:37:31 PM	50005
Ethylbenzene	0.089	0.048		mg/Kg	1	1/26/2020 6:37:31 PM	50005
Xylenes, Total	1.3	0.096		mg/Kg	1	1/26/2020 6:37:31 PM	50005
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	1/26/2020 6:37:31 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 2 East

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:10:00 AM

**Lab ID:** 2001907-005

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 3:51:15 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/27/2020 1:27:29 PM	50008
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/27/2020 1:27:29 PM	50008
Surr: DNOP	85.3	55.1-146		%Rec	1	1/27/2020 1:27:29 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/26/2020 7:00:51 PM	50005
Surr: BFB	86.4	66.6-105		%Rec	1	1/26/2020 7:00:51 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 7:00:51 PM	50005
Toluene	ND	0.049		mg/Kg	1	1/26/2020 7:00:51 PM	50005
Ethylbenzene	ND	0.049		mg/Kg	1	1/26/2020 7:00:51 PM	50005
Xylenes, Total	ND	0.098		mg/Kg	1	1/26/2020 7:00:51 PM	50005
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	1/26/2020 7:00:51 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 2 West

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:15:00 AM

**Lab ID:** 2001907-006

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 4:03:36 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/27/2020 1:49:23 PM	50008
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 1:49:23 PM	50008
Surr: DNOP	84.4	55.1-146		%Rec	1	1/27/2020 1:49:23 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/26/2020 7:24:19 PM	50005
Surr: BFB	88.7	66.6-105		%Rec	1	1/26/2020 7:24:19 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 7:24:19 PM	50005
Toluene	ND	0.048		mg/Kg	1	1/26/2020 7:24:19 PM	50005
Ethylbenzene	ND	0.048		mg/Kg	1	1/26/2020 7:24:19 PM	50005
Xylenes, Total	ND	0.096		mg/Kg	1	1/26/2020 7:24:19 PM	50005
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	1/26/2020 7:24:19 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 2

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:20:00 AM

**Lab ID:** 2001907-007

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	5800	300		mg/Kg	100	1/27/2020 6:22:15 PM	50025
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	2900	100		mg/Kg	10	1/27/2020 2:11:13 PM	50008
Motor Oil Range Organics (MRO)	870	500		mg/Kg	10	1/27/2020 2:11:13 PM	50008
Surr: DNOP	0	55.1-146	S	%Rec	10	1/27/2020 2:11:13 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	35	4.9		mg/Kg	1	1/26/2020 7:47:44 PM	50005
Surr: BFB	267	66.6-105	S	%Rec	1	1/26/2020 7:47:44 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 7:47:44 PM	50005
Toluene	ND	0.049		mg/Kg	1	1/26/2020 7:47:44 PM	50005
Ethylbenzene	0.078	0.049		mg/Kg	1	1/26/2020 7:47:44 PM	50005
Xylenes, Total	1.1	0.097		mg/Kg	1	1/26/2020 7:47:44 PM	50005
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	1/26/2020 7:47:44 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 3 East

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:25:00 AM

**Lab ID:** 2001907-008

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 3:24:48 PM	50029
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/24/2020 11:21:01 PM	50008
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/24/2020 11:21:01 PM	50008
Surr: DNOP	77.0	55.1-146		%Rec	1	1/24/2020 11:21:01 PM	50008
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/26/2020 8:11:11 PM	50005
Surr: BFB	87.5	66.6-105		%Rec	1	1/26/2020 8:11:11 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 8:11:11 PM	50005
Toluene	ND	0.047		mg/Kg	1	1/26/2020 8:11:11 PM	50005
Ethylbenzene	ND	0.047		mg/Kg	1	1/26/2020 8:11:11 PM	50005
Xylenes, Total	ND	0.094		mg/Kg	1	1/26/2020 8:11:11 PM	50005
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	1/26/2020 8:11:11 PM	50005

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 3 West

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 9:30:00 AM

Lab ID: 2001907-009

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 4:02:02 PM	50029
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	7.9		mg/Kg	1	1/25/2020 12:14:33 AM	50010
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	1/25/2020 12:14:33 AM	50010
Surr: DNOP	87.6	55.1-146		%Rec	1	1/25/2020 12:14:33 AM	50010
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/26/2020 8:34:32 PM	50005
Surr: BFB	83.7	66.6-105		%Rec	1	1/26/2020 8:34:32 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/26/2020 8:34:32 PM	50005
Toluene	ND	0.050		mg/Kg	1	1/26/2020 8:34:32 PM	50005
Ethylbenzene	ND	0.050		mg/Kg	1	1/26/2020 8:34:32 PM	50005
Xylenes, Total	ND	0.099		mg/Kg	1	1/26/2020 8:34:32 PM	50005
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	1/26/2020 8:34:32 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 3

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:35:00 AM

**Lab ID:** 2001907-010

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	6900	300		mg/Kg	100	1/27/2020 7:36:22 PM	50029
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	830	8.8		mg/Kg	1	1/25/2020 12:41:17 AM	50010
Motor Oil Range Organics (MRO)	220	44		mg/Kg	1	1/25/2020 12:41:17 AM	50010
Surr: DNOP	102	55.1-146		%Rec	1	1/25/2020 12:41:17 AM	50010
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	8.2	4.7		mg/Kg	1	1/26/2020 10:07:58 PM	50005
Surr: BFB	134	66.6-105	S	%Rec	1	1/26/2020 10:07:58 PM	50005
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/26/2020 10:07:58 PM	50005
Toluene	ND	0.047		mg/Kg	1	1/26/2020 10:07:58 PM	50005
Ethylbenzene	ND	0.047		mg/Kg	1	1/26/2020 10:07:58 PM	50005
Xylenes, Total	0.23	0.094		mg/Kg	1	1/26/2020 10:07:58 PM	50005
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	1/26/2020 10:07:58 PM	50005

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 4 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:40:00 AM

**Lab ID:** 2001907-011

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 4:26:51 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2020 2:01:35 PM	50007
Surr: BFB	93.3	70-130		%Rec	1	1/25/2020 2:01:35 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/25/2020 12:50:12 AM	50010
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/25/2020 12:50:12 AM	50010
Surr: DNOP	46.2	55.1-146	S	%Rec	1	1/25/2020 12:50:12 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/25/2020 2:01:35 PM	50007
Toluene	ND	0.049		mg/Kg	1	1/25/2020 2:01:35 PM	50007
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2020 2:01:35 PM	50007
Xylenes, Total	ND	0.099		mg/Kg	1	1/25/2020 2:01:35 PM	50007
Surr: 1,2-Dichloroethane-d4	84.8	70-130		%Rec	1	1/25/2020 2:01:35 PM	50007
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	1/25/2020 2:01:35 PM	50007
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	1/25/2020 2:01:35 PM	50007
Surr: Toluene-d8	93.8	70-130		%Rec	1	1/25/2020 2:01:35 PM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 4 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 9:45:00 AM

**Lab ID:** 2001907-012

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 4:39:15 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/25/2020 3:27:06 PM	50007
Surr: BFB	91.4	70-130		%Rec	1	1/25/2020 3:27:06 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.1		mg/Kg	1	1/25/2020 12:59:06 AM	50010
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	1/25/2020 12:59:06 AM	50010
Surr: DNOP	76.9	55.1-146		%Rec	1	1/25/2020 12:59:06 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 3:27:06 PM	50007
Toluene	ND	0.047		mg/Kg	1	1/25/2020 3:27:06 PM	50007
Ethylbenzene	ND	0.047		mg/Kg	1	1/25/2020 3:27:06 PM	50007
Xylenes, Total	ND	0.094		mg/Kg	1	1/25/2020 3:27:06 PM	50007
Surr: 1,2-Dichloroethane-d4	89.2	70-130		%Rec	1	1/25/2020 3:27:06 PM	50007
Surr: 4-Bromofluorobenzene	87.1	70-130		%Rec	1	1/25/2020 3:27:06 PM	50007
Surr: Dibromofluoromethane	92.3	70-130		%Rec	1	1/25/2020 3:27:06 PM	50007
Surr: Toluene-d8	95.4	70-130		%Rec	1	1/25/2020 3:27:06 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 4

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 9:50:00 AM

Lab ID: 2001907-013

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	6100	300		mg/Kg	100	1/27/2020 7:48:43 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	15	4.8		mg/Kg	1	1/25/2020 4:52:57 PM	50007
Surr: BFB	87.8	70-130		%Rec	1	1/25/2020 4:52:57 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	840	9.6		mg/Kg	1	1/25/2020 1:08:02 AM	50010
Motor Oil Range Organics (MRO)	240	48		mg/Kg	1	1/25/2020 1:08:02 AM	50010
Surr: DNOP	142	55.1-146		%Rec	1	1/25/2020 1:08:02 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 4:52:57 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 4:52:57 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 4:52:57 PM	50007
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2020 4:52:57 PM	50007
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	1	1/25/2020 4:52:57 PM	50007
Surr: 4-Bromofluorobenzene	71.7	70-130		%Rec	1	1/25/2020 4:52:57 PM	50007
Surr: Dibromofluoromethane	97.8	70-130		%Rec	1	1/25/2020 4:52:57 PM	50007
Surr: Toluene-d8	95.3	70-130		%Rec	1	1/25/2020 4:52:57 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 5 South

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:10:00 AM

Lab ID: 2001907-014

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	120	60		mg/Kg	20	1/24/2020 5:28:55 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2020 5:21:35 PM	50007
Surr: BFB	94.2	70-130		%Rec	1	1/25/2020 5:21:35 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	9.3	8.4		mg/Kg	1	1/25/2020 1:16:56 AM	50010
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/25/2020 1:16:56 AM	50010
Surr: DNOP	48.0	55.1-146	S	%Rec	1	1/25/2020 1:16:56 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/25/2020 5:21:35 PM	50007
Toluene	ND	0.049		mg/Kg	1	1/25/2020 5:21:35 PM	50007
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2020 5:21:35 PM	50007
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2020 5:21:35 PM	50007
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%Rec	1	1/25/2020 5:21:35 PM	50007
Surr: 4-Bromofluorobenzene	86.5	70-130		%Rec	1	1/25/2020 5:21:35 PM	50007
Surr: Dibromofluoromethane	92.5	70-130		%Rec	1	1/25/2020 5:21:35 PM	50007
Surr: Toluene-d8	95.0	70-130		%Rec	1	1/25/2020 5:21:35 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 5 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:15:00 AM

Lab ID: 2001907-015

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 5:41:20 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2020 5:50:10 PM	50007
Surr: BFB	93.2	70-130		%Rec	1	1/25/2020 5:50:10 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/25/2020 1:25:51 AM	50010
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/25/2020 1:25:51 AM	50010
Surr: DNOP	39.0	55.1-146	S	%Rec	1	1/25/2020 1:25:51 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 5:50:10 PM	50007
Toluene	ND	0.049		mg/Kg	1	1/25/2020 5:50:10 PM	50007
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2020 5:50:10 PM	50007
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2020 5:50:10 PM	50007
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%Rec	1	1/25/2020 5:50:10 PM	50007
Surr: 4-Bromofluorobenzene	89.1	70-130		%Rec	1	1/25/2020 5:50:10 PM	50007
Surr: Dibromofluoromethane	90.7	70-130		%Rec	1	1/25/2020 5:50:10 PM	50007
Surr: Toluene-d8	96.1	70-130		%Rec	1	1/25/2020 5:50:10 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 5

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:20:00 AM

Lab ID: 2001907-016

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	7900	300		mg/Kg	100	1/27/2020 8:01:03 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	40	25		mg/Kg	5	1/25/2020 6:18:42 PM	50007
Surr: BFB	90.4	70-130		%Rec	5	1/25/2020 6:18:42 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	640	8.7		mg/Kg	1	1/25/2020 1:34:46 AM	50010
Motor Oil Range Organics (MRO)	170	44		mg/Kg	1	1/25/2020 1:34:46 AM	50010
Surr: DNOP	87.2	55.1-146		%Rec	1	1/25/2020 1:34:46 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.12		mg/Kg	5	1/25/2020 6:18:42 PM	50007
Toluene	ND	0.25		mg/Kg	5	1/25/2020 6:18:42 PM	50007
Ethylbenzene	ND	0.25		mg/Kg	5	1/25/2020 6:18:42 PM	50007
Xylenes, Total	ND	0.49		mg/Kg	5	1/25/2020 6:18:42 PM	50007
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%Rec	5	1/25/2020 6:18:42 PM	50007
Surr: 4-Bromofluorobenzene	81.1	70-130		%Rec	5	1/25/2020 6:18:42 PM	50007
Surr: Dibromofluoromethane	92.4	70-130		%Rec	5	1/25/2020 6:18:42 PM	50007
Surr: Toluene-d8	93.0	70-130		%Rec	5	1/25/2020 6:18:42 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 6 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:25:00 AM

Lab ID: 2001907-017

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 6:06:08 PM	50029
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2020 6:47:12 PM	50007
Surr: BFB	93.3	70-130		%Rec	1	1/25/2020 6:47:12 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/25/2020 1:43:42 AM	50010
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/25/2020 1:43:42 AM	50010
Surr: DNOP	50.3	55.1-146	S	%Rec	1	1/25/2020 1:43:42 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 6:47:12 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 6:47:12 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 6:47:12 PM	50007
Xylenes, Total	ND	0.096		mg/Kg	1	1/25/2020 6:47:12 PM	50007
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%Rec	1	1/25/2020 6:47:12 PM	50007
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	1/25/2020 6:47:12 PM	50007
Surr: Dibromofluoromethane	93.6	70-130		%Rec	1	1/25/2020 6:47:12 PM	50007
Surr: Toluene-d8	94.6	70-130		%Rec	1	1/25/2020 6:47:12 PM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 6 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 8:30:00 AM

**Lab ID:** 2001907-018

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 8:35:16 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2020 7:15:42 PM	50007
Surr: BFB	92.3	70-130		%Rec	1	1/25/2020 7:15:42 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/25/2020 1:52:39 AM	50010
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/25/2020 1:52:39 AM	50010
Surr: DNOP	64.4	55.1-146		%Rec	1	1/25/2020 1:52:39 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 7:15:42 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 7:15:42 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 7:15:42 PM	50007
Xylenes, Total	ND	0.095		mg/Kg	1	1/25/2020 7:15:42 PM	50007
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%Rec	1	1/25/2020 7:15:42 PM	50007
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	1/25/2020 7:15:42 PM	50007
Surr: Dibromofluoromethane	93.6	70-130		%Rec	1	1/25/2020 7:15:42 PM	50007
Surr: Toluene-d8	93.2	70-130		%Rec	1	1/25/2020 7:15:42 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 6

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:35:00 AM

Lab ID: 2001907-019

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	6300	300		mg/Kg	100	1/27/2020 6:34:37 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2020 7:44:12 PM	50007
Surr: BFB	93.5	70-130		%Rec	1	1/25/2020 7:44:12 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/25/2020 2:01:37 AM	50010
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2020 2:01:37 AM	50010
Surr: DNOP	86.6	55.1-146		%Rec	1	1/25/2020 2:01:37 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 7:44:12 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 7:44:12 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 7:44:12 PM	50007
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2020 7:44:12 PM	50007
Surr: 1,2-Dichloroethane-d4	85.1	70-130		%Rec	1	1/25/2020 7:44:12 PM	50007
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	1/25/2020 7:44:12 PM	50007
Surr: Dibromofluoromethane	94.9	70-130		%Rec	1	1/25/2020 7:44:12 PM	50007
Surr: Toluene-d8	93.5	70-130		%Rec	1	1/25/2020 7:44:12 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 7 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:40:00 AM

Lab ID: 2001907-020

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 9:49:18 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/25/2020 8:12:43 PM	50007
Surr: BFB	91.4	70-130		%Rec	1	1/25/2020 8:12:43 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/25/2020 2:10:35 AM	50010
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2020 2:10:35 AM	50010
Surr: DNOP	47.8	55.1-146	S	%Rec	1	1/25/2020 2:10:35 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/25/2020 8:12:43 PM	50007
Toluene	ND	0.047		mg/Kg	1	1/25/2020 8:12:43 PM	50007
Ethylbenzene	ND	0.047		mg/Kg	1	1/25/2020 8:12:43 PM	50007
Xylenes, Total	ND	0.093		mg/Kg	1	1/25/2020 8:12:43 PM	50007
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%Rec	1	1/25/2020 8:12:43 PM	50007
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	1/25/2020 8:12:43 PM	50007
Surr: Dibromofluoromethane	93.0	70-130		%Rec	1	1/25/2020 8:12:43 PM	50007
Surr: Toluene-d8	93.6	70-130		%Rec	1	1/25/2020 8:12:43 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Well 7 South

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:45:00 AM

Lab ID: 2001907-021

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 10:01:38 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	12	5.0		mg/Kg	1	1/25/2020 8:41:13 PM	50007
Surr: BFB	90.6	70-130		%Rec	1	1/25/2020 8:41:13 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	15	8.4		mg/Kg	1	1/25/2020 2:19:44 AM	50010
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/25/2020 2:19:44 AM	50010
Surr: DNOP	67.4	55.1-146		%Rec	1	1/25/2020 2:19:44 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/25/2020 8:41:13 PM	50007
Toluene	ND	0.050		mg/Kg	1	1/25/2020 8:41:13 PM	50007
Ethylbenzene	ND	0.050		mg/Kg	1	1/25/2020 8:41:13 PM	50007
Xylenes, Total	0.26	0.099		mg/Kg	1	1/25/2020 8:41:13 PM	50007
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	1/25/2020 8:41:13 PM	50007
Surr: 4-Bromofluorobenzene	85.9	70-130		%Rec	1	1/25/2020 8:41:13 PM	50007
Surr: Dibromofluoromethane	95.0	70-130		%Rec	1	1/25/2020 8:41:13 PM	50007
Surr: Toluene-d8	94.4	70-130		%Rec	1	1/25/2020 8:41:13 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 7

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 8:50:00 AM

Lab ID: 2001907-022

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	5000	150		mg/Kg	50	1/27/2020 6:46:58 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	220	4.7		mg/Kg	1	1/25/2020 9:09:43 PM	50007
Surr: BFB	124	70-130		%Rec	1	1/25/2020 9:09:43 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	4700	96		mg/Kg	10	1/28/2020 1:41:36 PM	50010
Motor Oil Range Organics (MRO)	1100	480		mg/Kg	10	1/28/2020 1:41:36 PM	50010
Surr: DNOP	0	55.1-146	S	%Rec	10	1/28/2020 1:41:36 PM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/25/2020 9:09:43 PM	50007
Toluene	0.055	0.047		mg/Kg	1	1/25/2020 9:09:43 PM	50007
Ethylbenzene	0.11	0.047		mg/Kg	1	1/25/2020 9:09:43 PM	50007
Xylenes, Total	3.1	0.093		mg/Kg	1	1/25/2020 9:09:43 PM	50007
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	1/25/2020 9:09:43 PM	50007
Surr: 4-Bromofluorobenzene	36.3	70-130	S	%Rec	1	1/25/2020 9:09:43 PM	50007
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	1/25/2020 9:09:43 PM	50007
Surr: Toluene-d8	94.6	70-130		%Rec	1	1/25/2020 9:09:43 PM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 8 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 8:55:00 AM

**Lab ID:** 2001907-023

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	260	60		mg/Kg	20	1/24/2020 10:26:19 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/28/2020 3:07:52 PM	50007
Surr: BFB	94.5	70-130		%Rec	1	1/28/2020 3:07:52 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	57	9.6		mg/Kg	1	1/25/2020 2:37:58 AM	50010
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2020 2:37:58 AM	50010
Surr: DNOP	51.3	55.1-146	S	%Rec	1	1/25/2020 2:37:58 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 9:38:14 PM	50007
Toluene	ND	0.049		mg/Kg	1	1/25/2020 9:38:14 PM	50007
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2020 9:38:14 PM	50007
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2020 9:38:14 PM	50007
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%Rec	1	1/25/2020 9:38:14 PM	50007
Surr: 4-Bromofluorobenzene	83.3	70-130		%Rec	1	1/25/2020 9:38:14 PM	50007
Surr: Dibromofluoromethane	95.7	70-130		%Rec	1	1/25/2020 9:38:14 PM	50007
Surr: Toluene-d8	99.4	70-130		%Rec	1	1/25/2020 9:38:14 PM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 8 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:00:00 AM

**Lab ID:** 2001907-024

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1900	60		mg/Kg	20	1/24/2020 11:03:23 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2020 10:06:41 PM	50007
Surr: BFB	92.6	70-130		%Rec	1	1/25/2020 10:06:41 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/25/2020 2:47:03 AM	50010
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/25/2020 2:47:03 AM	50010
Surr: DNOP	43.7	55.1-146	S	%Rec	1	1/25/2020 2:47:03 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 10:06:41 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 10:06:41 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 10:06:41 PM	50007
Xylenes, Total	ND	0.096		mg/Kg	1	1/25/2020 10:06:41 PM	50007
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%Rec	1	1/25/2020 10:06:41 PM	50007
Surr: 4-Bromofluorobenzene	90.2	70-130		%Rec	1	1/25/2020 10:06:41 PM	50007
Surr: Dibromofluoromethane	95.2	70-130		%Rec	1	1/25/2020 10:06:41 PM	50007
Surr: Toluene-d8	93.6	70-130		%Rec	1	1/25/2020 10:06:41 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 8

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 9:05:00 AM

Lab ID: 2001907-025

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 11:15:44 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	180	4.6		mg/Kg	1	1/25/2020 10:35:07 PM	50007
Surr: BFB	130	70-130		%Rec	1	1/25/2020 10:35:07 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	6500	190		mg/Kg	20	1/27/2020 3:17:17 PM	50010
Motor Oil Range Organics (MRO)	2000	950		mg/Kg	20	1/27/2020 3:17:17 PM	50010
Surr: DNOP	0	55.1-146	S	%Rec	20	1/27/2020 3:17:17 PM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/25/2020 10:35:07 PM	50007
Toluene	ND	0.046		mg/Kg	1	1/25/2020 10:35:07 PM	50007
Ethylbenzene	0.048	0.046		mg/Kg	1	1/25/2020 10:35:07 PM	50007
Xylenes, Total	1.7	0.093		mg/Kg	1	1/25/2020 10:35:07 PM	50007
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%Rec	1	1/25/2020 10:35:07 PM	50007
Surr: 4-Bromofluorobenzene	35.6	70-130	S	%Rec	1	1/25/2020 10:35:07 PM	50007
Surr: Dibromofluoromethane	96.9	70-130		%Rec	1	1/25/2020 10:35:07 PM	50007
Surr: Toluene-d8	94.2	70-130		%Rec	1	1/25/2020 10:35:07 PM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 9 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 9:10:00 AM

Lab ID: 2001907-026

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/24/2020 11:28:05 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/27/2020 3:11:05 PM	50007
Surr: BFB	93.8	70-130		%Rec	1	1/27/2020 3:11:05 PM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/27/2020 3:39:13 PM	50010
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/27/2020 3:39:13 PM	50010
Surr: DNOP	76.5	55.1-146		%Rec	1	1/27/2020 3:39:13 PM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/25/2020 11:03:32 PM	50007
Toluene	ND	0.048		mg/Kg	1	1/25/2020 11:03:32 PM	50007
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2020 11:03:32 PM	50007
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2020 11:03:32 PM	50007
Surr: 1,2-Dichloroethane-d4	90.1	70-130		%Rec	1	1/25/2020 11:03:32 PM	50007
Surr: 4-Bromofluorobenzene	87.4	70-130		%Rec	1	1/25/2020 11:03:32 PM	50007
Surr: Dibromofluoromethane	95.3	70-130		%Rec	1	1/25/2020 11:03:32 PM	50007
Surr: Toluene-d8	98.2	70-130		%Rec	1	1/25/2020 11:03:32 PM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 9 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:15:00 AM

**Lab ID:** 2001907-027

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 11:40:25 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/26/2020 1:53:36 AM	50007
Surr: BFB	92.8	70-130		%Rec	1	1/26/2020 1:53:36 AM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/25/2020 3:14:11 AM	50010
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/25/2020 3:14:11 AM	50010
Surr: DNOP	28.3	55.1-146	S	%Rec	1	1/25/2020 3:14:11 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/26/2020 1:53:36 AM	50007
Toluene	ND	0.050		mg/Kg	1	1/26/2020 1:53:36 AM	50007
Ethylbenzene	ND	0.050		mg/Kg	1	1/26/2020 1:53:36 AM	50007
Xylenes, Total	ND	0.10		mg/Kg	1	1/26/2020 1:53:36 AM	50007
Surr: 1,2-Dichloroethane-d4	90.3	70-130		%Rec	1	1/26/2020 1:53:36 AM	50007
Surr: 4-Bromofluorobenzene	91.0	70-130		%Rec	1	1/26/2020 1:53:36 AM	50007
Surr: Dibromofluoromethane	93.5	70-130		%Rec	1	1/26/2020 1:53:36 AM	50007
Surr: Toluene-d8	94.1	70-130		%Rec	1	1/26/2020 1:53:36 AM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 9

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:20:00 AM

**Lab ID:** 2001907-028

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 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	1/24/2020 11:52:45 PM	50042
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	4.9	4.6		mg/Kg	1	1/26/2020 2:21:53 AM	50007
Surr: BFB	91.4	70-130		%Rec	1	1/26/2020 2:21:53 AM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	73	7.7		mg/Kg	1	1/25/2020 3:23:11 AM	50010
Motor Oil Range Organics (MRO)	ND	39		mg/Kg	1	1/25/2020 3:23:11 AM	50010
Surr: DNOP	27.4	55.1-146	S	%Rec	1	1/25/2020 3:23:11 AM	50010
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/26/2020 2:21:53 AM	50007
Toluene	ND	0.046		mg/Kg	1	1/26/2020 2:21:53 AM	50007
Ethylbenzene	ND	0.046		mg/Kg	1	1/26/2020 2:21:53 AM	50007
Xylenes, Total	ND	0.093		mg/Kg	1	1/26/2020 2:21:53 AM	50007
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%Rec	1	1/26/2020 2:21:53 AM	50007
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	1/26/2020 2:21:53 AM	50007
Surr: Dibromofluoromethane	93.9	70-130		%Rec	1	1/26/2020 2:21:53 AM	50007
Surr: Toluene-d8	92.4	70-130		%Rec	1	1/26/2020 2:21:53 AM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 10 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 9:25:00 AM

Lab ID: 2001907-029

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 8:38:05 PM	50067
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/26/2020 2:50:08 AM	50007
Surr: BFB	93.5	70-130		%Rec	1	1/26/2020 2:50:08 AM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/27/2020 10:22:33 AM	50031
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 10:22:33 AM	50031
Surr: DNOP	89.9	55.1-146		%Rec	1	1/27/2020 10:22:33 AM	50031
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/26/2020 2:50:08 AM	50007
Toluene	ND	0.049		mg/Kg	1	1/26/2020 2:50:08 AM	50007
Ethylbenzene	ND	0.049		mg/Kg	1	1/26/2020 2:50:08 AM	50007
Xylenes, Total	ND	0.098		mg/Kg	1	1/26/2020 2:50:08 AM	50007
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%Rec	1	1/26/2020 2:50:08 AM	50007
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	1/26/2020 2:50:08 AM	50007
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	1/26/2020 2:50:08 AM	50007
Surr: Toluene-d8	92.3	70-130		%Rec	1	1/26/2020 2:50:08 AM	50007

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 10 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:30:00 AM

**Lab ID:** 2001907-030

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 9:15:05 PM	50067
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/26/2020 3:18:24 AM	50007
Surr: BFB	94.5	70-130		%Rec	1	1/26/2020 3:18:24 AM	50007
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/27/2020 10:50:00 AM	50031
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 10:50:00 AM	50031
Surr: DNOP	82.5	55.1-146		%Rec	1	1/27/2020 10:50:00 AM	50031
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/26/2020 3:18:24 AM	50007
Toluene	ND	0.046		mg/Kg	1	1/26/2020 3:18:24 AM	50007
Ethylbenzene	ND	0.046		mg/Kg	1	1/26/2020 3:18:24 AM	50007
Xylenes, Total	ND	0.092		mg/Kg	1	1/26/2020 3:18:24 AM	50007
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%Rec	1	1/26/2020 3:18:24 AM	50007
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	1/26/2020 3:18:24 AM	50007
Surr: Dibromofluoromethane	92.4	70-130		%Rec	1	1/26/2020 3:18:24 AM	50007
Surr: Toluene-d8	92.9	70-130		%Rec	1	1/26/2020 3:18:24 AM	50007

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 10

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 9:35:00 AM

Lab ID: 2001907-031

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	5100	300		mg/Kg	100	1/29/2020 1:56:24 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	260	9.3		mg/Kg	1	1/27/2020 10:59:12 AM	50031
Motor Oil Range Organics (MRO)	87	47		mg/Kg	1	1/27/2020 10:59:12 AM	50031
Surr: DNOP	79.9	55.1-146		%Rec	1	1/27/2020 10:59:12 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2020 10:08:03 AM	50028
Surr: BFB	105	66.6-105	S	%Rec	1	1/27/2020 10:08:03 AM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/27/2020 10:08:03 AM	50028
Toluene	ND	0.049		mg/Kg	1	1/27/2020 10:08:03 AM	50028
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2020 10:08:03 AM	50028
Xylenes, Total	ND	0.098		mg/Kg	1	1/27/2020 10:08:03 AM	50028
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	1/27/2020 10:08:03 AM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 11 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:40:00 AM

**Lab ID:** 2001907-032

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	260	60		mg/Kg	20	1/27/2020 10:29:08 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	14	9.6		mg/Kg	1	1/27/2020 11:08:20 AM	50031
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 11:08:20 AM	50031
Surr: DNOP	69.2	55.1-146		%Rec	1	1/27/2020 11:08:20 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2020 10:31:38 AM	50028
Surr: BFB	109	66.6-105	S	%Rec	1	1/27/2020 10:31:38 AM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2020 10:31:38 AM	50028
Toluene	ND	0.049		mg/Kg	1	1/27/2020 10:31:38 AM	50028
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2020 10:31:38 AM	50028
Xylenes, Total	0.33	0.097		mg/Kg	1	1/27/2020 10:31:38 AM	50028
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	1/27/2020 10:31:38 AM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 11 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:45:00 AM

**Lab ID:** 2001907-033

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 10:41:30 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	34	9.4		mg/Kg	1	1/27/2020 11:17:28 AM	50031
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/27/2020 11:17:28 AM	50031
Surr: DNOP	69.6	55.1-146		%Rec	1	1/27/2020 11:17:28 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	15	5.0		mg/Kg	1	1/27/2020 10:17:06 PM	50028
Surr: BFB	164	66.6-105	S	%Rec	1	1/27/2020 10:17:06 PM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/27/2020 10:17:06 PM	50028
Toluene	ND	0.050		mg/Kg	1	1/27/2020 10:17:06 PM	50028
Ethylbenzene	0.060	0.050		mg/Kg	1	1/27/2020 10:17:06 PM	50028
Xylenes, Total	0.96	0.10		mg/Kg	1	1/27/2020 10:17:06 PM	50028
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	1/27/2020 10:17:06 PM	50028

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 11

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/21/2020 9:50:00 AM

Lab ID: 2001907-034

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	9300	300		mg/Kg	100	1/29/2020 2:08:44 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	200	9.6		mg/Kg	1	1/27/2020 11:26:38 AM	50031
Motor Oil Range Organics (MRO)	74	48		mg/Kg	1	1/27/2020 11:26:38 AM	50031
Surr: DNOP	82.7	55.1-146		%Rec	1	1/27/2020 11:26:38 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2020 10:40:27 PM	50028
Surr: BFB	87.9	66.6-105		%Rec	1	1/27/2020 10:40:27 PM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/27/2020 10:40:27 PM	50028
Toluene	ND	0.049		mg/Kg	1	1/27/2020 10:40:27 PM	50028
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2020 10:40:27 PM	50028
Xylenes, Total	ND	0.098		mg/Kg	1	1/27/2020 10:40:27 PM	50028
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	1/27/2020 10:40:27 PM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 12 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 9:55:00 AM

**Lab ID:** 2001907-035

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 11:06:11 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/27/2020 11:35:50 AM	50031
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/27/2020 11:35:50 AM	50031
Surr: DNOP	66.9	55.1-146		%Rec	1	1/27/2020 11:35:50 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2020 11:03:49 PM	50028
Surr: BFB	83.8	66.6-105		%Rec	1	1/27/2020 11:03:49 PM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2020 11:03:49 PM	50028
Toluene	ND	0.049		mg/Kg	1	1/27/2020 11:03:49 PM	50028
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2020 11:03:49 PM	50028
Xylenes, Total	ND	0.097		mg/Kg	1	1/27/2020 11:03:49 PM	50028
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	1/27/2020 11:03:49 PM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 12 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 10:00:00 AM

**Lab ID:** 2001907-036

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 11:18:31 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/27/2020 11:45:00 AM	50031
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 11:45:00 AM	50031
Surr: DNOP	65.4	55.1-146		%Rec	1	1/27/2020 11:45:00 AM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2020 11:27:10 PM	50028
Surr: BFB	82.8	66.6-105		%Rec	1	1/27/2020 11:27:10 PM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/27/2020 11:27:10 PM	50028
Toluene	ND	0.049		mg/Kg	1	1/27/2020 11:27:10 PM	50028
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2020 11:27:10 PM	50028
Xylenes, Total	ND	0.099		mg/Kg	1	1/27/2020 11:27:10 PM	50028
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	1/27/2020 11:27:10 PM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 12

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 10:05:00 AM

**Lab ID:** 2001907-037

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	7000	300		mg/Kg	100	1/29/2020 2:21:06 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	9400	190		mg/Kg	20	1/27/2020 1:11:35 PM	50031
Motor Oil Range Organics (MRO)	1800	960		mg/Kg	20	1/27/2020 1:11:35 PM	50031
Surr: DNOP	0	55.1-146	S	%Rec	20	1/27/2020 1:11:35 PM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	94	4.8		mg/Kg	1	1/27/2020 11:50:31 PM	50028
Surr: BFB	556	66.6-105	S	%Rec	1	1/27/2020 11:50:31 PM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2020 11:50:31 PM	50028
Toluene	0.10	0.048		mg/Kg	1	1/27/2020 11:50:31 PM	50028
Ethylbenzene	0.25	0.048		mg/Kg	1	1/27/2020 11:50:31 PM	50028
Xylenes, Total	5.1	0.097		mg/Kg	1	1/27/2020 11:50:31 PM	50028
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	1/27/2020 11:50:31 PM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 13 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 10:10:00 AM

**Lab ID:** 2001907-038

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	62	60		mg/Kg	20	1/27/2020 11:43:13 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/27/2020 12:34:58 PM	50031
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 12:34:58 PM	50031
Surr: DNOP	64.9	55.1-146		%Rec	1	1/27/2020 12:34:58 PM	50031
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/28/2020 12:13:54 AM	50028
Surr: BFB	83.9	66.6-105		%Rec	1	1/28/2020 12:13:54 AM	50028
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	1/28/2020 12:13:54 AM	50028
Toluene	ND	0.046		mg/Kg	1	1/28/2020 12:13:54 AM	50028
Ethylbenzene	ND	0.046		mg/Kg	1	1/28/2020 12:13:54 AM	50028
Xylenes, Total	ND	0.093		mg/Kg	1	1/28/2020 12:13:54 AM	50028
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	1/28/2020 12:13:54 AM	50028

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 13 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 10:15:00 AM

**Lab ID:** 2001907-039

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	240	60		mg/Kg	20	1/28/2020 11:28:16 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/27/2020 4:21:19 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 4:21:19 PM	50046
Surr: DNOP	56.5	55.1-146		%Rec	1	1/27/2020 4:21:19 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/28/2020 12:37:13 AM	50041
Surr: BFB	85.9	66.6-105		%Rec	1	1/28/2020 12:37:13 AM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2020 12:37:13 AM	50041
Toluene	ND	0.050		mg/Kg	1	1/28/2020 12:37:13 AM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/28/2020 12:37:13 AM	50041
Xylenes, Total	ND	0.099		mg/Kg	1	1/28/2020 12:37:13 AM	50041
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	1/28/2020 12:37:13 AM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 13

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/21/2020 10:20:00 AM

**Lab ID:** 2001907-040

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	6800	300		mg/Kg	100	1/28/2020 11:40:37 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	66	9.4		mg/Kg	1	1/27/2020 4:30:29 PM	50046
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/27/2020 4:30:29 PM	50046
Surr: DNOP	78.6	55.1-146		%Rec	1	1/27/2020 4:30:29 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/28/2020 8:09:27 PM	50041
Surr: BFB	91.3	66.6-105		%Rec	1	1/28/2020 8:09:27 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2020 2:56:48 AM	50041
Toluene	ND	0.049		mg/Kg	1	1/28/2020 2:56:48 AM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/28/2020 2:56:48 AM	50041
Xylenes, Total	ND	0.099		mg/Kg	1	1/28/2020 2:56:48 AM	50041
Surr: 4-Bromofluorobenzene	93.5	80-120		%Rec	1	1/28/2020 2:56:48 AM	50041

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 14 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 10:25:00 AM

Lab ID: 2001907-041

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	79	60		mg/Kg	20	1/28/2020 11:52:57 PM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	61	9.5		mg/Kg	1	1/27/2020 4:39:38 PM	50046
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 4:39:38 PM	50046
Surr: DNOP	75.2	55.1-146		%Rec	1	1/27/2020 4:39:38 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/28/2020 8:32:55 PM	50041
Surr: BFB	92.6	66.6-105		%Rec	1	1/28/2020 8:32:55 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/28/2020 8:32:55 PM	50041
Toluene	ND	0.050		mg/Kg	1	1/28/2020 8:32:55 PM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/28/2020 8:32:55 PM	50041
Xylenes, Total	0.12	0.10		mg/Kg	1	1/28/2020 8:32:55 PM	50041
Surr: 4-Bromofluorobenzene	97.7	80-120		%Rec	1	1/28/2020 8:32:55 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 14 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:30:00 AM

**Lab ID:** 2001907-042

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 12:05:17 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	23	9.8		mg/Kg	1	1/27/2020 4:48:46 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 4:48:46 PM	50046
Surr: DNOP	75.6	55.1-146		%Rec	1	1/27/2020 4:48:46 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/28/2020 8:56:19 PM	50041
Surr: BFB	85.2	66.6-105		%Rec	1	1/28/2020 8:56:19 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/28/2020 8:56:19 PM	50041
Toluene	ND	0.049		mg/Kg	1	1/28/2020 8:56:19 PM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/28/2020 8:56:19 PM	50041
Xylenes, Total	ND	0.098		mg/Kg	1	1/28/2020 8:56:19 PM	50041
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	1/28/2020 8:56:19 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 14

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:35:00 AM

**Lab ID:** 2001907-043

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	77	60		mg/Kg	20	1/29/2020 12:17:37 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	73	9.8		mg/Kg	1	1/27/2020 4:57:53 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 4:57:53 PM	50046
Surr: DNOP	81.8	55.1-146		%Rec	1	1/27/2020 4:57:53 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.9	5.0		mg/Kg	1	1/28/2020 9:19:45 PM	50041
Surr: BFB	122	66.6-105	S	%Rec	1	1/28/2020 9:19:45 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2020 9:19:45 PM	50041
Toluene	ND	0.050		mg/Kg	1	1/28/2020 9:19:45 PM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/28/2020 9:19:45 PM	50041
Xylenes, Total	0.54	0.10		mg/Kg	1	1/28/2020 9:19:45 PM	50041
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	1/28/2020 9:19:45 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 15 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:40:00 AM

**Lab ID:** 2001907-044

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 12:29:58 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/27/2020 5:07:01 PM	50046
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	1/27/2020 5:07:01 PM	50046
Surr: DNOP	84.4	55.1-146		%Rec	1	1/27/2020 5:07:01 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/28/2020 9:43:05 PM	50041
Surr: BFB	85.0	66.6-105		%Rec	1	1/28/2020 9:43:05 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2020 9:43:05 PM	50041
Toluene	ND	0.050		mg/Kg	1	1/28/2020 9:43:05 PM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/28/2020 9:43:05 PM	50041
Xylenes, Total	ND	0.099		mg/Kg	1	1/28/2020 9:43:05 PM	50041
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	1/28/2020 9:43:05 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 15 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:45:00 AM

**Lab ID:** 2001907-045

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 12:42:19 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	52	9.4		mg/Kg	1	1/27/2020 5:16:09 PM	50046
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/27/2020 5:16:09 PM	50046
Surr: DNOP	76.9	55.1-146		%Rec	1	1/27/2020 5:16:09 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/28/2020 10:06:25 PM	50041
Surr: BFB	91.9	66.6-105		%Rec	1	1/28/2020 10:06:25 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	1/28/2020 10:06:25 PM	50041
Toluene	ND	0.046		mg/Kg	1	1/28/2020 10:06:25 PM	50041
Ethylbenzene	ND	0.046		mg/Kg	1	1/28/2020 10:06:25 PM	50041
Xylenes, Total	0.17	0.093		mg/Kg	1	1/28/2020 10:06:25 PM	50041
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	1/28/2020 10:06:25 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 15

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:50:00 AM

**Lab ID:** 2001907-046

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 1:19:21 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/27/2020 5:25:22 PM	50046
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 5:25:22 PM	50046
Surr: DNOP	63.9	55.1-146		%Rec	1	1/27/2020 5:25:22 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/28/2020 10:29:45 PM	50041
Surr: BFB	80.9	66.6-105		%Rec	1	1/28/2020 10:29:45 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2020 10:29:45 PM	50041
Toluene	ND	0.049		mg/Kg	1	1/28/2020 10:29:45 PM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/28/2020 10:29:45 PM	50041
Xylenes, Total	ND	0.098		mg/Kg	1	1/28/2020 10:29:45 PM	50041
Surr: 4-Bromofluorobenzene	90.6	80-120		%Rec	1	1/28/2020 10:29:45 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 16 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 10:55:00 AM

**Lab ID:** 2001907-047

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 1:31:42 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/27/2020 5:34:33 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 5:34:33 PM	50046
Surr: DNOP	62.7	55.1-146		%Rec	1	1/27/2020 5:34:33 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/29/2020 11:06:29 AM	50041
Surr: BFB	74.9	66.6-105		%Rec	1	1/29/2020 11:06:29 AM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/29/2020 11:06:29 AM	50041
Toluene	ND	0.050		mg/Kg	1	1/29/2020 11:06:29 AM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/29/2020 11:06:29 AM	50041
Xylenes, Total	ND	0.099		mg/Kg	1	1/29/2020 11:06:29 AM	50041
Surr: 4-Bromofluorobenzene	83.4	80-120		%Rec	1	1/29/2020 11:06:29 AM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 16 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:00:00 AM

**Lab ID:** 2001907-048

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/29/2020 1:44:02 AM	50067
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	1/27/2020 5:43:43 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 5:43:43 PM	50046
Surr: DNOP	56.5	55.1-146		%Rec	1	1/27/2020 5:43:43 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/29/2020 11:30:02 AM	50041
Surr: BFB	77.3	66.6-105		%Rec	1	1/29/2020 11:30:02 AM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/29/2020 11:30:02 AM	50041
Toluene	ND	0.049		mg/Kg	1	1/29/2020 11:30:02 AM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/29/2020 11:30:02 AM	50041
Xylenes, Total	ND	0.098		mg/Kg	1	1/29/2020 11:30:02 AM	50041
Surr: 4-Bromofluorobenzene	84.4	80-120		%Rec	1	1/29/2020 11:30:02 AM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 16

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:05:00 AM

**Lab ID:** 2001907-049

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 7:25:45 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/27/2020 5:52:51 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 5:52:51 PM	50046
Surr: DNOP	64.9	55.1-146		%Rec	1	1/27/2020 5:52:51 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/29/2020 11:53:35 AM	50041
Surr: BFB	78.0	66.6-105		%Rec	1	1/29/2020 11:53:35 AM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/29/2020 11:53:35 AM	50041
Toluene	ND	0.049		mg/Kg	1	1/29/2020 11:53:35 AM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/29/2020 11:53:35 AM	50041
Xylenes, Total	ND	0.097		mg/Kg	1	1/29/2020 11:53:35 AM	50041
Surr: 4-Bromofluorobenzene	87.1	80-120		%Rec	1	1/29/2020 11:53:35 AM	50041

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 17 North

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 11:10:00 AM

Lab ID: 2001907-050

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/27/2020 8:27:48 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	34	9.6		mg/Kg	1	1/27/2020 6:01:58 PM	50046
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 6:01:58 PM	50046
Surr: DNOP	69.3	55.1-146		%Rec	1	1/27/2020 6:01:58 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/29/2020 12:17:20 PM	50041
Surr: BFB	82.4	66.6-105		%Rec	1	1/29/2020 12:17:20 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/29/2020 12:17:20 PM	50041
Toluene	ND	0.050		mg/Kg	1	1/29/2020 12:17:20 PM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/29/2020 12:17:20 PM	50041
Xylenes, Total	ND	0.10		mg/Kg	1	1/29/2020 12:17:20 PM	50041
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	1/29/2020 12:17:20 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 17 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:15:00 AM

**Lab ID:** 2001907-051

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 8:40:12 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/27/2020 6:11:03 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 6:11:03 PM	50046
Surr: DNOP	73.0	55.1-146		%Rec	1	1/27/2020 6:11:03 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.9	4.6		mg/Kg	1	1/29/2020 12:40:56 PM	50041
Surr: BFB	106	66.6-105	S	%Rec	1	1/29/2020 12:40:56 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	1/29/2020 12:40:56 PM	50041
Toluene	0.047	0.046		mg/Kg	1	1/29/2020 12:40:56 PM	50041
Ethylbenzene	ND	0.046		mg/Kg	1	1/29/2020 12:40:56 PM	50041
Xylenes, Total	0.58	0.092		mg/Kg	1	1/29/2020 12:40:56 PM	50041
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	1/29/2020 12:40:56 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 17

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:20:00 AM

**Lab ID:** 2001907-052

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 8:52:36 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/27/2020 6:20:07 PM	50046
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/27/2020 6:20:07 PM	50046
Surr: DNOP	45.0	55.1-146	S	%Rec	1	1/27/2020 6:20:07 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/29/2020 1:04:34 PM	50041
Surr: BFB	80.9	66.6-105		%Rec	1	1/29/2020 1:04:34 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	1/29/2020 1:04:34 PM	50041
Toluene	ND	0.046		mg/Kg	1	1/29/2020 1:04:34 PM	50041
Ethylbenzene	ND	0.046		mg/Kg	1	1/29/2020 1:04:34 PM	50041
Xylenes, Total	0.21	0.093		mg/Kg	1	1/29/2020 1:04:34 PM	50041
Surr: 4-Bromofluorobenzene	87.2	80-120		%Rec	1	1/29/2020 1:04:34 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 18 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:25:00 AM

**Lab ID:** 2001907-053

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 9:05:01 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/27/2020 6:29:10 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 6:29:10 PM	50046
Surr: DNOP	60.4	55.1-146		%Rec	1	1/27/2020 6:29:10 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/29/2020 1:28:10 PM	50041
Surr: BFB	78.5	66.6-105		%Rec	1	1/29/2020 1:28:10 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/29/2020 1:28:10 PM	50041
Toluene	ND	0.048		mg/Kg	1	1/29/2020 1:28:10 PM	50041
Ethylbenzene	ND	0.048		mg/Kg	1	1/29/2020 1:28:10 PM	50041
Xylenes, Total	ND	0.097		mg/Kg	1	1/29/2020 1:28:10 PM	50041
Surr: 4-Bromofluorobenzene	86.5	80-120		%Rec	1	1/29/2020 1:28:10 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 18 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:30:00 AM

**Lab ID:** 2001907-054

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 9:17:25 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/27/2020 6:38:12 PM	50046
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/27/2020 6:38:12 PM	50046
Surr: DNOP	54.8	55.1-146	S	%Rec	1	1/27/2020 6:38:12 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/29/2020 1:51:29 PM	50041
Surr: BFB	79.6	66.6-105		%Rec	1	1/29/2020 1:51:29 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/29/2020 1:51:29 PM	50041
Toluene	ND	0.049		mg/Kg	1	1/29/2020 1:51:29 PM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/29/2020 1:51:29 PM	50041
Xylenes, Total	0.20	0.099		mg/Kg	1	1/29/2020 1:51:29 PM	50041
Surr: 4-Bromofluorobenzene	86.0	80-120		%Rec	1	1/29/2020 1:51:29 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Floor 18

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:35:00 AM

**Lab ID:** 2001907-055

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 9:29:50 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	1700	82		mg/Kg	10	1/28/2020 10:21:58 AM	50046
Motor Oil Range Organics (MRO)	430	410		mg/Kg	10	1/28/2020 10:21:58 AM	50046
Surr: DNOP	0	55.1-146	S	%Rec	10	1/28/2020 10:21:58 AM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	18	5.0		mg/Kg	1	1/29/2020 3:25:53 PM	50041
Surr: BFB	152	66.6-105	S	%Rec	1	1/29/2020 3:25:53 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/29/2020 3:25:53 PM	50041
Toluene	ND	0.050		mg/Kg	1	1/29/2020 3:25:53 PM	50041
Ethylbenzene	ND	0.050		mg/Kg	1	1/29/2020 3:25:53 PM	50041
Xylenes, Total	0.48	0.099		mg/Kg	1	1/29/2020 3:25:53 PM	50041
Surr: 4-Bromofluorobenzene	86.8	80-120		%Rec	1	1/29/2020 3:25:53 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 19 North

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:40:00 AM

**Lab ID:** 2001907-056

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	61		mg/Kg	20	1/27/2020 9:42:14 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/27/2020 6:56:14 PM	50046
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 6:56:14 PM	50046
Surr: DNOP	60.4	55.1-146		%Rec	1	1/27/2020 6:56:14 PM	50046
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/29/2020 3:49:28 PM	50041
Surr: BFB	74.7	66.6-105		%Rec	1	1/29/2020 3:49:28 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/29/2020 3:49:28 PM	50041
Toluene	ND	0.048		mg/Kg	1	1/29/2020 3:49:28 PM	50041
Ethylbenzene	ND	0.048		mg/Kg	1	1/29/2020 3:49:28 PM	50041
Xylenes, Total	ND	0.097		mg/Kg	1	1/29/2020 3:49:28 PM	50041
Surr: 4-Bromofluorobenzene	84.6	80-120		%Rec	1	1/29/2020 3:49:28 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 19 South

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:45:00 AM

**Lab ID:** 2001907-057

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 9:54:39 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/27/2020 7:58:58 PM	50047
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/27/2020 7:58:58 PM	50047
Surr: DNOP	86.1	55.1-146		%Rec	1	1/27/2020 7:58:58 PM	50047
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/29/2020 4:12:59 PM	50041
Surr: BFB	77.0	66.6-105		%Rec	1	1/29/2020 4:12:59 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/29/2020 4:12:59 PM	50041
Toluene	ND	0.049		mg/Kg	1	1/29/2020 4:12:59 PM	50041
Ethylbenzene	ND	0.049		mg/Kg	1	1/29/2020 4:12:59 PM	50041
Xylenes, Total	ND	0.097		mg/Kg	1	1/29/2020 4:12:59 PM	50041
Surr: 4-Bromofluorobenzene	87.1	80-120		%Rec	1	1/29/2020 4:12:59 PM	50041

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 **2001907**

Date Reported: **1/30/2020**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Mewbourne Oil Company

**Client Sample ID:** Wall 19 West

**Project:** FNR 17 20 B21P Federal Com 1

**Collection Date:** 1/20/2020 11:50:00 AM

**Lab ID:** 2001907-058

**Matrix:** SOIL

**Received Date:** 1/23/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	1/27/2020 10:31:52 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/27/2020 8:43:47 PM	50047
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/27/2020 8:43:47 PM	50047
Surr: DNOP	63.9	55.1-146		%Rec	1	1/27/2020 8:43:47 PM	50047
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/29/2020 4:36:19 PM	50041
Surr: BFB	78.0	66.6-105		%Rec	1	1/29/2020 4:36:19 PM	50041
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/29/2020 4:36:19 PM	50041
Toluene	ND	0.047		mg/Kg	1	1/29/2020 4:36:19 PM	50041
Ethylbenzene	ND	0.047		mg/Kg	1	1/29/2020 4:36:19 PM	50041
Xylenes, Total	ND	0.095		mg/Kg	1	1/29/2020 4:36:19 PM	50041
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	1/29/2020 4:36:19 PM	50041

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 2001907

Date Reported: 1/30/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Floor 19

Project: FNR 17 20 B21P Federal Com 1

Collection Date: 1/20/2020 11:55:00 AM

Lab ID: 2001907-059

Matrix: SOIL

Received Date: 1/23/2020 9:20:00 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	1/27/2020 10:44:16 PM	50074
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	1/27/2020 8:52:46 PM	50047
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/27/2020 8:52:46 PM	50047
Surr: DNOP	63.7	55.1-146		%Rec	1	1/27/2020 8:52:46 PM	50047
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/27/2020 12:04:24 AM	50043
Surr: BFB	82.9	66.6-105		%Rec	1	1/27/2020 12:04:24 AM	50043
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/27/2020 12:04:24 AM	50043
Toluene	ND	0.046		mg/Kg	1	1/27/2020 12:04:24 AM	50043
Ethylbenzene	ND	0.046		mg/Kg	1	1/27/2020 12:04:24 AM	50043
Xylenes, Total	0.12	0.093		mg/Kg	1	1/27/2020 12:04:24 AM	50043
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	1/27/2020 12:04:24 AM	50043

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		

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

WO#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>MB-50029</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50029</b>	RunNo: <b>66060</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269555</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-50029</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50029</b>	RunNo: <b>66060</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269556</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	95.3	90	110			

Sample ID: <b>MB-50025</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50025</b>	RunNo: <b>66053</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269609</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-50025</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50025</b>	RunNo: <b>66053</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269611</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	92.6	90	110			

Sample ID: <b>MB-50042</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50042</b>	RunNo: <b>66053</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269655</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-50042</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50042</b>	RunNo: <b>66053</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2269656</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	91.5	90	110			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical 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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>MB-50067</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50067</b>	RunNo: <b>66103</b>								
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270295</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-50067</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50067</b>	RunNo: <b>66103</b>								
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270296</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	93.1	90	110			

Sample ID: <b>MB-50074</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50074</b>	RunNo: <b>66105</b>								
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270651</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-50074</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50074</b>	RunNo: <b>66105</b>								
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270652</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	93.0	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>2001907-009AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 3 West</b>	Batch ID: <b>50010</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268835</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	8.7	43.59	4.232	81.6	47.4	136			
Surr: DNOP	1.8		4.359		41.4	55.1	146			S

Sample ID: <b>2001907-009AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 3 West</b>	Batch ID: <b>50010</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268860</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	9.0	45.05	4.232	96.9	47.4	136	18.4	43.4	
Surr: DNOP	1.8		4.505		40.3	55.1	146	0	0	S

Sample ID: <b>LCS-50008</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50008</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2268881</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	10	50.00	0	100	63.9	124			
Surr: DNOP	3.9		5.000		78.4	55.1	146			

Sample ID: <b>LCS-50010</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50010</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268882</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	4.2		5.000		83.3	55.1	146			

Sample ID: <b>MB-50008</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50008</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2268884</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	8.8		10.00		88.0	55.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>MB-50010</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50010</b>	RunNo: <b>66058</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/24/2020</b>	SeqNo: <b>2268885</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		122	55.1	146			

Sample ID: <b>2001907-029AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 10 North</b>	Batch ID: <b>50031</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269875</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	9.6	47.89	0	99.1	47.4	136			
Surr: DNOP	3.4		4.789		71.7	55.1	146			

Sample ID: <b>2001907-029AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 10 North</b>	Batch ID: <b>50031</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269876</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	9.6	48.17	0	98.7	47.4	136	0.241	43.4	
Surr: DNOP	3.4		4.817		70.5	55.1	146	0	0	

Sample ID: <b>LCS-50031</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50031</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269896</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	10	50.00	0	86.8	63.9	124			
Surr: DNOP	3.6		5.000		72.9	55.1	146			

Sample ID: <b>MB-50031</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50031</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269897</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	13		10.00		128	55.1	146			

**Qualifiers:**

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- 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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>2001907-057AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 19 South</b>	Batch ID: <b>50047</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270174</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.5	47.39	3.790	81.3	47.4	136			
Surr: DNOP	2.8		4.739		58.9	55.1	146			

Sample ID: <b>2001907-057AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>Wall 19 South</b>	Batch ID: <b>50047</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270175</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	9.1	45.66	3.790	70.4	47.4	136	16.3	43.4	
Surr: DNOP	1.6		4.566		34.5	55.1	146	0	0	S

Sample ID: <b>LCS-50046</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50046</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270195</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	63.9	124			
Surr: DNOP	4.5		5.000		89.4	55.1	146			

Sample ID: <b>LCS-50047</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50047</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270196</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	63.9	124			
Surr: DNOP	4.2		5.000		84.5	55.1	146			

Sample ID: <b>MB-50046</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50046</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270197</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		94.2	55.1	146			

**Qualifiers:**

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- 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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>MB-50047</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50047</b>	RunNo: <b>66092</b>								
Prep Date: <b>1/25/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270198</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		99.7	55.1	146			

**Qualifiers:**

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- 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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>mb-50005</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50005</b>		RunNo: <b>66055</b>							
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>		SeqNo: <b>2268933</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	810		1000		81.2	66.6	105			

Sample ID: <b>lcs-50005</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50005</b>		RunNo: <b>66055</b>							
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>		SeqNo: <b>2268934</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.8	80	120			
Surr: BFB	860		1000		86.2	66.6	105			

Sample ID: <b>mb-50028</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50028</b>		RunNo: <b>66066</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/25/2020</b>		SeqNo: <b>2268988</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		85.6	66.6	105			

Sample ID: <b>lcs-50028</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50028</b>		RunNo: <b>66066</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/25/2020</b>		SeqNo: <b>2268989</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	94.0	80	120			
Surr: BFB	960		1000		96.4	66.6	105			

Sample ID: <b>MB-50043</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50043</b>		RunNo: <b>66068</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>		SeqNo: <b>2269049</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	770		1000		77.0	66.6	105			

Sample ID: <b>LCS-50043</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50043</b>		RunNo: <b>66068</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>		SeqNo: <b>2269050</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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>LCS-50043</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50043</b>		RunNo: <b>66068</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>		SeqNo: <b>2269050</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	5.0	25.00	0	87.0	80	120			
Surr: BFB	890		1000		89.0	66.6	105			

Sample ID: <b>mb-50041</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50041</b>		RunNo: <b>66097</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>		SeqNo: <b>2270072</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		86.4	66.6	105			

Sample ID: <b>lcs-50041</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50041</b>		RunNo: <b>66097</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>		SeqNo: <b>2270073</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	90.1	80	120			
Surr: BFB	1400		1000		144	66.6	105			S

Sample ID: <b>2001907-039ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>Wall 13 South</b>	Batch ID: <b>50041</b>		RunNo: <b>66097</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/28/2020</b>		SeqNo: <b>2270075</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.58	0	84.2	69.1	142			
Surr: BFB	880		983.3		89.8	66.6	105			

Sample ID: <b>2001907-039amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>Wall 13 South</b>	Batch ID: <b>50041</b>		RunNo: <b>66097</b>							
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/28/2020</b>		SeqNo: <b>2270076</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	5.0	24.95	0	86.8	69.1	142	4.48	20	
Surr: BFB	910		998.0		91.0	66.6	105	0	0	

Sample ID: <b>mb-50070</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50070</b>		RunNo: <b>66126</b>							
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/28/2020</b>		SeqNo: <b>2271722</b>		Units: <b>%Rec</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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>mb-50070</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50070</b>		RunNo: <b>66126</b>							
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/28/2020</b>		SeqNo: <b>2271722</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		85.8	66.6	105			

Sample ID: <b>ics-50070</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50070</b>		RunNo: <b>66126</b>							
Prep Date: <b>1/27/2020</b>	Analysis Date: <b>1/28/2020</b>		SeqNo: <b>2271723</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.4	66.6	105			

Sample ID: <b>mb-50099</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50099</b>		RunNo: <b>66150</b>							
Prep Date: <b>1/28/2020</b>	Analysis Date: <b>1/29/2020</b>		SeqNo: <b>2272828</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	720		1000		72.0	66.6	105			

Sample ID: <b>ics-50099</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50099</b>		RunNo: <b>66150</b>							
Prep Date: <b>1/28/2020</b>	Analysis Date: <b>1/29/2020</b>		SeqNo: <b>2272829</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	850		1000		85.4	66.6	105			

**Qualifiers:**

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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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>mb-50005</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50005</b>	RunNo: <b>66055</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268950</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		91.8	80	120			

Sample ID: <b>LCS-50005</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50005</b>	RunNo: <b>66055</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268951</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.9	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	80	120			

Sample ID: <b>2001907-001ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>Wall 1 North</b>	Batch ID: <b>50005</b>	RunNo: <b>66055</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268953</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	0.9862	0	106	78.5	119			
Toluene	1.0	0.049	0.9862	0.01118	104	75.7	123			
Ethylbenzene	1.0	0.049	0.9862	0	105	74.3	126			
Xylenes, Total	3.1	0.099	2.959	0.04171	103	72.9	130			
Surr: 4-Bromofluorobenzene	0.91		0.9862		91.9	80	120			

Sample ID: <b>2001907-001amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>Wall 1 North</b>	Batch ID: <b>50005</b>	RunNo: <b>66055</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2268954</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.023	0.9251	0	101	78.5	119	10.7	20	
Toluene	0.94	0.046	0.9251	0.01118	100	75.7	123	9.89	20	
Ethylbenzene	0.94	0.046	0.9251	0	102	74.3	126	9.35	20	
Xylenes, Total	2.8	0.093	2.775	0.04171	101	72.9	130	8.43	20	
Surr: 4-Bromofluorobenzene	0.83		0.9251		90.0	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>mb-50028</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50028</b>	RunNo: <b>66066</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269004</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	0.97		1.000		96.9	80	120			

Sample ID: <b>LCS-50028</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50028</b>	RunNo: <b>66066</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269005</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	95.5	80	120			
Toluene	0.97	0.050	1.000	0	97.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: <b>MB-50043</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50043</b>	RunNo: <b>66068</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269077</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	0.87		1.000		86.6	80	120			

Sample ID: <b>LCS-50043</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50043</b>	RunNo: <b>66068</b>								
Prep Date: <b>1/24/2020</b>	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2269078</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.0	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.5	80	120			
Surr: 4-Bromofluorobenzene	0.88		1.000		87.7	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>2001907-059ams</b> SampType: <b>MS</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>Floor 19</b> Batch ID: <b>50043</b> RunNo: <b>66068</b>										
Prep Date: <b>1/24/2020</b> Analysis Date: <b>1/27/2020</b> SeqNo: <b>2269080</b> Units: <b>mg/Kg</b>										
Benzene	0.86	0.023	0.9251	0	92.8	78.5	119			
Toluene	0.86	0.046	0.9251	0.01096	91.3	75.7	123			
Ethylbenzene	0.85	0.046	0.9251	0.01244	90.9	74.3	126			
Xylenes, Total	2.6	0.093	2.775	0.1176	90.1	72.9	130			
Surr: 4-Bromofluorobenzene	0.86		0.9251		92.9	80	120			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>2001907-059amsd</b> SampType: <b>MSD</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>Floor 19</b> Batch ID: <b>50043</b> RunNo: <b>66068</b>										
Prep Date: <b>1/24/2020</b> Analysis Date: <b>1/27/2020</b> SeqNo: <b>2269081</b> Units: <b>mg/Kg</b>										
Benzene	0.87	0.024	0.9470	0	92.2	78.5	119	1.66	20	
Toluene	0.90	0.047	0.9470	0.01096	93.4	75.7	123	4.50	20	
Ethylbenzene	0.88	0.047	0.9470	0.01244	91.2	74.3	126	2.70	20	
Xylenes, Total	2.7	0.095	2.841	0.1176	90.9	72.9	130	3.09	20	
Surr: 4-Bromofluorobenzene	0.87		0.9470		92.2	80	120	0	0	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>mb-50041</b> SampType: <b>MBLK</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>PBS</b> Batch ID: <b>50041</b> RunNo: <b>66097</b>										
Prep Date: <b>1/24/2020</b> Analysis Date: <b>1/27/2020</b> SeqNo: <b>2270113</b> Units: <b>mg/Kg</b>										
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>LCS-50041</b> SampType: <b>LCS</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>LCSS</b> Batch ID: <b>50041</b> RunNo: <b>66097</b>										
Prep Date: <b>1/24/2020</b> Analysis Date: <b>1/27/2020</b> SeqNo: <b>2270114</b> Units: <b>mg/Kg</b>										
Benzene	0.91	0.025	1.000	0	91.4	80	120			
Toluene	0.94	0.050	1.000	0	94.1	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: 2001907-040ams		SampType: MS		TestCode: EPA Method 8021B: Volatiles						
Client ID: Floor 13		Batch ID: 50041		RunNo: 66097						
Prep Date: 1/24/2020		Analysis Date: 1/28/2020		SeqNo: 2270117			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9756	0	88.3	78.5	119			
Toluene	0.88	0.049	0.9756	0.01213	88.6	75.7	123			
Ethylbenzene	0.87	0.049	0.9756	0.01460	87.3	74.3	126			
Xylenes, Total	2.7	0.098	2.927	0.07781	87.9	72.9	130			
Surr: 4-Bromofluorobenzene	0.92		0.9756		94.4	80	120			

Sample ID: 2001907-040amsd		SampType: MSD		TestCode: EPA Method 8021B: Volatiles						
Client ID: Floor 13		Batch ID: 50041		RunNo: 66097						
Prep Date: 1/24/2020		Analysis Date: 1/28/2020		SeqNo: 2270118			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	0.9852	0	88.0	78.5	119	0.640	20	
Toluene	0.87	0.049	0.9852	0.01213	87.4	75.7	123	0.353	20	
Ethylbenzene	0.87	0.049	0.9852	0.01460	86.5	74.3	126	0.0753	20	
Xylenes, Total	2.6	0.099	2.956	0.07781	86.7	72.9	130	0.450	20	
Surr: 4-Bromofluorobenzene	0.89		0.9852		90.5	80	120	0	0	

Sample ID: mb-50070		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS		Batch ID: 50070		RunNo: 66126						
Prep Date: 1/27/2020		Analysis Date: 1/28/2020		SeqNo: 2271744			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120			

Sample ID: LCS-50070		SampType: LCS		TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS		Batch ID: 50070		RunNo: 66126						
Prep Date: 1/27/2020		Analysis Date: 1/28/2020		SeqNo: 2271745			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	80	120			

Sample ID: MB-50099		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS		Batch ID: 50099		RunNo: 66150						
Prep Date: 1/28/2020		Analysis Date: 1/29/2020		SeqNo: 2272873			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.82		1.000		82.0	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>LCS-50099</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50099</b>	RunNo: <b>66150</b>								
Prep Date: <b>1/28/2020</b>	Analysis Date: <b>1/29/2020</b>	SeqNo: <b>2272874</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87		1.000		87.0	80	120			

**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 |   |

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

WO#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>2001907-012ams</b> SampType: <b>MS</b> TestCode: <b>EPA Method 8260B: Volatiles Short List</b>										
Client ID: <b>Wall 4 North</b> Batch ID: <b>50007</b> RunNo: <b>66080</b>										
Prep Date: <b>1/23/2020</b> Analysis Date: <b>1/25/2020</b> SeqNo: <b>2269696</b> Units: <b>mg/Kg</b>										
Benzene	0.99	0.024	0.9728	0	101	70	130			
Toluene	0.92	0.049	0.9728	0	94.1	70	130			
Ethylbenzene	1.0	0.049	0.9728	0	104	70	130			
Xylenes, Total	2.9	0.097	2.918	0	99.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.4864		90.0	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.4864		88.6	70	130			
Surr: Dibromofluoromethane	0.45		0.4864		92.9	70	130			
Surr: Toluene-d8	0.45		0.4864		93.0	70	130			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>2001907-012amsd</b> SampType: <b>MSD</b> TestCode: <b>EPA Method 8260B: Volatiles Short List</b>										
Client ID: <b>Wall 4 North</b> Batch ID: <b>50007</b> RunNo: <b>66080</b>										
Prep Date: <b>1/23/2020</b> Analysis Date: <b>1/25/2020</b> SeqNo: <b>2269697</b> Units: <b>mg/Kg</b>										
Benzene	0.91	0.025	0.9930	0	91.6	70	130	8.14	20	
Toluene	0.90	0.050	0.9930	0	90.8	70	130	1.58	20	
Ethylbenzene	0.96	0.050	0.9930	0	96.7	70	130	5.63	0	
Xylenes, Total	2.8	0.099	2.979	0	94.1	70	130	3.39	0	
Surr: 1,2-Dichloroethane-d4	0.45		0.4965		90.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.43		0.4965		86.7	70	130	0	0	
Surr: Dibromofluoromethane	0.47		0.4965		94.3	70	130	0	0	
Surr: Toluene-d8	0.47		0.4965		95.6	70	130	0	0	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>Ics-50007</b> SampType: <b>LCS</b> TestCode: <b>EPA Method 8260B: Volatiles Short List</b>										
Client ID: <b>LCSS</b> Batch ID: <b>50007</b> RunNo: <b>66080</b>										
Prep Date: <b>1/23/2020</b> Analysis Date: <b>1/25/2020</b> SeqNo: <b>2269717</b> Units: <b>mg/Kg</b>										
Benzene	0.94	0.025	1.000	0	94.1	70	130			
Toluene	0.89	0.050	1.000	0	88.9	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	94.5	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.3	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.1	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.5	70	130			
Surr: Toluene-d8	0.46		0.5000		92.9	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>mb-50007</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50007</b>	RunNo: <b>66080</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269718</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: 1,2-Dichloroethane-d4	0.44		0.5000		88.4	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.9	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.8	70	130			
Surr: Toluene-d8	0.46		0.5000		91.5	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#: 2001907

30-Jan-20

**Client:** Mewbourne Oil Company  
**Project:** FNR 17 20 B21P Federal Com 1

Sample ID: <b>2001907-011ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>Wall 4 South</b>	Batch ID: <b>50007</b>	RunNo: <b>66080</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269727</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	24.78	4.743	96.3	70	130			
Surr: BFB	460		495.5		93.7	70	130			

Sample ID: <b>2001907-011amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>Wall 4 South</b>	Batch ID: <b>50007</b>	RunNo: <b>66080</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269728</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	4.6	23.11	4.743	96.6	70	130	5.54	20	
Surr: BFB	440		462.1		95.7	70	130	0	0	

Sample ID: <b>lcs-50007</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50007</b>	RunNo: <b>66080</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269750</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.3	70	130			
Surr: BFB	460		500.0		92.8	70	130			

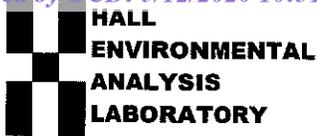
Sample ID: <b>mb-50007</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50007</b>	RunNo: <b>66080</b>								
Prep Date: <b>1/23/2020</b>	Analysis Date: <b>1/25/2020</b>	SeqNo: <b>2269751</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	460		500.0		91.4	70	130			

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>G66104</b>	RunNo: <b>66104</b>								
Prep Date:	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270329</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	470		500.0		93.5	70	130			

Sample ID: <b>mb1</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>G66104</b>	RunNo: <b>66104</b>								
Prep Date:	Analysis Date: <b>1/27/2020</b>	SeqNo: <b>2270354</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	470		500.0		93.4	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



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: **2001907**      RcptNo: 1

Received By: **Isaiah Ortiz**      1/23/2020 9:20:00 AM      *I-OK*  
 Completed By: **Isaiah Ortiz**      1/23/2020 9:46:47 AM      *I-OK*  
 Reviewed By: **ENM**      1/23/20

**Chain of Custody**

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

**Log In**

3. Was an attempt made to cool the samples?      Yes       No       NA   
 4. Were all samples received at a temperature of >0° C to 6.0° C      Yes       No       NA   
 5. Sample(s) in proper container(s)?      Yes       No   
 6. Sufficient sample volume for indicated test(s)?      Yes       No   
 7. Are samples (except VOA and ONG) properly preserved?      Yes       No   
 8. Was preservative added to bottles?      Yes       No       NA   
 9. Received at least 1 vial with headspace <1/4" for AQ VOA?      Yes       No       NA   
 10. Were any sample containers received broken?      Yes       No   
 11. Does paperwork match bottle labels?      Yes       No   
 (Note discrepancies on chain of custody)  
 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?      Yes       No   
 (If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: *SR 1/23/20*

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

16. Additional remarks:

**17. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Not Present			
2	1.3	Good	Not Present			

# Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type)

Turn-Around Time:  
 Standard  Rush

Project Name:  
 FNR 17 20 B2IP Federal Com 1

Project #:

Project Manager:  
 Robbie Runnels

Sampler: Kenny Angel

On Ice  Yes  No  
 # of Coolers 2  
 Cooler Temperature of 13.0°C / 55.4°F

Container Type and #  
 Preservative Type  
 HEAL No  
 2001007

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No
1/20/20	0850	S	Wall 1 North	1	Ice	-001
1/20/20	0855	S	Wall 1 East	1	Ice	-002
1/20/20	0900	S	Wall 1 West	1	Ice	-003
1/20/20	0905	S	Floor 1	1	Ice	-004
1/20/20	0910	S	Wall 2 East	1	Ice	-005
1/20/20	0915	S	Wall 2 West	1	Ice	-006
1/20/20	0920	S	Floor 2	1	Ice	-007
1/20/20	0925	S	Wall 3 East	1	Ice	-008
1/20/20	0930	S	Wall 3 West	1	Ice	-009
1/20/20	0935	S	Floor 3	1	Ice	-010
1/20/20	0940	S	Wall 4 South	1	Ice	-011
1/20/20	0945	S	Wall 4 North	1	Ice	-012

Relinquished by:

Signature: Kenny Angel  
 Date: 1/22/20  
 Time: 6:45

Relinquished by:

Signature: [Signature]  
 Date: 1/20/20  
 Time: 1700

Received by: [Signature] Date: 1/20/20 Time: 0845

Received by: [Signature] Date: 1/20/20 Time: 0920

Via: [Signature] Date: 1/20/20 Time: 0920

Remarks:

Chloride

TPH

BTEX

## Analysis Request

# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

# Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Turn-Around Time: 5 day

Standard  Rush

Project Name:  
FNR 17 20 B2IP Federal Com 1

Project #:

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  AZ Compliance

NELAC  Other

EDD (Type)

Project Manager:

Robbie Runnels

Sampler: Kenny Angel

On Ice  Yes  No

# of Coolers: 2

Cooler Temp (including 0.13, 0.14, 1.3, 1.5)

Container Type and #

Preservative Type

HEAL No

Date

Matrix

Sample Name

1/20/20 0950

S

Floor 4

1 Ice

- 013

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0810

S

Wall 5 South

1 Ice

- 014

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0815

S

Wall 5 North

1 Ice

- 015

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0820

S

Floor 5

1 Ice

- 016

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0825

S

Wall 6 North

1 Ice

- 017

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0830

S

Wall 6 South

1 Ice

- 018

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0835

S

Floor 6

1 Ice

- 019

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0840

S

Wall 7 North

1 Ice

- 020

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0845

S

Wall 7 South

1 Ice

- 021

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0850

S

Floor 7

1 Ice

- 022

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0855

S

Wall 8 North

1 Ice

- 023

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

1/21/20 0900

S

Wall 8 South

1 Ice

- 024

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Date: 1/22/20

Time: 0845

Relinquished by: *Robbie Runnels*

Received by: *[Signature]*

Date: 1/22/20

Time: 0645

Via: *Express*

HEAL No: 2001901

Remarks:

Date: 1/22/20

Time: 1900

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: 01/22/20

Time: 0920

Via: *Express*

HEAL No: 20



### Chain-of-Custody Record

Client: Mewbourne Oil Company

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type)

Turn-Around Time: 5 days  
 Standard  Rush

Project Name:  
 FNR 17 20 B2IP Federal Com 1

Project #:

Project Manager:  
 Robbie Runnels

Sampler: Kenny Angel

On Ice:  Yes  No

# of Coolers: 2

Cooler Temperature: 13.0 C / 55.4 F

Container Type and #

Preservative Type

HEAL No. 200185

Date

Time

Matrix

Sample Name

Chloride

TPH

BTEX

Remarks:

Received by: [Signature] Date Time: 1/22/20 0645

Relinquished by: [Signature] Date Time: 1/22/20 0920

Date: 1/22/20 Time: 0645

Date: 1/22/20 Time: 0920

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



# APPENDIX – 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 32.303547

Longitude -103.899399

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: FNR 17 20 W2IP Fed Com 3H	Site Type: Production
Date Release Discovered 12/4/2019 @ 14:27	API# (if applicable) 30-015-44578

Unit Letter	Section	Township	Range	County
J	17	23S	30E	Eddy

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) 50	Volume Recovered (bbls) 10
	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 4" steel transfer line developed the leak.

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 Victoria Venegas on 12/5/2019 at 12:30 by email 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 Specialist</u>  Signature:  Date: <u>12/5/2019</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>105</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.

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 Specialist

Signature:  Date: 4/23/2020

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 Specialist

Signature:  Date: 4/20/2020

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 Specialist

Signature:  Date: 4/23/2020

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: \_\_\_\_\_