State of New Mexico
Oil Conservation Division

Incident ID	nRM2018244476
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☑ Extents of contamination must be fully delineated.

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

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

Printed Name: Robbie Runnels Title: Environmental Representative

Signature: _____ Date: _____

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Site Assessment Report &
Proposed Remediation Workplan (Addendum)

Mewbourne Oil Company
Hoss 11 SWD #1
Eddy County, New Mexico
Unit Letter A, D, Section 11, 12, Township 25 South, Range 28 East
Latitude 32.151564 North, Longitude 104.050164 West
NMOCD Reference No. nRM2018244476

Prepared By:

Etech Environmental & Safety Solutions, Inc.
3100 Plains Highway
Lovington, New Mexico 88260

Ben J. Arguijo

Joel W. Lowry

Midland • San Antonio • Lubbock • Lovington • Lafayette

TABLE OF CONTENTS

1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this Site Assessment Report & Proposed Remediation Workplan (Addendum) for the release site known as the Hoss 11 SWD #1

Location of Release Source

Latitude: 32.151564 Longitude: -104.050164

Provided GPS are in WGS84 format.

Site Name:	Hoss 11 SWD #1	Site Type:	SWD
Date Release Discovered:	6/29/2020	API # (if applicable):	30-015-44666

Unit Letter	Section	Township	Range	County
A, D	11, 12	25S	28E	Eddy

Surface Owner: [ ] State [ ] Federal [ ] Tribal [X] Private (Name Joy Cooksey)

Nature and Volume of Release

[ ] Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
[X] Produced Water	Volume Released (bbls) 100	Volume Recovered (bbls) 70
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	[X] Yes [ ] No [ ] N/A
[ ] Condensate	Volume Released (bbls)	Volume Recovered (bbls)
[ ] Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
[ ] Other (describe)	Volume/Weight Released	Volume/Weight Recovered
Cause of Release: Hammer Union on the discharge line parted.		

Initial Response

- [X] The source of the release has been stopped.
- [X] The impacted area has been secured to protect human health and the environment.
- [X] Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
- [X] All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and the United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Site.

Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. In addition, on August 17, 2020, an investigative soil boring/temporary monitor well was drilled at the Site in an effort to further investigate site characteristics and determine if shallow groundwater is present in the area. The investigative soil bore was advanced to a total depth of approximately fifty-three (53) feet bgs and left open for seventy-two (72) hours. No indications of inflow and/or accumulation of water were noted during the advancement of the soil bore or prior to plugging and abandonment. The location of the soil bore is depicted in Figure 2. A drilling report is provided in Appendix E.

What is the shallowest depth to groundwater beneath the area affected by the release?	>53'	
Did the release impact groundwater or surface water?	☐ Yes	☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes	☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark?	☐ Yes	☒ No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	☐ Yes	☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes	☒ No
Are the lateral extents of the release within 1,000 feet of any other fresh water well or spring?	☐ Yes	☒ No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes	☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes	☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes	☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes	☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes	☒ No
Did the release impact areas not on an exploration, development, production or storage site?	☐ Yes	☒ No

Additional NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; aerial imagery; and a karst survey conducted by a third-party contractor. The results are depicted on Figures 1, 2, 4, and 5. A copy of the karst survey is included in Appendix E.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standard for the Site are as follows:

Probable Depth to Groundwater	Constituent	Method	Closure Criteria	Reclamation Standard*
>53'	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg	100 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	-	-
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg	10 mg/kg

* The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas.

4.0 INITIAL SITE ASSESSMENT

On July 15, 2020, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores (SP1 through SP10) were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores (NH1B, NH2, EH1, EH2, EH3, SH1, SH2, SH3D, WH1, and WH2) were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for the presence of Volatile Organic Compounds utilizing a Photoionization Detector (PID) and/or concentrations of chloride utilizing a Hach Quantab ® chloride test kit. A "Site & Sample Location Map" is provided as Figure 3. Field data and soil profile logs are provided in Appendix B.

Based on field observations and field test data, forty (40) delineation soil samples (EH1 Surf., EH1 1', EH2 Surf., EH2 1', EH3 Surf., EH3 1', NH1B Surf., NH1A 1', NH2 Surf., NH2 1', WH1 Surf., WH1 1', WH2 Surf., WH2 1', SH1 Surf., SH1 1', SH2 Surf., SH2 1', SH3D Surf., SH3D 1', SP1 Surf., SP1 1', SP2 Surf., SP2 2' SP3 Surf., SP3 1', SP4 Surf., SP4 4', SP5 Surf., SP5 1', SP6 Surf., SP6 1', SP7 Surf., SP7 2', SP8 Surf., SP8 13', SP9 Surf., SP9 6', SP10 Surf., and SP10 2') were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Based on laboratory analytical results, the horizontal and vertical extent of impacted soil was adequately defined. A summary of soil chemistry data is provided as Table 1. Laboratory analytical reports are provided in Appendix C. General photographs of the Site are provided in Appendix D.

5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, Mewbourne Oil Company proposed the following remediation activities designed to advance the Site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the release margins. The floors and sidewalls of the excavation will be advanced until laboratory analytical results indicate BTEX, TPH, and chloride concentrations are below the NMOCD Closure Criteria and/or NMOCD Reclamation Standard.
- Excavate impacted soil adjacent to the on-site electrical facilities, containment, associated piping, and equipment to the maximum extent practicable.
- Upon receiving laboratory analytical results from excavation confirmation soil samples, backfill the excavated area with locally sourced, non-impacted, "like" material.
- Defer remediation of impacted soil affected above the NMOCD Closure Criteria beneath and adjacent to the on-site electrical facilities, containment area, and associated equipment until the facility is decommissioned and abandoned.
- Upon completion of excavation activities, collect representative five-point composite confirmation soil samples from the excavation sidewalls in each cardinal direction, representing no more than fifty (50) linear feet. Collect a minimum of one (1) representative five-point composite confirmation soil sample from the base of the excavated area representing every 300 square feet. Collect additional, discrete grab samples from wet or visibly stained areas inferred to have been affected by the release, as necessary.
- Upon completion of remediation activities, prepare a *Remediation Summary and Deferral Request* detailing field activities and laboratory analytical results from confirmation soil samples. The *Remediation Summary and Deferral Request* will include a scaled map depicting impacted soil affected above the NMOCD Closure Criteria remaining in-situ.

6.0 REGULATORY APPROVALS & STIPULATIONS

On September 24, 2020, a *Site Assessment Report and Proposed Remediation Workplan* was submitted to the NMOCD proposing the aforementioned remediation activities to advance the Site toward regulatory closure. The proposed workplan was subsequently approved by the NMOCD, with the stipulation that confirmation floor and sidewall samples exhibit concentrations of chloride and TPH below 600 mg/kg and 100 mg/kg, respectively, as the Site is located in an area of high potential for karst occurrence.

Please reference the *Site Assessment Report and Proposed Remediation Workplan* for additional details regarding site characterization and proposed remediation activities.

On March 4, 2021, based on the size and nature of the release, an *Alternative Sampling Plan* was submitted to the NMOCD proposing an alternative sampling plan to include the collection of composite soil samples every fifty (50) linear feet from the excavation sidewalls and every 500 square feet from the base of the excavated area. A variance to collect TPH and BTEX confirmation samples at 100-foot horizontal increments was also requested. The *Alternative Sampling Plan* was subsequently approved by the NMOCD, with the stipulation that each confirmation sample is to be analyzed for TPH, BTEX, and chloride. The variance to collect TPH and BTEX confirmation samples at 100-foot horizontal increments was denied.

7.0 VARIANCE REQUEST

Pursuant to Section 19.15.29.14 of the New Mexico Administrative Code (NMAC), Mewbourne Oil Company requests a variance to install a 20-mil, string-reinforced liner on the floor of the proposed excavation in the pasture adjacent to the Hoss 11 SWD #1. The area (characterized by hand-augered soil boring SP8) will be excavated to a maximum depth of eight (8) feet bgs. Due to the presence of karst and potentially unstable soil, deeper excavation in this area poses a risk to human health and safety that exceeds the benefits of the removal of additional soil affected above the NMOCD Closure Criteria.

Upon receiving laboratory analytical results from excavation confirmation soil samples, the proposed liner will be installed on the floor of the excavation at approximately eight (8) feet bgs. Approximately six (6) inches of pad material will be installed both above and below the liner in an effort to maintain its integrity during backfilling activities. The liner will be sloped to facilitate shedding of moisture outside both the footprint of the excavation and the maximum horizontal extent of impacted soil. This engineered control is designed to inhibit the vertical migration of chloride contamination remaining in-situ. Immediately following installation of the liner and pad material, the excavated area will be backfilled with locally sourced, non-impacted, "like" material in an effort to reduce safety and environmental concerns associated with the open excavation.

Etech utilized the Environmental Protection Agency's (EPA) Multimedia Exposure Assessment Model (MULTIMED) to determine if the contamination remaining in-situ under the proposed liner poses a threat to groundwater quality. The most appropriate and conservative parameters possible for the Site and karst/limestone were used for the assessment model in regard to unsaturated transport zone thickness (i.e., 40 feet between the maximum vertical extent of the spill and groundwater surface), contaminant concentration (1,000 mg/kg, which is above the maximum anticipated to remain in-situ), saturated hydraulic conductivity (1 m/day), etc. The model indicates that the peak concentration of chloride in the underlying groundwater contributed by the contamination remaining in-situ would be approximately 49.42 mg/L in 220 years, versus 340.7 mg/L in 65.6 years if the area was not lined (see Appendix F).

Since the estimated increase in chloride concentration is below the standard of 250.0 mg/L specified in NMAC Section 20.6.2.3103 B.(1), the MULTIMED model effectively demonstrates that leaving the chloride contamination in-situ "does not cause an imminent risk to human health, the environment, or ground water", pursuant to NMAC Section 19.15.29.12.C(3).

8.0 TIMELINE & ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed within 90 days of receiving necessary approval(s) of this Site Assessment Report & Proposed Remediation Plan (Addendum) . Based on the revised Closure Criteria assigned to the Site by the NMOCD, as well as laboratory analytical results, site characteristics, and field observations made during the initial site assessment, it is estimated that approximately 23,448 cubic yards of impacted soil is in need of removal.

9.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area will be contoured and compacted to achieve erosion control, stability, and preservation of surface water flow to the extent practicable. Affected areas not on production pads, pipeline right-of-ways, and/or lease roads will be reseeded with a landowner-approved seed mixture during the first favorable growing season following closure of the site. Final reclamation and re-vegetation of the affected area on the facility well pad will be conducted in accordance with NMAC Section 19.15.29.13 upon decommissioning the facility.

10.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Site Assessment Report & Proposed Remediation Plan (Addendum)* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech 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 Mewbourne Oil Company. Use of the information contained in this report is prohibited without the consent of Etech and/or Mewbourne Oil Company.

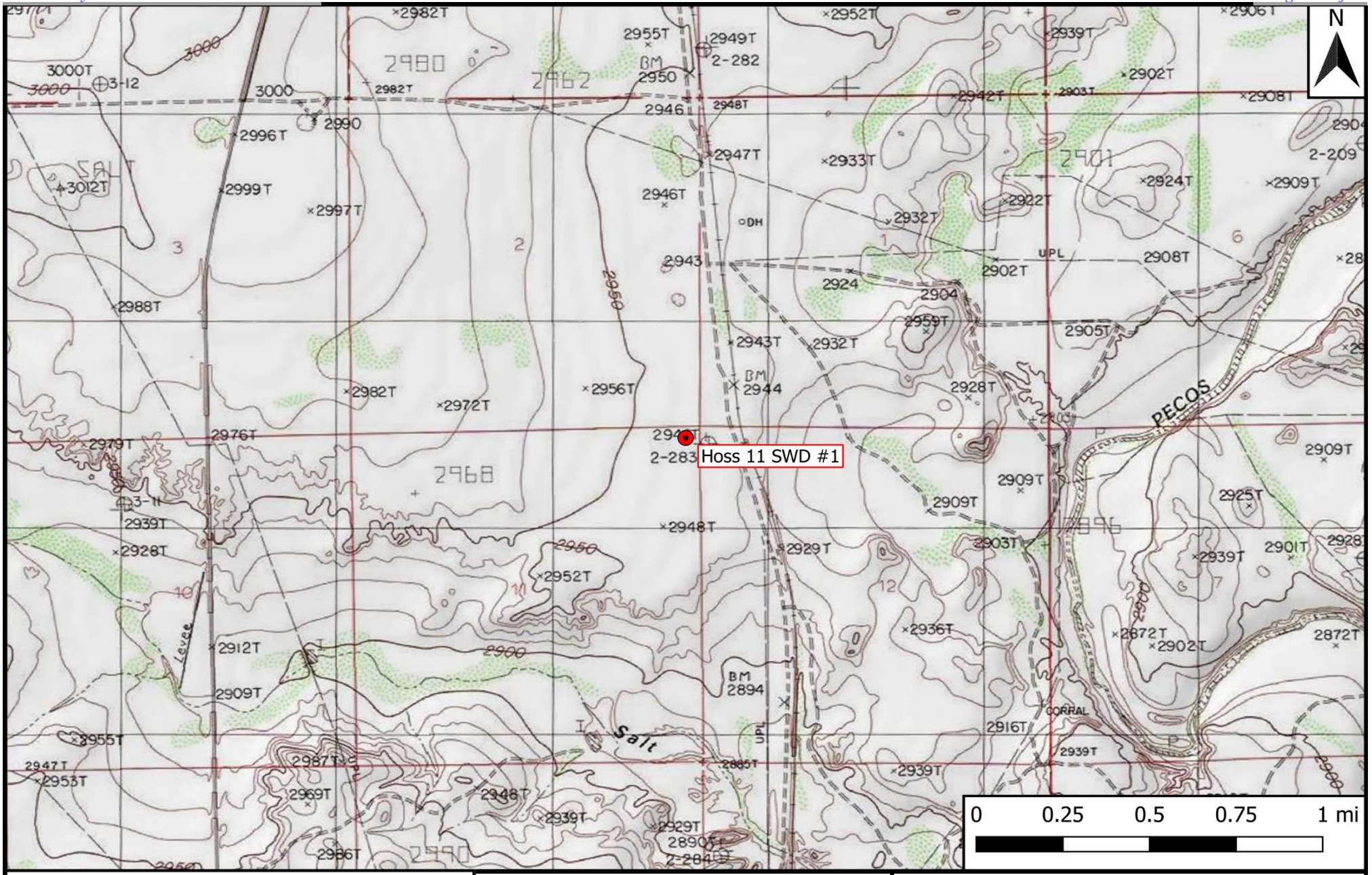
11.0 DISTRIBUTION

Mewbourne Oil Company
4801 Business Park Blvd.
Hobbs, NM 88240

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210

(Electronic Submission)

Figure 1
Topographic Map



Legend

Site Location

Figure 1

Topographic Map

Mewbourne Oil Company

Hoss 11 SWD #1

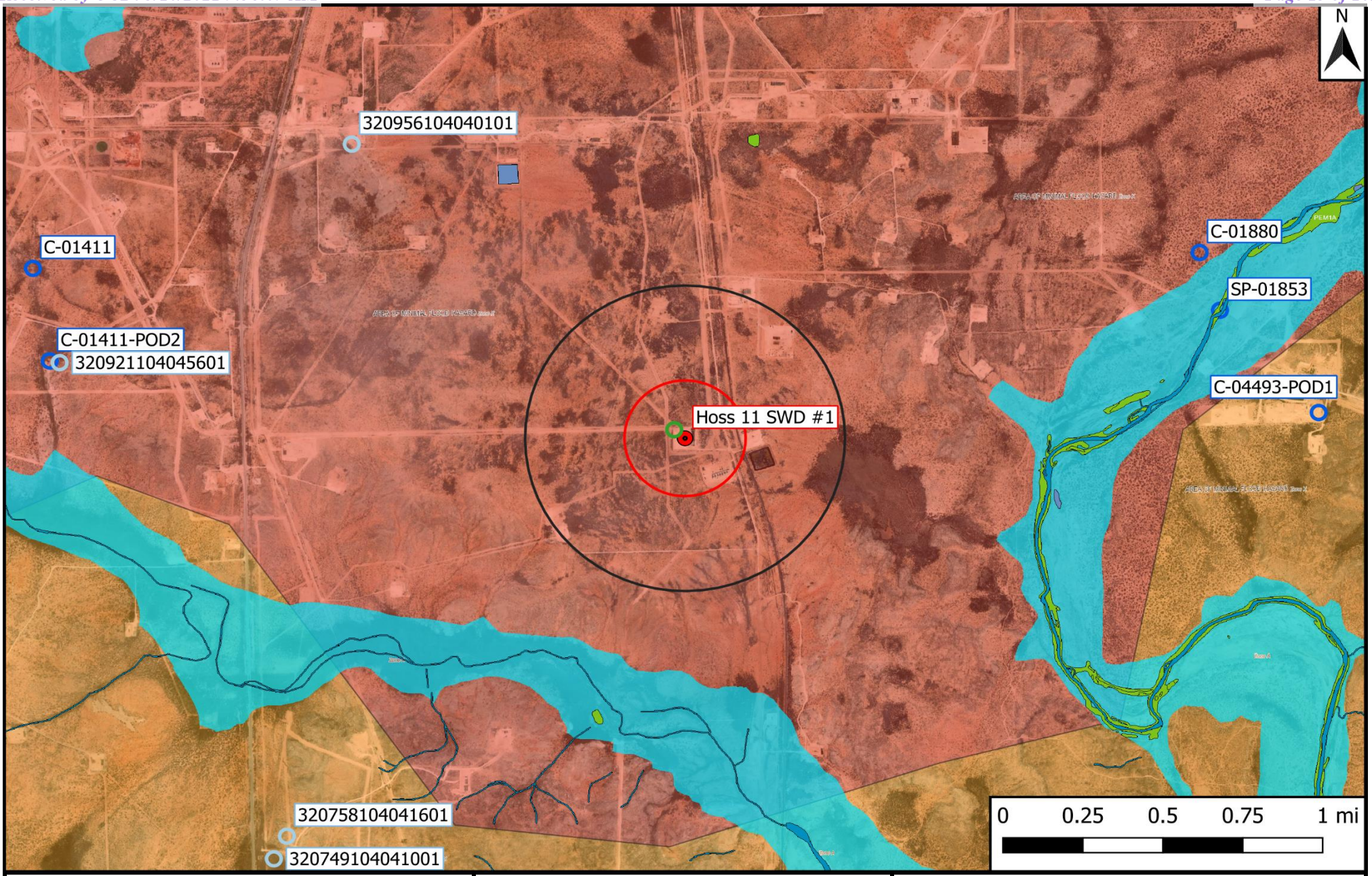
GPS: 32.151564, -104.050164

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: jwl Date: 3/4/21

Figure 2
Aerial Proximity Map



Legend

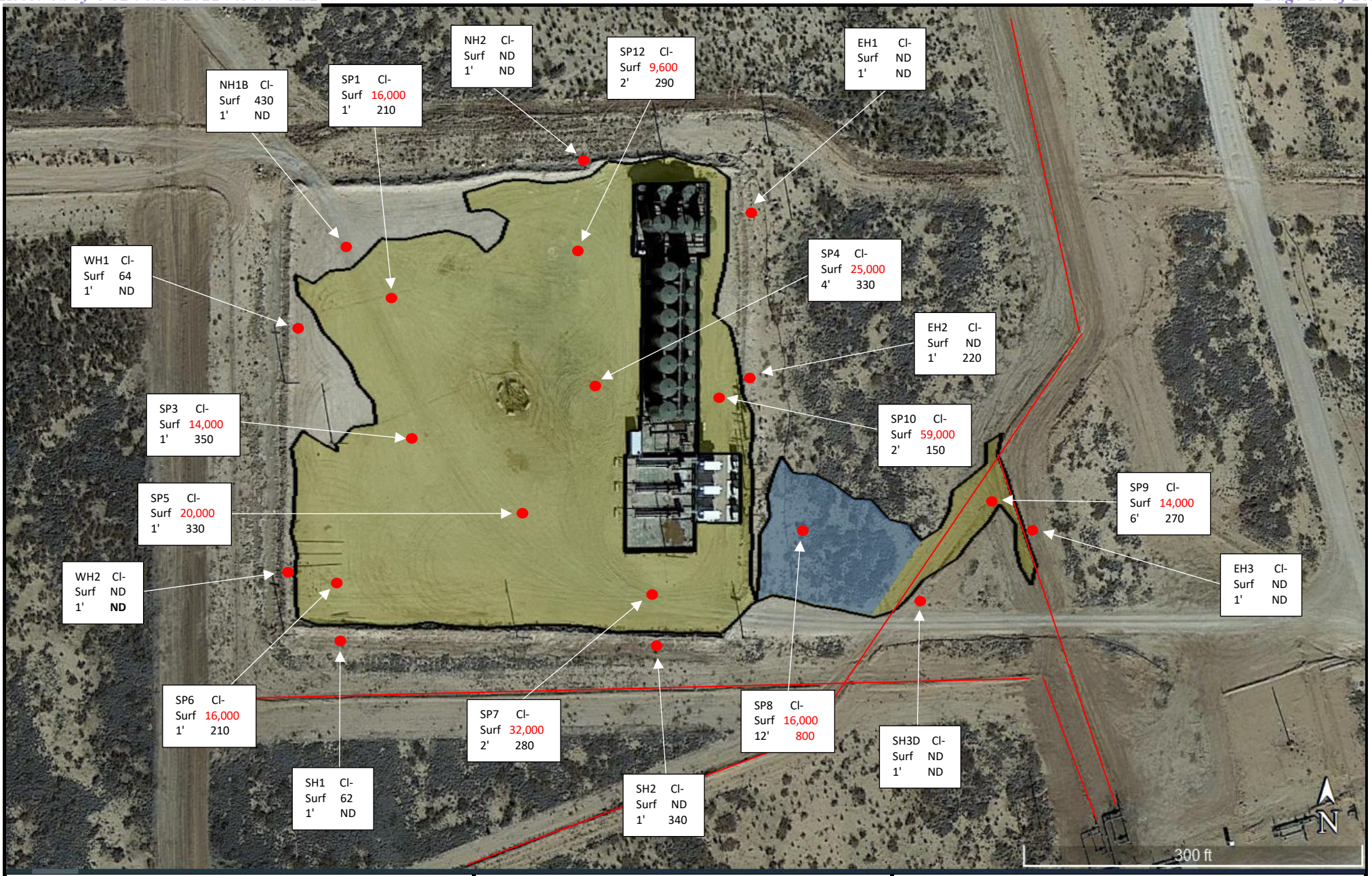
- Site Location
- Well - NMOSE
- Well - USGS
- Well - Investigative/Monitor
- Potash Mine Workings
- 1,000-Ft Radius
- 0.5-Mi Radius
- 1% Annual Flood Chance
- Emergent/Forested Wetlands
- Lake/Freshwater Pond
- Medium/Hight Karst
- Riverine

Figure 2
Aerial Proximity Map
Mewbourne Oil Company
Hoss 11 SWD #1
GPS: 32.151564, -104.050164
Eddy County

ETECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: jwl Date: 3/5/21

Figure 3
Site & Sample Location Map



Legend:

- Pipeline
- Sample Point
- Impacted Area
- Proposed Liner

Figure 3

Site & Sample Location Map

Mewbourne Oil Company

Hoss 11 SWD #1

GPS: 32.151564, -104.050164

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: jwl Date: 3/5/21

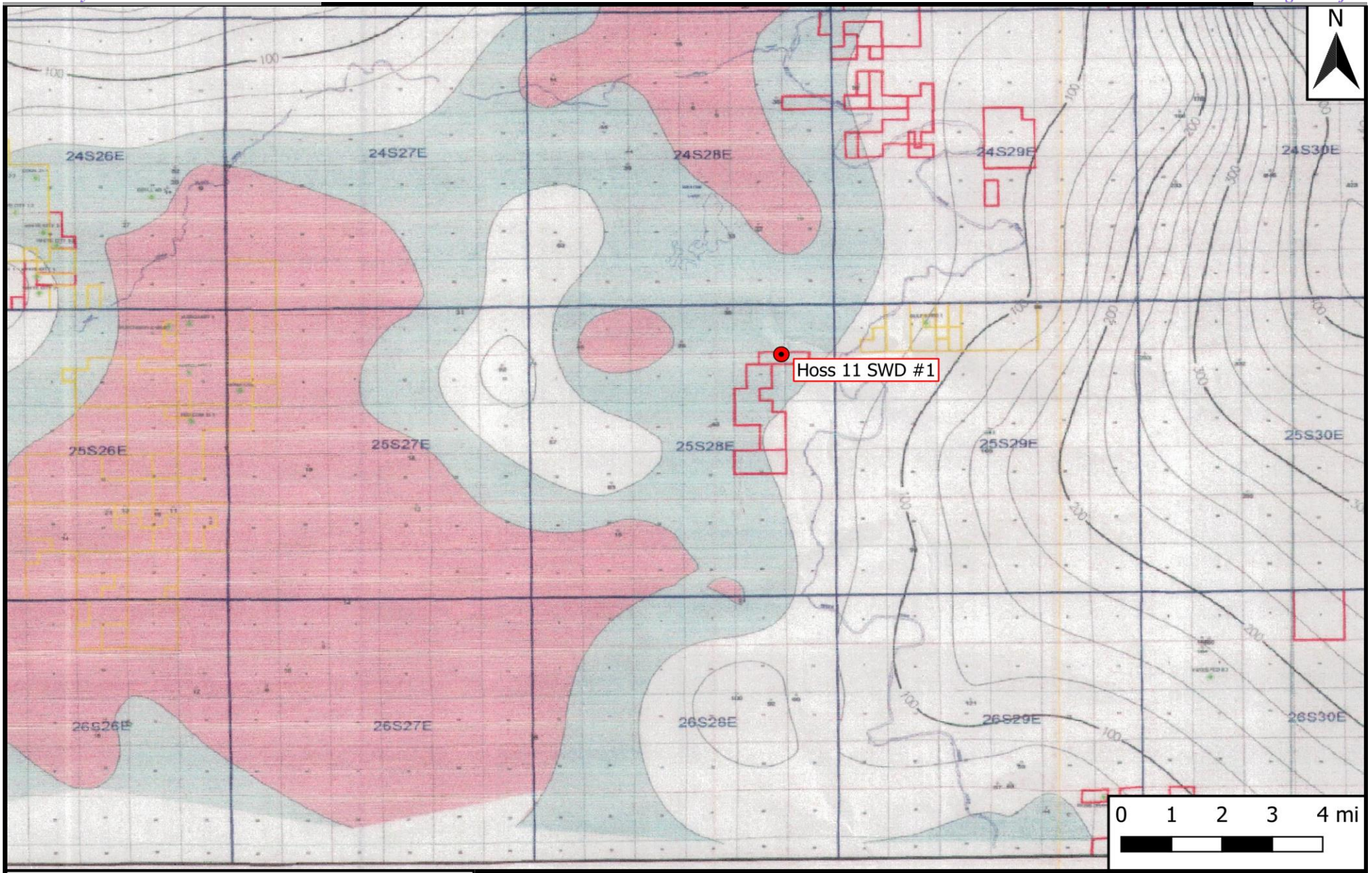
Table 1
Concentrations of BTEX, TPH & Chloride in Soil

TABLE 1
CONCENTRATIONS OF BTEX, TPH & CHLORIDE IN SOIL
Mewbourne Oil Company
Hoss 11 SWD #1
NMOCD Ref. #: nRM2018244476

NMOCD Closure Criteria				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**
NMOCD Reclamation Standard				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**
Sample ID	**Date**	**Depth**	**Soil Status**	**SW 846 8021B**		**SW 846 8015M Ext.**					**4500 Cl**
				Benzene (mg/kg)	**BTEX (mg/kg)**	**GRO C_6-C_{10} (mg/kg)**	**DRO C_{10}-C_{28} (mg/kg)**	**GRO + DRO C_6-C_{28} (mg/kg)**	**ORO C_{28}-C_{36} (mg/kg)**	**TPH C_6-C_{36} (mg/kg)**	**Chloride (mg/kg)**
EH1 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
EH1 @1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
EH2 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
EH2 @1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	220
EH3 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
EH3 @1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
NH1B @ Surt	7/15/2020	Surt	In-Situ	ND	ND	ND	ND	ND	ND	ND	430
NH1A @ 1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	180
NH2 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
NH2 @1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
WH1 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	64.0
WH1 @ 1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	100
WH2 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
WH2 @1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
SH1 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	62.0
SH1 @ 1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
SH2 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	340
SH2 @ 1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	260
SH3D @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
SH3D @ 1'	7/15/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
SP1 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	13.0	13.0	ND	13.0	**16,000**
SP1 @ 1'	7/16/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	210
SP2 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	**9,600**
SP2 @ 2'	7/16/2020	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	290
SP3 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	**14,000**
SP3 @ 1'	7/16/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	350
SP4 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	14.0	14.0	ND	14.0	**25,000**
SP4 @ 4'	7/16/2020	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	330
SP5 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	**20,000**
SP5 @ 1'	7/16/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	330
SP6 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	**16,000**
SP6 @ 1'	7/16/2020	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	210
SP7 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	ND	12.0	12.0	ND	12.0	**32,000**
SP7 @ 2'	7/16/2020	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	280
SP8 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	100	100	ND	100	**16,000**
SP8 @ 12'	7/17/2020	12'	In-Situ	ND	ND	ND	ND	ND	ND	ND	**800**
SP9 @ Surf	7/15/2020	Surf	In-Situ	ND	ND	ND	ND	ND	ND	ND	**14,000**
SP9 @ 6'	7/16/2020	6'	In-Situ	ND	ND	ND	ND	ND	ND	ND	270
SP10 @ Surf	7/16/2020	Surf	In-Situ	ND	ND	13.0	63.0	76.0	ND	76.0	**59,000**
SP10 @ 2'	7/16/2020	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	150
SP8 @ 13'	8/17/2020	13'	In-Situ	-	-	-	-	-	-	-	**830**

NOTES:
- = Sample not analyzed for that constituent.
Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A
Depth to Groundwater Information



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map

Mewbourne Oil Company

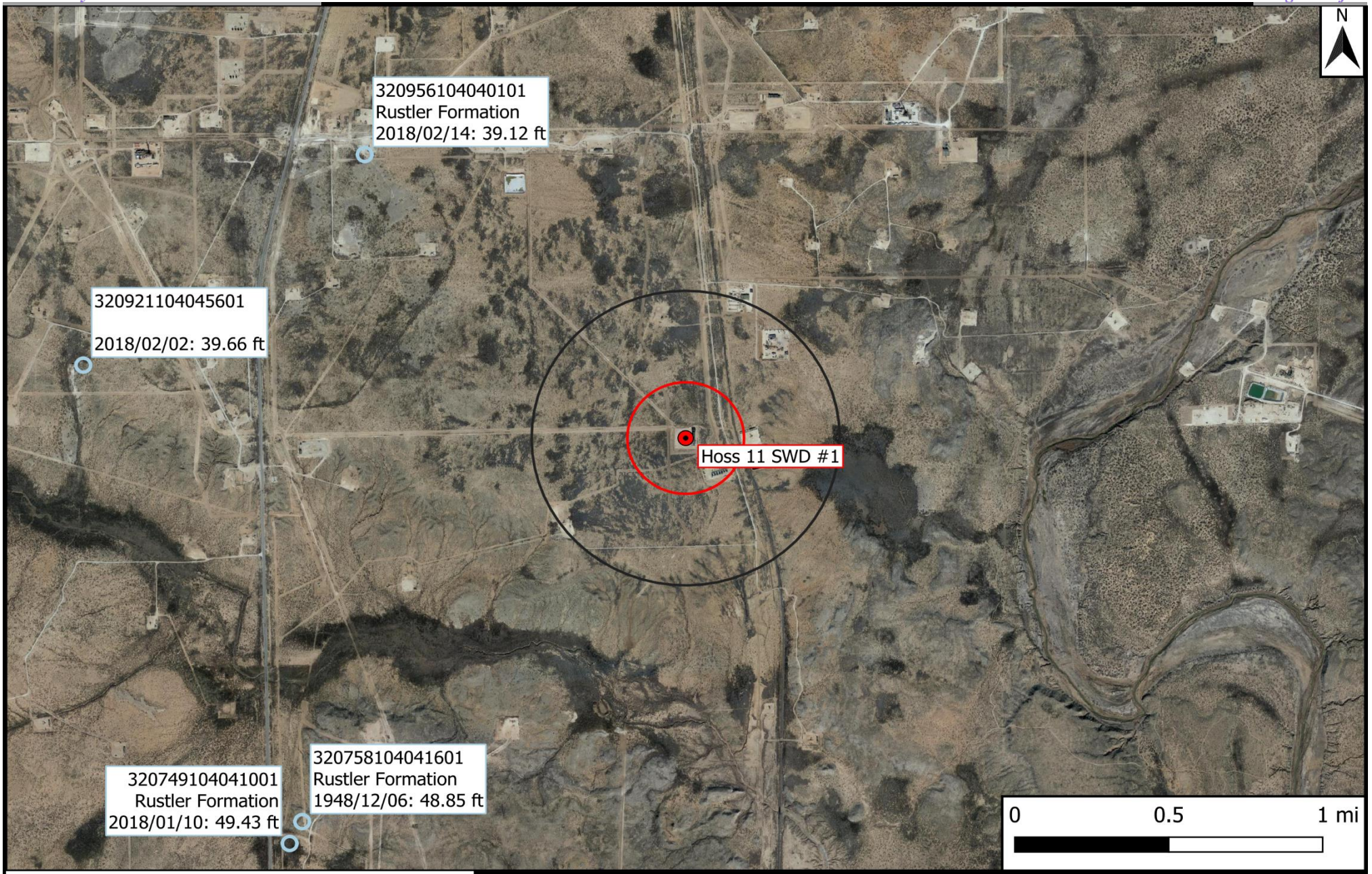
Hoss 11 SWD #1

GPS: 32.151564, -104.050164

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: jwl Date: 3/4/21



Legend
- Site Location
- Well - USGS
- 1,000-Ft Radius
- 0.5-Mi Radius

Figure 5
USGS Well Proximity Map
Mewbourne Oil Company
Hoss 11 SWD #1
GPS: 32.151564, -104.050164
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: jwl Date: 3/4/21

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01880		C	ED	3	3	2	06	25S	29E	592161	3558605*	2767	85	40	45

Average Depth to Water: **40 feet**

Minimum Depth: **40 feet**

Maximum Depth: **40 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 589570.98 **Northing (Y):** 3557630.74 **Radius:** 3220

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

8/4/20 11:16 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 01880	3	3	2	06	25S	29E	592161	3558605*

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: MURRELL ABBOTT

Drill Start Date: 10/29/1979 **Drill Finish Date:** 10/30/1979 **Plug Date:**

Log File Date: 11/05/1979 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 7.00 **Depth Well:** 85 feet **Depth Water:** 40 feet

Water Bearing Stratifications:	Top	Bottom	Description
	40	85	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	40	60

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

Click to hideNews Bulletins

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320956104040101

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

USGS 320956104040101 25S.28E.03.22231

Eddy County, New Mexico
Latitude 32°09'56.2", Longitude 104°04'04.1" NAD83
Land-surface elevation 2,990.20 feet above NGVD29
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1948-12-06		D	32.27			2		U		U	A
1978-01-03		D	32.97			2		U		U	A
1983-02-01		D	25.87			2		U		U	A
1987-10-14		D	29.27			2		U		U	A
1988-03-22		D	29.93			2		U		U	A
1992-11-04		D	35.03			2		S		U	A
1998-01-23		D	33.84			2		S		U	A
2003-01-27		D	32.08			2		S	USGS	A	A
2013-01-10	14:20 MST	m	33.56			2		S	USGS	R	A
2018-02-14	09:56 MST	m	39.12			2		V	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Method of measurement	V	Calibrated electric-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O").
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.

Section	Code	Description
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-08-04 13:14:06 EDT
0.29 0.25 nadww02

Appendix B
Field Data & Soil Profile Logs

eTECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 7/15/20

Project: Hoss SWD

Project Number: 12712 Latitude: 32.151564 Longitude: -104.050164

Sample ID	PID/Odor	Chloride Conc.	GPS
SH3 @ Surf.		1.4 112	
SH3 @ 1'		4.9 160	
SH 3 @ Surf.		2.6 276	
SH 3 @ 1'		4.6 732	
SP 8 @ Surf.		> 2584 ~~8776~~ 15528	
SP 8 @ 1'		> 2584 8776	
SP 9 @ Surf.		12680 ~~796~~	
SP 9 @ 1'		796	
SP 8 @ 2'		> 2584	
SP 8 @ 3'		> 2584	
SP 8 @ 4'		> 2584	
SP 9 @ 2'		~~796~~ 1336	
SH3A @ Surf.		432	
SH3A @ 1'		796	
SP8 @ 5'		~~> 2584~~ 5768	
SH3B @ Surf		520	
SH 3B @ 1'		860	
SP 9 @ 3'		348	
SP 9 @ 4'		1076	
SP 9 @ 5'		676	
SH3C @ Surf.		244	
SH 3C @ 1'		~~796~~ 796	
SH 2 @ Surf		476	
SH 2 @ 1'		308	
SH 1 @ Surf		184	
SH 1 @ 1'		184	
WH 2 @ Surf		712	
WH 2 @ 1'		212	
WH 1 @ Surf		160	
WH 1 @ 1'		244	
NH 1 @ Surf.		~~796~~ 2212	
NH 1 @ 1'		676	
EH 2 @ Surf		< 112	
EH 2 @ 1'		312	
EH 1 @ Surf		< 112	
EH 1 @ 1'		132	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

eTECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 7/15/20

Project: Hoss SWD

Project Number: 12712 Latitude: 32.151564 Longitude: -104.050164

Sample ID	PID/Odor	Chloride Conc.		GPS
NH2 @ Surf		112		
NH2 @ 1'		160		
NH 1A @ Surf		620		
NH 1A @ 1'		344		
NH 1B @ Surf.		520		
SH 3D @ Surf.		312		
SH 3D @ 1'		184		
		7/16/20		
SP8 @ 6'		1908		
SP8 @ 7'		1776		
SP9 @ 6'		312		
SP9 @ 7'		312		
SP7 @ Surf		>2584 24756		
SP7 @ 1'		1000		
SP7 @ 2'		520		
SP7 @ 3'		520		
SP10 @ Surf		>2584 >24756		
SP10 @ 1'		860		
SP10 @ 2'		244		
SP4 @ Surf		>2584 >24756		
SP4 @ 1'		>2584		
SP4 @ 2'		>2584		
SP5 @ Surf		19368	SP1 @ Surf	15204
SP5 @ 1'		520	SP1 @ 1'	348
SP5 @ 2'		520	SP1 @ 2'	348
SP4 @ 3'		1432		
SP4 @ 4'		520		
SP6 @ Surf		15528		
SP6 @ 1'		476		
SP6 @ 2'		476		
SP3 @ Surf		12680		
SP3 @ 1'		348		
SP3 @ 2'		476		
SP2 @ Surf.		11520		
SP2 @ 1'		2388		
SP2 @ 2'		432		

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

continued samples on back

9-17-20

Sample ID	Odor	Chloride Conc.
SP 8 @ 8'	~~Ø~~	928
SP 8 @ 9'	~~Ø~~	744
SP 8 @ 10'	~~Ø~~	536
SP 8 @ 11'	~~Ø~~	688
SP 8 @ 12'	~~Ø~~	400

eTECH Environmental & Safety Solutions, Inc.

Soil Profile

Date: 7.22-20

Project: Hoss 11 SWD #1

Project Number: 12712 Latitude: 32.151564 Longitude: -104.050164

Depth (ft. bgs)	Description
0-6	0-6" - caliche
6-14	6"-4' - Red Bed clay - gypsum 4'-14' - Sand - Clay - gypsum mix

eTECH Environmental & Safety Solutions, Inc.

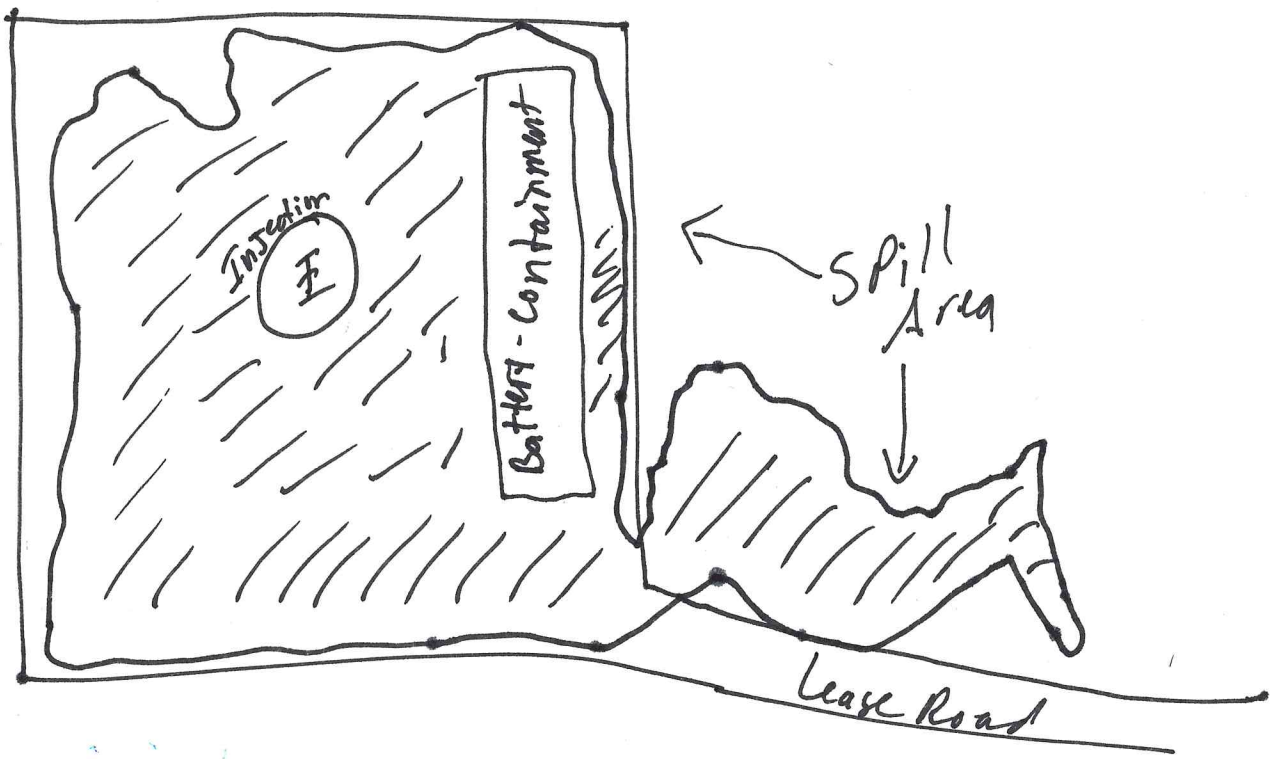
Initial Release Assessment Form

Date: 7-15-20

Project: Hoss 11 SWD #1 Clean Up Level: 0

Project Number: 12712 Latitude: 32.151564 Longitude: -104.050164

Site Diagram



Notes:

~Length: 550' ~Width: 400 ~Area: 127,000 Sq. Ft ~Depth:

	Yes	No
3-4 Representative Pictures of the Affected Area including sample locations?	☒	☐
Necessary Samples Field Screened and on Ice?	☒	☐
Sample and Field Screen Data Entered on Sample Log?	☒	☐
Was horizontal and vertical delineation achieved?	☐	☐

Appendix C
Laboratory Analytical Reports

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: EH1 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-001 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	59		mg/Kg	20	7/22/2020 4:06:03 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/22/2020 2:23:52 AM	53809
Surr: BFB	91.2	70-130		%Rec	1	7/22/2020 2:23:52 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/22/2020 11:47:58 PM	53860
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/22/2020 11:47:58 PM	53860
Surr: DNOP	59.9	55.1-146		%Rec	1	7/22/2020 11:47:58 PM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 2:23:52 AM	53809
Toluene	ND	0.050		mg/Kg	1	7/22/2020 2:23:52 AM	53809
Ethylbenzene	ND	0.050		mg/Kg	1	7/22/2020 2:23:52 AM	53809
Xylenes, Total	ND	0.099		mg/Kg	1	7/22/2020 2:23:52 AM	53809
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	7/22/2020 2:23:52 AM	53809
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	7/22/2020 2:23:52 AM	53809
Surr: Dibromofluoromethane	109	70-130		%Rec	1	7/22/2020 2:23:52 AM	53809
Surr: Toluene-d8	100	70-130		%Rec	1	7/22/2020 2:23:52 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** EH1 @1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-002 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	7/22/2020 4:18:27 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 2:52:19 AM	53809
Surr: BFB	97.6	70-130		%Rec	1	7/22/2020 2:52:19 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/22/2020 11:58:13 PM	53860
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/22/2020 11:58:13 PM	53860
Surr: DNOP	76.2	55.1-146		%Rec	1	7/22/2020 11:58:13 PM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 2:52:19 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 2:52:19 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 2:52:19 AM	53809
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2020 2:52:19 AM	53809
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	7/22/2020 2:52:19 AM	53809
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	7/22/2020 2:52:19 AM	53809
Surr: Dibromofluoromethane	108	70-130		%Rec	1	7/22/2020 2:52:19 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 2:52:19 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: EH2 @Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-003 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	7/22/2020 4:30:51 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/22/2020 3:20:57 AM	53809
Surr: BFB	93.2	70-130		%Rec	1	7/22/2020 3:20:57 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2020 12:08:25 AM	53860
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2020 12:08:25 AM	53860
Surr: DNOP	81.9	55.1-146		%Rec	1	7/23/2020 12:08:25 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.023		mg/Kg	1	7/22/2020 3:20:57 AM	53809
Toluene	ND	0.046		mg/Kg	1	7/22/2020 3:20:57 AM	53809
Ethylbenzene	ND	0.046		mg/Kg	1	7/22/2020 3:20:57 AM	53809
Xylenes, Total	ND	0.092		mg/Kg	1	7/22/2020 3:20:57 AM	53809
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/22/2020 3:20:57 AM	53809
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	7/22/2020 3:20:57 AM	53809
Surr: Dibromofluoromethane	106	70-130		%Rec	1	7/22/2020 3:20:57 AM	53809
Surr: Toluene-d8	97.6	70-130		%Rec	1	7/22/2020 3:20:57 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** EH2 @1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-004 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	60		mg/Kg	20	7/22/2020 4:43:15 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2020 3:49:28 AM	53809
Surr: BFB	96.0	70-130		%Rec	1	7/22/2020 3:49:28 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2020 12:18:38 AM	53860
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2020 12:18:38 AM	53860
Surr: DNOP	91.9	55.1-146		%Rec	1	7/23/2020 12:18:38 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	7/22/2020 3:49:28 AM	53809
Toluene	ND	0.047		mg/Kg	1	7/22/2020 3:49:28 AM	53809
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2020 3:49:28 AM	53809
Xylenes, Total	ND	0.095		mg/Kg	1	7/22/2020 3:49:28 AM	53809
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	7/22/2020 3:49:28 AM	53809
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	7/22/2020 3:49:28 AM	53809
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/22/2020 3:49:28 AM	53809
Surr: Toluene-d8	97.0	70-130		%Rec	1	7/22/2020 3:49:28 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: EH3 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-005 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	7/22/2020 5:20:29 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2020 4:17:57 AM	53809
Surr: BFB	98.2	70-130		%Rec	1	7/22/2020 4:17:57 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2020 12:28:50 AM	53860
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 12:28:50 AM	53860
Surr: DNOP	87.5	55.1-146		%Rec	1	7/23/2020 12:28:50 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.023		mg/Kg	1	7/22/2020 4:17:57 AM	53809
Toluene	ND	0.047		mg/Kg	1	7/22/2020 4:17:57 AM	53809
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2020 4:17:57 AM	53809
Xylenes, Total	ND	0.094		mg/Kg	1	7/22/2020 4:17:57 AM	53809
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	7/22/2020 4:17:57 AM	53809
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	7/22/2020 4:17:57 AM	53809
Surr: Dibromofluoromethane	111	70-130		%Rec	1	7/22/2020 4:17:57 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 4:17:57 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** EH3 @1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-006 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	7/22/2020 5:32:54 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 4:46:31 AM	53809
Surr: BFB	96.3	70-130		%Rec	1	7/22/2020 4:46:31 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2020 12:39:00 AM	53860
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2020 12:39:00 AM	53860
Surr: DNOP	140	55.1-146		%Rec	1	7/23/2020 12:39:00 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 4:46:31 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 4:46:31 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 4:46:31 AM	53809
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2020 4:46:31 AM	53809
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	7/22/2020 4:46:31 AM	53809
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	7/22/2020 4:46:31 AM	53809
Surr: Dibromofluoromethane	111	70-130		%Rec	1	7/22/2020 4:46:31 AM	53809
Surr: Toluene-d8	100	70-130		%Rec	1	7/22/2020 4:46:31 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: NH1B @ Surt
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-007 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	430	60		mg/Kg	20	7/22/2020 5:45:19 AM	53881
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2020 5:15:08 AM	53809
Surr: BFB	99.6	70-130		%Rec	1	7/22/2020 5:15:08 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/23/2020 12:49:16 AM	53860
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 12:49:16 AM	53860
Surr: DNOP	69.2	55.1-146		%Rec	1	7/23/2020 12:49:16 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	7/22/2020 5:15:08 AM	53809
Toluene	ND	0.047		mg/Kg	1	7/22/2020 5:15:08 AM	53809
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2020 5:15:08 AM	53809
Xylenes, Total	ND	0.095		mg/Kg	1	7/22/2020 5:15:08 AM	53809
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/22/2020 5:15:08 AM	53809
Surr: 4-Bromofluorobenzene	89.8	70-130		%Rec	1	7/22/2020 5:15:08 AM	53809
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/22/2020 5:15:08 AM	53809
Surr: Toluene-d8	105	70-130		%Rec	1	7/22/2020 5:15:08 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: NH1A @ 1'
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-008 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	180	60		mg/Kg	20	7/22/2020 12:56:03 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/22/2020 5:44:07 AM	53809
Surr: BFB	93.8	70-130		%Rec	1	7/22/2020 5:44:07 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2020 12:59:26 AM	53860
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 12:59:26 AM	53860
Surr: DNOP	85.9	55.1-146		%Rec	1	7/23/2020 12:59:26 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 5:44:07 AM	53809
Toluene	ND	0.050		mg/Kg	1	7/22/2020 5:44:07 AM	53809
Ethylbenzene	ND	0.050		mg/Kg	1	7/22/2020 5:44:07 AM	53809
Xylenes, Total	ND	0.10		mg/Kg	1	7/22/2020 5:44:07 AM	53809
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	7/22/2020 5:44:07 AM	53809
Surr: 4-Bromofluorobenzene	89.3	70-130		%Rec	1	7/22/2020 5:44:07 AM	53809
Surr: Dibromofluoromethane	114	70-130		%Rec	1	7/22/2020 5:44:07 AM	53809
Surr: Toluene-d8	97.2	70-130		%Rec	1	7/22/2020 5:44:07 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: NH2 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-009 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	7/22/2020 1:33:16 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 6:12:38 AM	53809
Surr: BFB	97.9	70-130		%Rec	1	7/22/2020 6:12:38 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/23/2020 1:09:36 AM	53860
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/23/2020 1:09:36 AM	53860
Surr: DNOP	111	55.1-146		%Rec	1	7/23/2020 1:09:36 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	7/22/2020 6:12:38 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 6:12:38 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 6:12:38 AM	53809
Xylenes, Total	ND	0.097		mg/Kg	1	7/22/2020 6:12:38 AM	53809
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	7/22/2020 6:12:38 AM	53809
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	7/22/2020 6:12:38 AM	53809
Surr: Dibromofluoromethane	108	70-130		%Rec	1	7/22/2020 6:12:38 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 6:12:38 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** NH2 @1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-010 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	7/22/2020 1:45:40 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/22/2020 6:41:08 AM	53809
Surr: BFB	92.9	70-130		%Rec	1	7/22/2020 6:41:08 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/23/2020 1:19:45 AM	53860
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2020 1:19:45 AM	53860
Surr: DNOP	103	55.1-146		%Rec	1	7/23/2020 1:19:45 AM	53860
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	7/22/2020 6:41:08 AM	53809
Toluene	ND	0.048		mg/Kg	1	7/22/2020 6:41:08 AM	53809
Ethylbenzene	ND	0.048		mg/Kg	1	7/22/2020 6:41:08 AM	53809
Xylenes, Total	ND	0.095		mg/Kg	1	7/22/2020 6:41:08 AM	53809
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	7/22/2020 6:41:08 AM	53809
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	7/22/2020 6:41:08 AM	53809
Surr: Dibromofluoromethane	112	70-130		%Rec	1	7/22/2020 6:41:08 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 6:41:08 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: WH1 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-011 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	64	60		mg/Kg	20	7/22/2020 1:58:05 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2020 7:09:42 AM	53809
Surr: BFB	94.6	70-130		%Rec	1	7/22/2020 7:09:42 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2020 2:20:35 AM	53861
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2020 2:20:35 AM	53861
Surr: DNOP	76.4	55.1-146		%Rec	1	7/23/2020 2:20:35 AM	53861
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.023		mg/Kg	1	7/22/2020 7:09:42 AM	53809
Toluene	ND	0.047		mg/Kg	1	7/22/2020 7:09:42 AM	53809
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2020 7:09:42 AM	53809
Xylenes, Total	ND	0.093		mg/Kg	1	7/22/2020 7:09:42 AM	53809
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	7/22/2020 7:09:42 AM	53809
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	7/22/2020 7:09:42 AM	53809
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/22/2020 7:09:42 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 7:09:42 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: WH1 @ 1'
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-012 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	100	60		mg/Kg	20	7/22/2020 2:10:30 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 7:38:13 AM	53809
Surr: BFB	96.9	70-130		%Rec	1	7/22/2020 7:38:13 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/23/2020 2:51:04 AM	53861
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2020 2:51:04 AM	53861
Surr: DNOP	91.8	55.1-146		%Rec	1	7/23/2020 2:51:04 AM	53861
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 7:38:13 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 7:38:13 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 7:38:13 AM	53809
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2020 7:38:13 AM	53809
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	7/22/2020 7:38:13 AM	53809
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	7/22/2020 7:38:13 AM	53809
Surr: Dibromofluoromethane	116	70-130		%Rec	1	7/22/2020 7:38:13 AM	53809
Surr: Toluene-d8	97.2	70-130		%Rec	1	7/22/2020 7:38:13 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: WH2 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-013 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	7/22/2020 2:22:55 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 8:06:54 AM	53809
Surr: BFB	99.0	70-130		%Rec	1	7/22/2020 8:06:54 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/23/2020 3:01:16 AM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 3:01:16 AM	53861
Surr: DNOP	74.6	55.1-146		%Rec	1	7/23/2020 3:01:16 AM	53861
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 8:06:54 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 8:06:54 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 8:06:54 AM	53809
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2020 8:06:54 AM	53809
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	7/22/2020 8:06:54 AM	53809
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	7/22/2020 8:06:54 AM	53809
Surr: Dibromofluoromethane	111	70-130		%Rec	1	7/22/2020 8:06:54 AM	53809
Surr: Toluene-d8	95.7	70-130		%Rec	1	7/22/2020 8:06:54 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: WH2 @1'
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-014 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	7/22/2020 2:35:19 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 8:35:29 AM	53809
Surr: BFB	92.5	70-130		%Rec	1	7/22/2020 8:35:29 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/23/2020 3:11:29 AM	53861
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2020 3:11:29 AM	53861
Surr: DNOP	88.2	55.1-146		%Rec	1	7/23/2020 3:11:29 AM	53861
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	7/22/2020 8:35:29 AM	53809
Toluene	ND	0.049		mg/Kg	1	7/22/2020 8:35:29 AM	53809
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 8:35:29 AM	53809
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2020 8:35:29 AM	53809
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	7/22/2020 8:35:29 AM	53809
Surr: 4-Bromofluorobenzene	88.3	70-130		%Rec	1	7/22/2020 8:35:29 AM	53809
Surr: Dibromofluoromethane	105	70-130		%Rec	1	7/22/2020 8:35:29 AM	53809
Surr: Toluene-d8	101	70-130		%Rec	1	7/22/2020 8:35:29 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SH1 @ Surf
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-015 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	62	60		mg/Kg	20	7/22/2020 3:12:33 PM	53890
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2020 9:03:59 AM	53809
Surr: BFB	98.8	70-130		%Rec	1	7/22/2020 9:03:59 AM	53809
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2020 3:21:46 AM	53861
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2020 3:21:46 AM	53861
Surr: DNOP	89.4	55.1-146		%Rec	1	7/23/2020 3:21:46 AM	53861
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.023		mg/Kg	1	7/22/2020 9:03:59 AM	53809
Toluene	ND	0.047		mg/Kg	1	7/22/2020 9:03:59 AM	53809
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2020 9:03:59 AM	53809
Xylenes, Total	ND	0.094		mg/Kg	1	7/22/2020 9:03:59 AM	53809
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/22/2020 9:03:59 AM	53809
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	7/22/2020 9:03:59 AM	53809
Surr: Dibromofluoromethane	106	70-130		%Rec	1	7/22/2020 9:03:59 AM	53809
Surr: Toluene-d8	98.3	70-130		%Rec	1	7/22/2020 9:03:59 AM	53809

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SH1 @ 1'
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-016 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Chloride	ND	60		mg/Kg	20	7/22/2020 3:24:58 PM	53890
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2020 3:32:03 AM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 3:32:03 AM	53861
Surr: DNOP	86.1	55.1-146		%Rec	1	7/23/2020 3:32:03 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/21/2020 1:14:35 PM	53810
Surr: BFB	97.0	66.6-105		%Rec	1	7/21/2020 1:14:35 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/20/2020 11:26:33 PM	53810
Toluene	ND	0.050		mg/Kg	1	7/20/2020 11:26:33 PM	53810
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2020 11:26:33 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2020 11:26:33 PM	53810
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/20/2020 11:26:33 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SH2 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-017 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Chloride	340	60		mg/Kg	20	7/22/2020 3:37:22 PM	53890
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2020 3:42:20 AM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 3:42:20 AM	53861
Surr: DNOP	105	55.1-146		%Rec	1	7/23/2020 3:42:20 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 1:38:11 PM	53810
Surr: BFB	96.7	66.6-105		%Rec	1	7/21/2020 1:38:11 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 12:36:53 AM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 12:36:53 AM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 12:36:53 AM	53810
Xylenes, Total	ND	0.098		mg/Kg	1	7/21/2020 12:36:53 AM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 12:36:53 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SH2 @ 1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-018 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	260	60		mg/Kg	20	7/22/2020 3:49:47 PM	53890
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/23/2020 3:52:36 AM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 3:52:36 AM	53861
Surr: DNOP	108	55.1-146		%Rec	1	7/23/2020 3:52:36 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2020 2:49:09 PM	53810
Surr: BFB	97.8	66.6-105		%Rec	1	7/21/2020 2:49:09 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2020 1:47:13 AM	53810
Toluene	ND	0.048		mg/Kg	1	7/21/2020 1:47:13 AM	53810
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2020 1:47:13 AM	53810
Xylenes, Total	ND	0.096		mg/Kg	1	7/21/2020 1:47:13 AM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 1:47:13 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SH3D @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-019 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	7/23/2020 11:20:06 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/23/2020 4:02:55 AM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 4:02:55 AM	53861
Surr: DNOP	104	55.1-146		%Rec	1	7/23/2020 4:02:55 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/21/2020 3:12:49 PM	53810
Surr: BFB	97.7	66.6-105		%Rec	1	7/21/2020 3:12:49 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	7/21/2020 2:10:36 AM	53810
Toluene	ND	0.047		mg/Kg	1	7/21/2020 2:10:36 AM	53810
Ethylbenzene	ND	0.047		mg/Kg	1	7/21/2020 2:10:36 AM	53810
Xylenes, Total	ND	0.094		mg/Kg	1	7/21/2020 2:10:36 AM	53810
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/21/2020 2:10:36 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SH3D @ 1'
Project: Hoss SWD **Collection Date:** 7/15/2020
Lab ID: 2007964-020 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	7/23/2020 11:57:09 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/23/2020 4:13:15 AM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 4:13:15 AM	53861
Surr: DNOP	94.5	55.1-146		%Rec	1	7/23/2020 4:13:15 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/21/2020 3:36:30 PM	53810
Surr: BFB	100	66.6-105		%Rec	1	7/21/2020 3:36:30 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2020 2:34:07 AM	53810
Toluene	ND	0.047		mg/Kg	1	7/21/2020 2:34:07 AM	53810
Ethylbenzene	ND	0.047		mg/Kg	1	7/21/2020 2:34:07 AM	53810
Xylenes, Total	ND	0.094		mg/Kg	1	7/21/2020 2:34:07 AM	53810
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	7/21/2020 2:34:07 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP1 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-021 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	16000	600		mg/Kg	200	7/24/2020 11:16:13 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	13	9.5		mg/Kg	1	7/23/2020 2:24:07 PM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 2:24:07 PM	53861
Surr: DNOP	95.2	55.1-146		%Rec	1	7/23/2020 2:24:07 PM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2020 4:00:07 PM	53810
Surr: BFB	98.4	66.6-105		%Rec	1	7/21/2020 4:00:07 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2020 2:57:40 AM	53810
Toluene	ND	0.048		mg/Kg	1	7/21/2020 2:57:40 AM	53810
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2020 2:57:40 AM	53810
Xylenes, Total	ND	0.097		mg/Kg	1	7/21/2020 2:57:40 AM	53810
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/21/2020 2:57:40 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP1 @ 1'
Project: Hoss SWD **Collection Date:** 7/16/2020
Lab ID: 2007964-022 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	210	60		mg/Kg	20	7/23/2020 12:46:33 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2020 4:34:08 AM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 4:34:08 AM	53861
Surr: DNOP	122	55.1-146		%Rec	1	7/23/2020 4:34:08 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/21/2020 4:23:53 PM	53810
Surr: BFB	101	66.6-105		%Rec	1	7/21/2020 4:23:53 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/21/2020 3:21:13 AM	53810
Toluene	ND	0.050		mg/Kg	1	7/21/2020 3:21:13 AM	53810
Ethylbenzene	ND	0.050		mg/Kg	1	7/21/2020 3:21:13 AM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 3:21:13 AM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 3:21:13 AM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP2 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-023 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	9600	600		mg/Kg	200	7/24/2020 11:28:38 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/23/2020 4:44:28 AM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 4:44:28 AM	53861
Surr: DNOP	101	55.1-146		%Rec	1	7/23/2020 4:44:28 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 4:47:30 PM	53810
Surr: BFB	102	66.6-105		%Rec	1	7/21/2020 4:47:30 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 4:47:30 PM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 4:47:30 PM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 4:47:30 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 4:47:30 PM	53810
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	7/21/2020 4:47:30 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP2 @ 2'
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-024 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	290	60		mg/Kg	20	7/23/2020 1:11:15 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2020 4:54:45 AM	53861
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2020 4:54:45 AM	53861
Surr: DNOP	101	55.1-146		%Rec	1	7/23/2020 4:54:45 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/21/2020 5:11:03 PM	53810
Surr: BFB	97.7	66.6-105		%Rec	1	7/21/2020 5:11:03 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	7/21/2020 5:11:03 PM	53810
Toluene	ND	0.047		mg/Kg	1	7/21/2020 5:11:03 PM	53810
Ethylbenzene	ND	0.047		mg/Kg	1	7/21/2020 5:11:03 PM	53810
Xylenes, Total	ND	0.094		mg/Kg	1	7/21/2020 5:11:03 PM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 5:11:03 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP3 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-025 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	14000	600		mg/Kg	200	7/24/2020 11:41:03 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/23/2020 5:04:59 AM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 5:04:59 AM	53861
Surr: DNOP	99.3	55.1-146		%Rec	1	7/23/2020 5:04:59 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/21/2020 5:34:40 PM	53810
Surr: BFB	96.6	66.6-105		%Rec	1	7/21/2020 5:34:40 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	7/21/2020 5:34:40 PM	53810
Toluene	ND	0.046		mg/Kg	1	7/21/2020 5:34:40 PM	53810
Ethylbenzene	ND	0.046		mg/Kg	1	7/21/2020 5:34:40 PM	53810
Xylenes, Total	ND	0.092		mg/Kg	1	7/21/2020 5:34:40 PM	53810
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/21/2020 5:34:40 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP3 @ 1'
Project: Hoss SWD **Collection Date:** 7/16/2020
Lab ID: 2007964-026 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	350	60		mg/Kg	20	7/23/2020 1:35:55 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/23/2020 5:15:11 AM	53861
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2020 5:15:11 AM	53861
Surr: DNOP	107	55.1-146		%Rec	1	7/23/2020 5:15:11 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/21/2020 5:58:13 PM	53810
Surr: BFB	97.4	66.6-105		%Rec	1	7/21/2020 5:58:13 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 5:58:13 PM	53810
Toluene	ND	0.050		mg/Kg	1	7/21/2020 5:58:13 PM	53810
Ethylbenzene	ND	0.050		mg/Kg	1	7/21/2020 5:58:13 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 5:58:13 PM	53810
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/21/2020 5:58:13 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP4 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-027 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	25000	1500		mg/Kg	500	7/24/2020 11:53:28 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	7/23/2020 2:48:14 PM	53861
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2020 2:48:14 PM	53861
Surr: DNOP	104	55.1-146		%Rec	1	7/23/2020 2:48:14 PM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 6:21:48 PM	53810
Surr: BFB	98.1	66.6-105		%Rec	1	7/21/2020 6:21:48 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 6:21:48 PM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 6:21:48 PM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 6:21:48 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 6:21:48 PM	53810
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	7/21/2020 6:21:48 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP4 @ 4'
Project: Hoss SWD **Collection Date:** 7/16/2020
Lab ID: 2007964-028 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	330	60		mg/Kg	20	7/23/2020 2:00:38 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/23/2020 5:35:32 AM	53861
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2020 5:35:32 AM	53861
Surr: DNOP	136	55.1-146		%Rec	1	7/23/2020 5:35:32 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2020 6:45:25 PM	53810
Surr: BFB	94.6	66.6-105		%Rec	1	7/21/2020 6:45:25 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	7/21/2020 6:45:25 PM	53810
Toluene	ND	0.048		mg/Kg	1	7/21/2020 6:45:25 PM	53810
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2020 6:45:25 PM	53810
Xylenes, Total	ND	0.095		mg/Kg	1	7/21/2020 6:45:25 PM	53810
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/21/2020 6:45:25 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP5 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-029 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	20000	1500		mg/Kg	500	7/25/2020 12:05:53 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/23/2020 5:45:42 AM	53861
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2020 5:45:42 AM	53861
Surr: DNOP	106	55.1-146		%Rec	1	7/23/2020 5:45:42 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2020 7:08:57 PM	53810
Surr: BFB	107	66.6-105	S	%Rec	1	7/21/2020 7:08:57 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	7/21/2020 7:08:57 PM	53810
Toluene	ND	0.048		mg/Kg	1	7/21/2020 7:08:57 PM	53810
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2020 7:08:57 PM	53810
Xylenes, Total	ND	0.095		mg/Kg	1	7/21/2020 7:08:57 PM	53810
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/21/2020 7:08:57 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP5 @ 1'
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-030 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	330	60		mg/Kg	20	7/23/2020 2:25:19 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2020 5:55:49 AM	53861
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2020 5:55:49 AM	53861
Surr: DNOP	106	55.1-146		%Rec	1	7/23/2020 5:55:49 AM	53861
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/21/2020 7:32:25 PM	53810
Surr: BFB	95.2	66.6-105		%Rec	1	7/21/2020 7:32:25 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	7/21/2020 7:32:25 PM	53810
Toluene	ND	0.046		mg/Kg	1	7/21/2020 7:32:25 PM	53810
Ethylbenzene	ND	0.046		mg/Kg	1	7/21/2020 7:32:25 PM	53810
Xylenes, Total	ND	0.093		mg/Kg	1	7/21/2020 7:32:25 PM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 7:32:25 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP6 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-031 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	16000	590		mg/Kg	200	7/25/2020 12:18:17 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/22/2020 12:31:45 PM	53863
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/22/2020 12:31:45 PM	53863
Surr: DNOP	151	55.1-146	S	%Rec	1	7/22/2020 12:31:45 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/21/2020 7:55:54 PM	53810
Surr: BFB	94.6	66.6-105		%Rec	1	7/21/2020 7:55:54 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/21/2020 7:55:54 PM	53810
Toluene	ND	0.050		mg/Kg	1	7/21/2020 7:55:54 PM	53810
Ethylbenzene	ND	0.050		mg/Kg	1	7/21/2020 7:55:54 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 7:55:54 PM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 7:55:54 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: Hoss SWD
Lab ID: 2007964-032 **Matrix:** SOIL

Client Sample ID: SP6 @ 1'
Collection Date: 7/16/2020
Received Date: 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	210	60		mg/Kg	20	7/23/2020 3:14:43 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/22/2020 1:02:04 PM	53863
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/22/2020 1:02:04 PM	53863
Surr: DNOP	134	55.1-146		%Rec	1	7/22/2020 1:02:04 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 8:19:21 PM	53810
Surr: BFB	97.6	66.6-105		%Rec	1	7/21/2020 8:19:21 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 8:19:21 PM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 8:19:21 PM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 8:19:21 PM	53810
Xylenes, Total	ND	0.098		mg/Kg	1	7/21/2020 8:19:21 PM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 8:19:21 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP7 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-033 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	32000	1500		mg/Kg	500	7/25/2020 12:30:42 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	12	9.7		mg/Kg	1	7/22/2020 1:12:13 PM	53863
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/22/2020 1:12:13 PM	53863
Surr: DNOP	125	55.1-146		%Rec	1	7/22/2020 1:12:13 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/21/2020 9:29:38 PM	53810
Surr: BFB	96.4	66.6-105		%Rec	1	7/21/2020 9:29:38 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	7/21/2020 9:29:38 PM	53810
Toluene	ND	0.047		mg/Kg	1	7/21/2020 9:29:38 PM	53810
Ethylbenzene	ND	0.047		mg/Kg	1	7/21/2020 9:29:38 PM	53810
Xylenes, Total	ND	0.094		mg/Kg	1	7/21/2020 9:29:38 PM	53810
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	7/21/2020 9:29:38 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP7 @ 2'
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-034 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	280	60		mg/Kg	20	7/23/2020 3:39:25 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/22/2020 1:22:35 PM	53863
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/22/2020 1:22:35 PM	53863
Surr: DNOP	166	55.1-146	S	%Rec	1	7/22/2020 1:22:35 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 9:53:04 PM	53810
Surr: BFB	94.5	66.6-105		%Rec	1	7/21/2020 9:53:04 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 9:53:04 PM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 9:53:04 PM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 9:53:04 PM	53810
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 9:53:04 PM	53810
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 9:53:04 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP8 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-035 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	16000	600		mg/Kg	200	7/25/2020 12:43:07 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	100	9.6		mg/Kg	1	7/22/2020 1:32:56 PM	53863
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/22/2020 1:32:56 PM	53863
Surr: DNOP	141	55.1-146		%Rec	1	7/22/2020 1:32:56 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 10:16:30 PM	53810
Surr: BFB	94.9	66.6-105		%Rec	1	7/21/2020 10:16:30 PM	53810
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	7/21/2020 10:16:30 PM	53810
Toluene	ND	0.049		mg/Kg	1	7/21/2020 10:16:30 PM	53810
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 10:16:30 PM	53810
Xylenes, Total	ND	0.098		mg/Kg	1	7/21/2020 10:16:30 PM	53810
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/21/2020 10:16:30 PM	53810

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP8 @ 12'
Project: Hoss SWD **Collection Date:** 7/17/2020
Lab ID: 2007964-036 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	800	60		mg/Kg	20	7/23/2020 4:04:07 PM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/22/2020 1:43:15 PM	53863
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/22/2020 1:43:15 PM	53863
Surr: DNOP	119	55.1-146		%Rec	1	7/22/2020 1:43:15 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2020 10:40:07 PM	53815
Surr: BFB	92.9	66.6-105		%Rec	1	7/21/2020 10:40:07 PM	53815
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/21/2020 10:40:07 PM	53815
Toluene	ND	0.049		mg/Kg	1	7/21/2020 10:40:07 PM	53815
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2020 10:40:07 PM	53815
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 10:40:07 PM	53815
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	7/21/2020 10:40:07 PM	53815

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP9 @ Surf
Project: Hoss SWD
Collection Date: 7/15/2020
Lab ID: 2007964-037 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	14000	600		mg/Kg	200	7/25/2020 12:55:31 AM	53915
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/22/2020 1:53:32 PM	53863
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/22/2020 1:53:32 PM	53863
Surr: DNOP	123	55.1-146		%Rec	1	7/22/2020 1:53:32 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/21/2020 11:50:27 PM	53815
Surr: BFB	96.1	66.6-105		%Rec	1	7/21/2020 11:50:27 PM	53815
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/21/2020 11:50:27 PM	53815
Toluene	ND	0.050		mg/Kg	1	7/21/2020 11:50:27 PM	53815
Ethylbenzene	ND	0.050		mg/Kg	1	7/21/2020 11:50:27 PM	53815
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2020 11:50:27 PM	53815
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/21/2020 11:50:27 PM	53815

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company **Client Sample ID:** SP9 @ 6'
Project: Hoss SWD **Collection Date:** 7/16/2020
Lab ID: 2007964-038 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	270	60		mg/Kg	20	7/23/2020 4:53:32 PM	53917
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/22/2020 2:03:48 PM	53863
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/22/2020 2:03:48 PM	53863
Surr: DNOP	163	55.1-146	S	%Rec	1	7/22/2020 2:03:48 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2020 1:01:04 AM	53815
Surr: BFB	92.7	66.6-105		%Rec	1	7/22/2020 1:01:04 AM	53815
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/22/2020 1:01:04 AM	53815
Toluene	ND	0.049		mg/Kg	1	7/22/2020 1:01:04 AM	53815
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2020 1:01:04 AM	53815
Xylenes, Total	ND	0.099		mg/Kg	1	7/22/2020 1:01:04 AM	53815
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/22/2020 1:01:04 AM	53815

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP10 @ Surf
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-039 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	59000	3000		mg/Kg	1E+	7/25/2020 1:07:56 AM	53917
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	63	9.9		mg/Kg	1	7/22/2020 2:14:03 PM	53863
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/22/2020 2:14:03 PM	53863
Surr: DNOP	121	55.1-146		%Rec	1	7/22/2020 2:14:03 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	13	5.0		mg/Kg	1	7/22/2020 1:24:42 AM	53815
Surr: BFB	152	66.6-105	S	%Rec	1	7/22/2020 1:24:42 AM	53815
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/22/2020 1:24:42 AM	53815
Toluene	ND	0.050		mg/Kg	1	7/22/2020 1:24:42 AM	53815
Ethylbenzene	ND	0.050		mg/Kg	1	7/22/2020 1:24:42 AM	53815
Xylenes, Total	ND	0.099		mg/Kg	1	7/22/2020 1:24:42 AM	53815
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/22/2020 1:24:42 AM	53815

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

Qualifiers:

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

Analytical Report
Lab Order **2007964**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Client Sample ID: SP10 @ 2'
Project: Hoss SWD
Collection Date: 7/16/2020
Lab ID: 2007964-040 **Matrix:** SOIL **Received Date:** 7/18/2020 11:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	150	60		mg/Kg	20	7/23/2020 6:07:36 PM	53917
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/22/2020 2:24:15 PM	53863
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/22/2020 2:24:15 PM	53863
Surr: DNOP	139	55.1-146		%Rec	1	7/22/2020 2:24:15 PM	53863
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/22/2020 1:48:15 AM	53815
Surr: BFB	91.4	66.6-105		%Rec	1	7/22/2020 1:48:15 AM	53815
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	7/22/2020 1:48:15 AM	53815
Toluene	ND	0.050		mg/Kg	1	7/22/2020 1:48:15 AM	53815
Ethylbenzene	ND	0.050		mg/Kg	1	7/22/2020 1:48:15 AM	53815
Xylenes, Total	ND	0.10		mg/Kg	1	7/22/2020 1:48:15 AM	53815
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/22/2020 1:48:15 AM	53815

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 26, 2020

Robbie Runnels

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

RE: Hoss SWD OrderNo.: 2008988

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/19/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2008988**
Date Reported: **8/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company
Project: Hoss SWD
Lab ID: 2008988-001 **Matrix:** SOIL

Client Sample ID: SP8@13'
Collection Date: 8/17/2020 9:30:00 AM
Received Date: 8/19/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	830	60		mg/Kg	20	8/26/2020 2:21:14 AM	54676

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2008988**

26-Aug-20

Client: Mewbourne Oil Company

Project: Hoss SWD

Sample ID: **MB-54676**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **54676**	RunNo: **71336**							
Prep Date: **8/25/2020**	Analysis Date: **8/25/2020**	SeqNo: **2490791**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Mewbourne Oil Company Work Order Number: 2008988 RcptNo: 1

Received By: **Cheyenne Cason** 8/19/2020 10:00:00 AM

Completed By: **Juan Rojas** 8/19/2020 10:18:59 AM

Reviewed By: SPA 8.19.20

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: EM 8/19/20

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8	Good				

Chain-of-Custody Record

Client: Newbourne

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 5day

Project Name: Hoss SWD

Project #: 12712

Project Manager: Lance Crenshaw

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.8±0=5.8 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2008544	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-17	9:30	Soil	SP @ 13'	Jar-1	ice	-001							X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8-18	10:45				8/18/20	1500
8/18/20	1900		CHE COURIER		8/19/20	1000

Remarks: Email results to pm@etechenv.com, rrunnels@newbourne.com

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 D
Photographic Log

Photographic Log

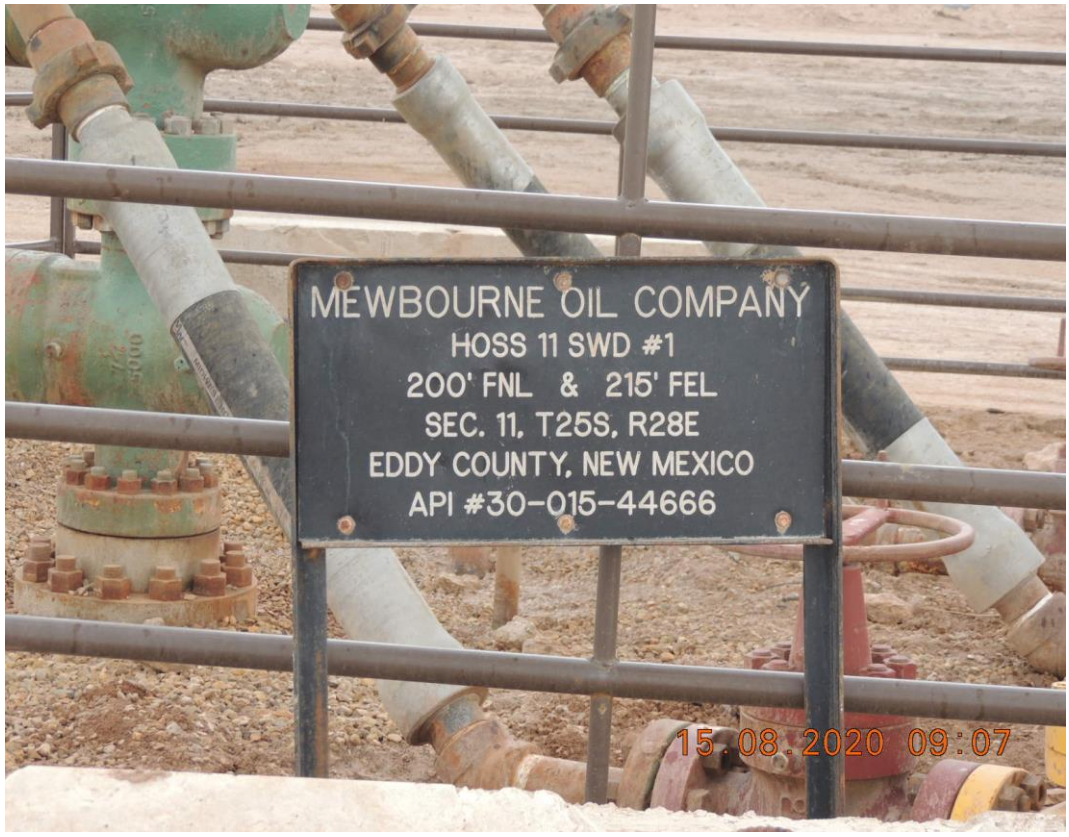
Photo Number: #1 **Photo Direction:** North **Photo Description:** Lease sign depicting location name.	

Photo Number: #2 **Photo Direction:** South **Photo Description:** Chloride impact on pad area.	

Photographic Log

Photo Number: #3 **Photo Direction:** North **Photo Description:** Impacted area in and around surface equipment.	

Photo Number: #4 **Photo Direction:** North **Photo Description:** Imapacted area in and around surface equipment.	

Photographic Log

Photo Number: #5 **Photo Direction:** East **Photo Description:** Impacted pasture area.	

Photo Number: #6 **Photo Direction:** Northeast **Photo Description:** Impacted pasture area.	

Appendix E
Cave/Karst Survey & Drilling Reports

DRILL SITE CONSULTING
822 W. DELAWARE
HOBBS NM, 88242

MEWBOURNE: HOSS 11 SWD #1
SECTION 11, TOWNSHIP 25 SOUTH, RANGE 28 EAST
EDDY COUNTY, NEW MEXICO

CAVE AND KARST SURFACE EVALUATION

15 AUGUST, 2020

BLM PROJECT NUMBER, NM

Work was started and completed on 15 August, 2020.

The HOSS 11 PAD was identified. A 200 meter perimeter was walked around the entire pad within certain boundaries. A main oil field road establishes the east boundary and existing oil and gas installations provided some other boundaries. The area was walked and checked for cave and karst concerns.

Cave or karst concerns were identified. They are highlighted in RED.
No other cave or karst concerns were identified.

Points were verified by using Garmin GPSMAP 64 hand-held GPS units with 13 S, WGS 83 as the datum.

The POINT LOCATIONS are for determining the route and serve no other purposes.

HOSS 11 PAD

POINT LOCATION	EUTM	NUTM	DESCRIPTION
NW PAD CORNER	589512	3557689	LOCATED
NE PAD CORNER	589633	3557689	LOCATED
SW PAD CORNER	589513	3557564	LOCATED
SE PAD CORNER	589636	3557564	LOCATED
C/L PAD	589569	3557629	LOCATED

LUCID COMPRESSOR STATION PAD

POINT LOCATION	EUTM	NUTM	DESCRIPTION
NW CORNER OF PAD FENCE	589620	3557475	LOCATED
SW CORNER OF PAD FENCE	589657	3557356	LOCATED
SE CORNER OF PAD FENCE	589834	3557410	LOCATED
NE CORNER OF PAD FENCE	589797	3557527	LOCATED

200 METER PERIMETER

POINT LOCATION	EUTM	NUTM	DESCRIPTION
NW CORNER	589275	3577878	LOCATED
NE CORNER	589736	3577878	C/L OIL FIELD ROAD
SW CORNER	589314	3577368	LOCATED
SE CORNER	589314	3577368	C/L OIL FIELD ROAD

GRIDDING CRITERIA

The area was walked on 50 meter grid transects. The grid parameters were:

From east to west on 3557900N, 3557850N, 3557700N, 3557650N, 3557500N, & 3557450N starting at the main oil field road and stopping at 589300E,

and

From west to east on 3557800N, 3557750N, 3557600N, 3557550N, 3557400N, & 3557350N starting at 589300E and stopping at the main oil field road.

ADDITIONAL FINDINGS OBSERVED DURING THE GRIDDED WALK

1 SOLARIS BPL trending N-S on 589705E
2 LUCID BPL trending N-S on 589643E
3 LUCID BPL trending N-S on 589687E
4 4WIRE O/H POWER LINE trending N-S on 589640E
5 ORYX MIDSTREAM BPL trending NNW-SSE on 589483E
6 C/L road running NNW-SSE on 589391E
7 4 WIRE O/H POWER LINE trending NNW-SSE on 589385E
8 MEWBOURNE BWL on 589364E
9 A spill area ~4O feet square.

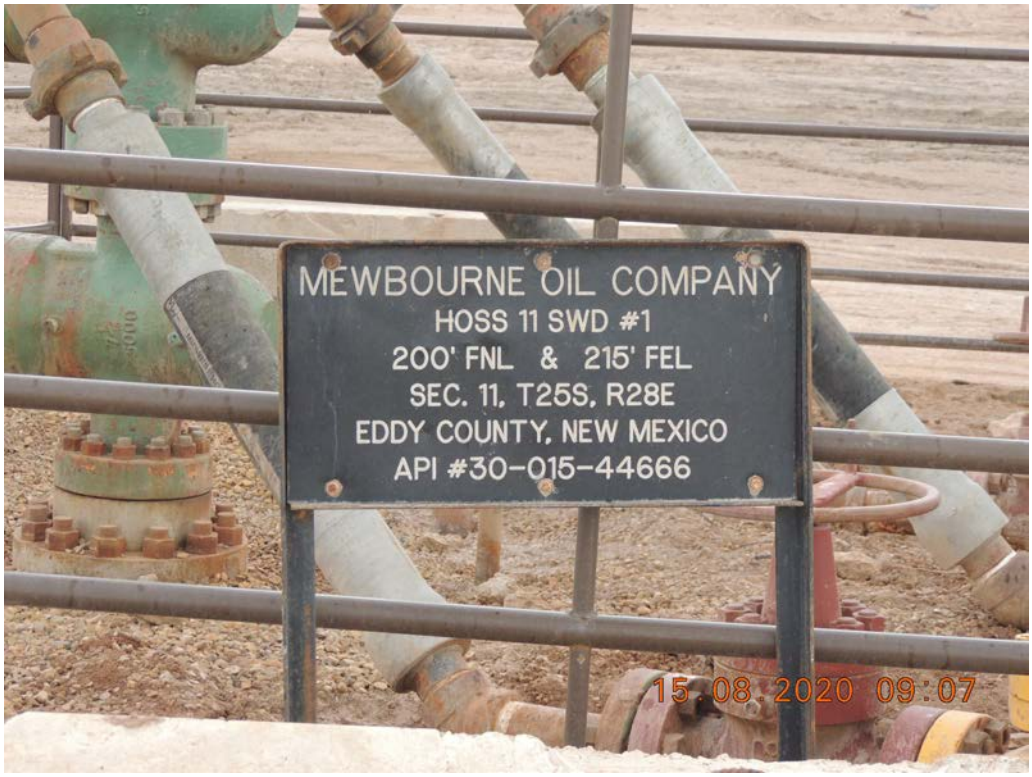
10 A valve located on the edge of the berm. Could be the source of the spill?? 589633E, 3557592N

The ground was composed of red/brown sandy soil. Small pieces of limestone are scattered in the walked area.

This evaluation includes only features apparent on the surface and does not include features which may exist sub-surface.

Photographs were taken.

David S. Belski
Cave and Karst Surface Evaluation



WELL PAD SIGNAGE

SURFACE DRAIN, 589304E, 3557882N, DEPTH UNKNOWN

SURFACE DRAIN, 589304E, 3557882N, DEPTH UNKNOWN

A 4” DIAMETER X 4+ FOOT DEEP HOLE DRILLED IN A SPILL AREA

A VALVE IN THE SPILL AREA, 589632E, 3557605N

A VALVE IN SPILL AREA, 589632E, 3557605N

TYPICAL SPILL AREA

CENTER OF SPILL AREA

Ready DRILL LLC
P.O. Box 7269
Abilene, Texas 79608
Tel 325-690-0053
Fax 325-698-0055

Drill Report M1 0957

Date: 7 Aug '20 Computer#: _____

Customer: Newbourne 2 Locations Rawhided 2nd

Lease/well: Hoss 11 Sud #1

Drilling Rig: _____

Rig measurement: _____

One Call#: _____

Prep Time 0530 Standby _____

Depart Shop _____ Arrived at Shop _____

Arrive at Loc. _____ Total Hours _____

Finished Job _____

Employees: McCracken, Shawn, Dylan

	Hole (Diameter x depth)	Pipe/cellar size	Total Drill Time
Cellar			
Conductor			
Mouse			
Rat			

Ground Level	Drilling conditions (describe material; rock, sand, gravel, clay, color of material, water zones, etc)
-------	53' Inside Containment "No water"
-------	17' out Side During Drill
-------	Rawhide

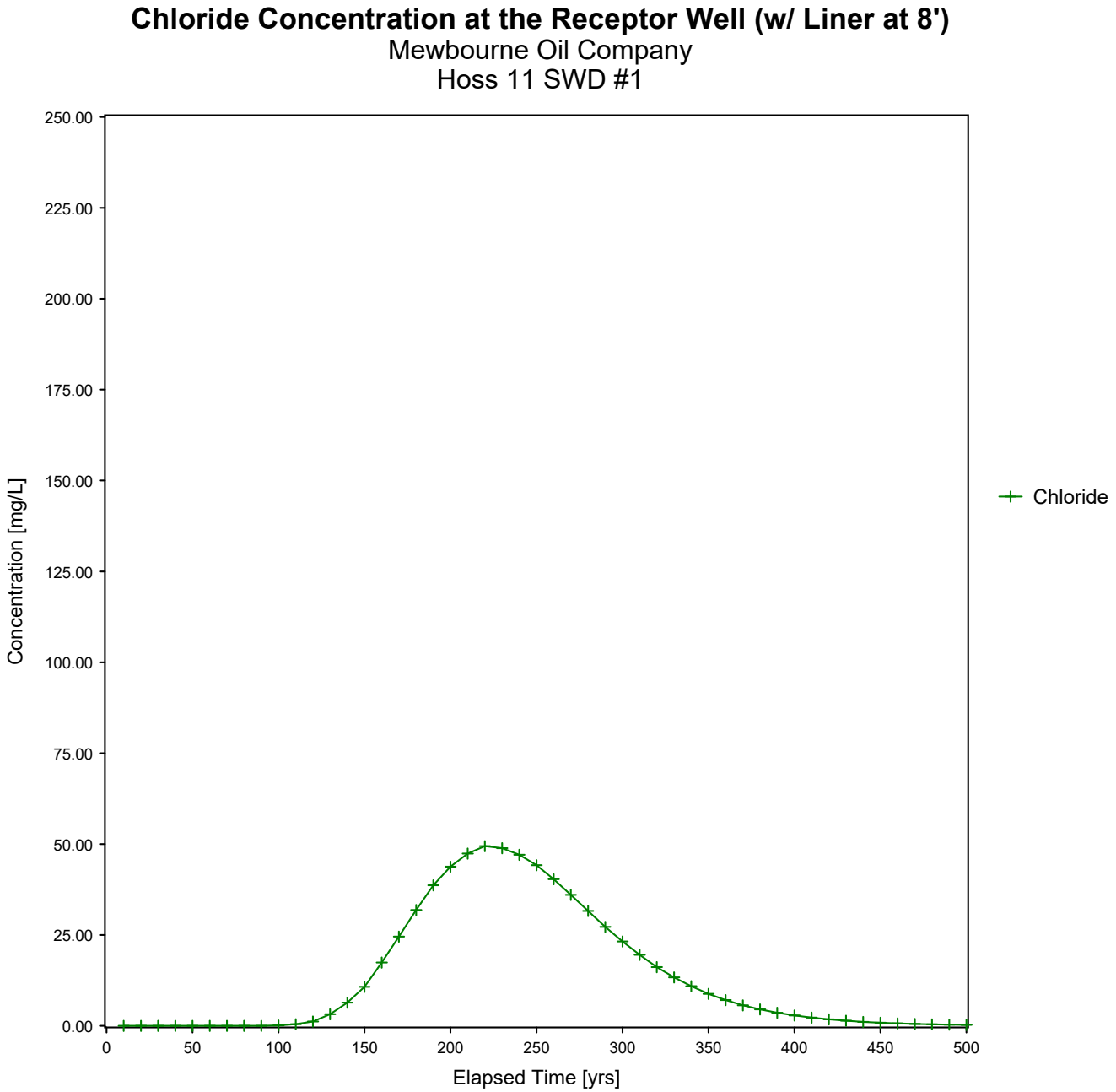
-------	135' Pad on Rawhide "No water"
-------	During Drill

Total Depth	

Cement	Total yards poured:	# Cement Trucks:	(volumetric/roller)
	(in-house)	Squeezed by:	(list third party)
Cement Employees:			
Water trucks (in house) #:		3rd party water/vac #:	
Drilling mud Bbls:			
Bullet teeth Qty:		Fencing provided?	yes___ no___ Type of fencing

Job Notes

Appendix F
Multimedia Exposure Assessment Model (MULTIMED)



U. S. E N V I R O N M E N T A L P R O T E C T I O N A G E N C Y

E X P O S U R E A S S E S S M E N T

M U L T I M E D I A M O D E L

MULTIMED (Version 1.50, 2005)

1
Run options
--- -------

Newbourne Oil Company

Hess 11 SWD #1
Chemical simulated is Chloride

Option Chosen Saturated and unsaturated zone models
Run was DETERMIN
Infiltration Specified By User: 7.620E-03 m/yr
Run was transient
Well Times: Find Maximium Concentration
Reject runs if Y coordinate outside plume
Reject runs if Z coordinate outside plume
Gaussian source used in saturated zone model
1
1
UNSATURATED ZONE FLOW MODEL PARAMETERS
(input parameter description and value)

NP	- Total number of nodal points	240
NMAT	- Number of different porous materials	1
KPROP	- Van Genuchten or Brooks and Corey	1
IMSHGN	- Spatial discretization option	1
NVFLAYR	- Number of layers in flow model	1

OPTIONS CHOSEN
------- ------
Van Genuchten functional coefficients
User defined coordinate system
1

Layer information

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	12.19	1

DATA FOR MATERIAL 1

VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	4.17	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.130	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	12.2	0.000	0.000	0.000

DATA FOR MATERIAL 1

VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Residual water content	--	CONSTANT	0.116	-999.	-999.	-999.
Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-02	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

1

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

NLAY	- Number of different layers used		1
NTSTPS	- Number of time values concentration calc		40
DUMMY	- Not presently used		1
ISOL	- Type of scheme used in unsaturated zone		2
N	- Stehfest terms or number of increments		18
NTEL	- Points in Lagrangian interpolation		3
NGPTS	- Number of Gauss points		104
NIT	- Convolution integral segments		2
IBOUND	- Type of boundary condition		3
ITSGEN	- Time values generated or input		1
TMAX	- Max simulation time	--	0.0
WTFUN	- Weighting factor	--	1.2

OPTIONS CHOSEN

Convolution integral approach
Exponentially decaying continuous source
Computer generated times for computing concentrations

1

DATA FOR LAYER 1

VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Thickness of layer	m	CONSTANT	12.2	-999.	-999.	-999.
Longitudinal dispersivity of layer	m	DERIVED	-999.	-999.	-999.	-999.
Percent organic matter	--	CONSTANT	0.000	-999.	-999.	-999.
Bulk density of soil for layer	g/cc	CONSTANT	1.99	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

1

CHEMICAL SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Solid phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Dissolved phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Overall chemical decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Acid catalyzed hydrolysis rate	l/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Neutral hydrolysis rate constant	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Base catalyzed hydrolysis rate	l/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Reference temperature	C	CONSTANT	25.0	-999.	-999.	-999.
Normalized distribution coefficient	ml/g	CONSTANT	0.000	-999.	-999.	-999.
Distribution coefficient	--	DERIVED	-999.	-999.	-999.	-999.
Biodegradation coefficient (sat. zone)	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Air diffusion coefficient	cm2/s	CONSTANT	-999.	-999.	-999.	-999.
Reference temperature for air diffusion	C	CONSTANT	-999.	-999.	-999.	-999.
Molecular weight	g/M	CONSTANT	-999.	-999.	-999.	-999.
Mole fraction of solute	--	CONSTANT	-999.	-999.	-999.	-999.
Vapor pressure of solute	mm Hg	CONSTANT	-999.	-999.	-999.	-999.
Henry`s law constant	atm-m^3/M	CONSTANT	-999.	-999.	-999.	-999.
Overall 1st order decay sat. zone	1/yr	DERIVED	0.000	0.000	0.000	1.00
Not currently used		CONSTANT	0.000	0.000	0.000	0.000
Not currently used		CONSTANT	0.000	0.000	0.000	0.000

1

SOURCE SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Infiltration rate	m/yr	CONSTANT	0.762E-02	-999.	-999.	-999.
Area of waste disposal unit	m^2	CONSTANT	0.107E+04	-999.	-999.	-999.
Duration of pulse	yr	DERIVED	0.100E-08	-999.	-999.	-999.
Spread of contaminant source	m	DERIVED	-999.	-999.	-999.	-999.
Recharge rate	m/yr	CONSTANT	0.000	-999.	-999.	-999.
Source decay constant	1/yr	CONSTANT	0.250E-01	0.000	0.000	0.000
Initial concentration at landfill	mg/l	CONSTANT	0.100E+04	-999.	-999.	-999.
Length scale of facility	m	DERIVED	-999.	-999.	-999.	-999.
Width scale of facility	m	DERIVED	-999.	-999.	-999.	-999.
Near field dilution		DERIVED	1.00	0.000	0.000	1.00

AQUIFER SPECIFIC VARIABLES

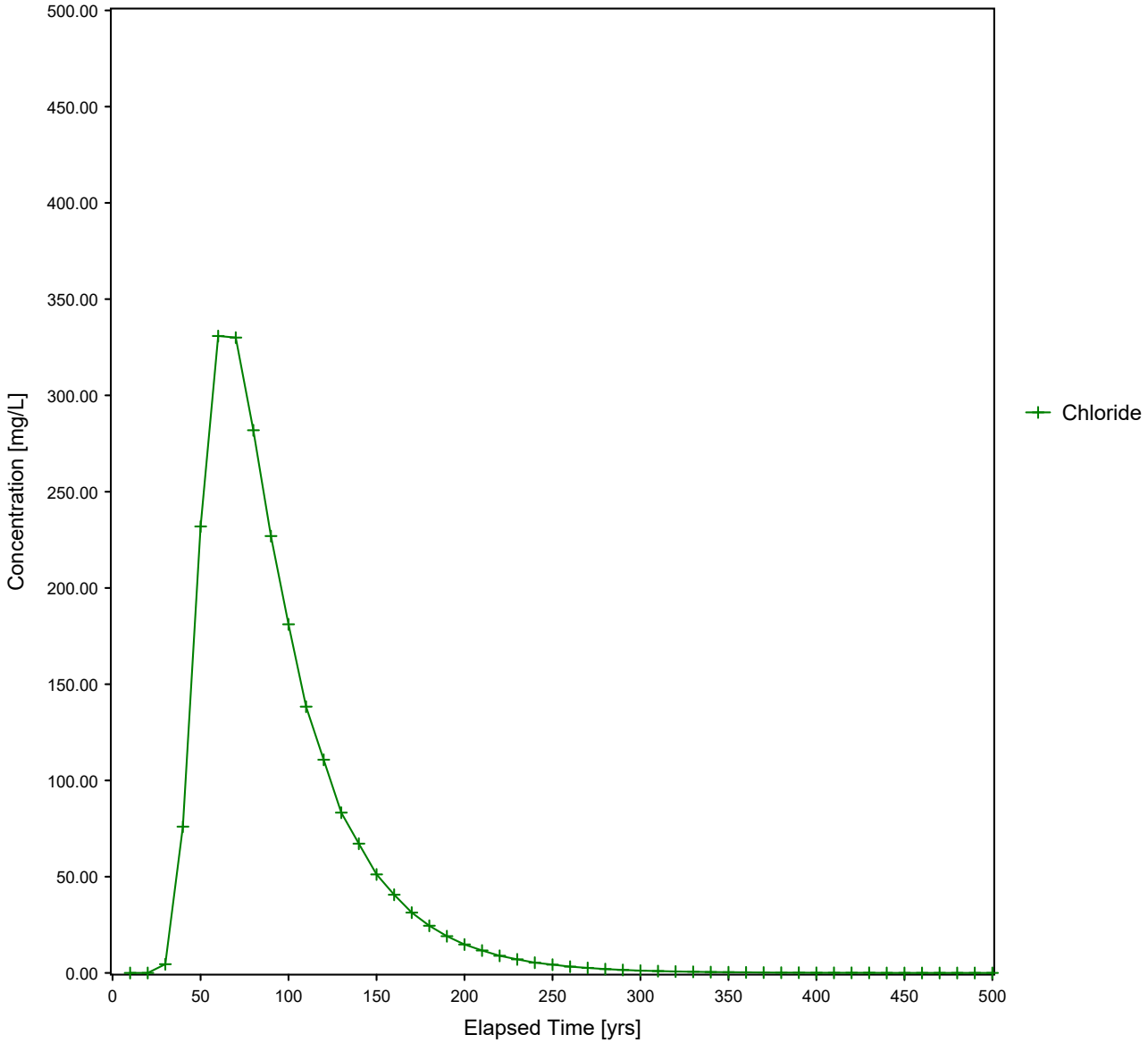
VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Particle diameter	cm	CONSTANT	-999.	-999.	-999.	-999.
Aquifer porosity	--	CONSTANT	0.300	-999.	-999.	-999.
Bulk density	g/cc	CONSTANT	1.86	-999.	-999.	-999.
Aquifer thickness	m	CONSTANT	6.10	-999.	-999.	-999.
Source thickness (mixing zone depth)	m	DERIVED	-999.	-999.	-999.	-999.
Conductivity (hydraulic)	m/yr	CONSTANT	315.	-999.	-999.	-999.
Gradient (hydraulic)		CONSTANT	0.300E-02	-999.	-999.	-999.
Groundwater seepage velocity	m/yr	DERIVED	-999.	-999.	-999.	-999.
Retardation coefficient	--	DERIVED	-999.	-999.	-999.	-999.
Longitudinal dispersivity	m	FUNCTION OF X	-999.	-999.	-999.	-999.
Transverse dispersivity	m	FUNCTION OF X	-999.	-999.	-999.	-999.
Vertical dispersivity	m	FUNCTION OF X	-999.	-999.	-999.	-999.
Temperature of aquifer	C	CONSTANT	20.0	-999.	-999.	-999.
pH	--	CONSTANT	7.00	-999.	-999.	-999.
Organic carbon content (fraction)		CONSTANT	0.000	-999.	-999.	-999.
Well distance from site	m	CONSTANT	1.00	-999.	-999.	-999.
Angle off center	degree	CONSTANT	0.000	-999.	-999.	-999.
Well vertical distance	m	CONSTANT	0.000	-999.	-999.	-999.

MAXIMUM WELL CONCENTRATION IS 49.42 AT 220 YEARS

Chloride Concentration at the Receptor Well (No Liner)

Mewbourne Oil Company

Hoss 11 SWD #1



U. S. E N V I R O N M E N T A L P R O T E C T I O N A G E N C Y

E X P O S U R E A S S E S S M E N T

M U L T I M E D I A M O D E L

MULTIMED (Version 1.50, 2005)

1
Run options
--- -------

Newbourne Oil Company

Hess 11 SWD #1
Chemical simulated is Chloride

Option Chosen Saturated and unsaturated zone models
Run was DETERMIN
Infiltration Specified By User: 3.048E-02 m/yr
Run was transient
Well Times: Find Maximium Concentration
Reject runs if Y coordinate outside plume
Reject runs if Z coordinate outside plume
Gaussian source used in saturated zone model
1
1
UNSATURATED ZONE FLOW MODEL PARAMETERS
(input parameter description and value)

NP	- Total number of nodal points	240
NMAT	- Number of different porous materials	1
KPROP	- Van Genuchten or Brooks and Corey	1
IMSHGN	- Spatial discretization option	1
NVFLAYR	- Number of layers in flow model	1

OPTIONS CHOSEN
------- ------
Van Genuchten functional coefficients
User defined coordinate system
1

Layer information

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	12.19	1

DATA FOR MATERIAL 1

VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	4.17	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.130	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	12.2	0.000	0.000	0.000

DATA FOR MATERIAL 1

VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Residual water content	--	CONSTANT	0.116	-999.	-999.	-999.
Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-02	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

1

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

NLAY	- Number of different layers used		1
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DUMMY	- Not presently used		1
ISOL	- Type of scheme used in unsaturated zone		2
N	- Stehfest terms or number of increments		18
NTEL	- Points in Lagrangian interpolation		3
NGPTS	- Number of Gauss points		104
NIT	- Convolution integral segments		2
IBOUND	- Type of boundary condition		3
ITSGEN	- Time values generated or input		1
TMAX	- Max simulation time	--	0.0
WTFUN	- Weighting factor	--	1.2

OPTIONS CHOSEN

Convolution integral approach
Exponentially decaying continuous source
Computer generated times for computing concentrations

1

DATA FOR LAYER 1

VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Thickness of layer	m	CONSTANT	12.2	-999.	-999.	-999.
Longitudinal dispersivity of layer	m	DERIVED	-999.	-999.	-999.	-999.
Percent organic matter	--	CONSTANT	0.000	-999.	-999.	-999.
Bulk density of soil for layer	g/cc	CONSTANT	1.99	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

1

CHEMICAL SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Solid phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Dissolved phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Overall chemical decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Acid catalyzed hydrolysis rate	l/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Neutral hydrolysis rate constant	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Base catalyzed hydrolysis rate	l/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Reference temperature	C	CONSTANT	25.0	-999.	-999.	-999.
Normalized distribution coefficient	ml/g	CONSTANT	0.000	-999.	-999.	-999.
Distribution coefficient	--	DERIVED	-999.	-999.	-999.	-999.
Biodegradation coefficient (sat. zone)	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Air diffusion coefficient	cm2/s	CONSTANT	-999.	-999.	-999.	-999.
Reference temperature for air diffusion	C	CONSTANT	-999.	-999.	-999.	-999.
Molecular weight	g/M	CONSTANT	-999.	-999.	-999.	-999.
Mole fraction of solute	--	CONSTANT	-999.	-999.	-999.	-999.
Vapor pressure of solute	mm Hg	CONSTANT	-999.	-999.	-999.	-999.
Henry`s law constant	atm-m^3/M	CONSTANT	-999.	-999.	-999.	-999.
Overall 1st order decay sat. zone	1/yr	DERIVED	0.000	0.000	0.000	1.00
Not currently used		CONSTANT	0.000	0.000	0.000	0.000
Not currently used		CONSTANT	0.000	0.000	0.000	0.000

1

SOURCE SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS MEAN	PARAMETERS STD DEV	LIMITS MIN	LIMITS MAX
Infiltration rate	m/yr	CONSTANT	0.305E-01	-999.	-999.	-999.
Area of waste disposal unit	m^2	CONSTANT	0.107E+04	-999.	-999.	-999.
Duration of pulse	yr	DERIVED	0.100E-08	-999.	-999.	-999.
Spread of contaminant source	m	DERIVED	-999.	-999.	-999.	-999.
Recharge rate	m/yr	CONSTANT	0.000	-999.	-999.	-999.
Source decay constant	1/yr	CONSTANT	0.250E-01	0.000	0.000	0.000
Initial concentration at landfill	mg/l	CONSTANT	0.100E+04	-999.	-999.	-999.
Length scale of facility	m	DERIVED	-999.	-999.	-999.	-999.
Width scale of facility	m	DERIVED	-999.	-999.	-999.	-999.
Near field dilution		DERIVED	1.00	0.000	0.000	1.00

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VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
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Particle diameter	cm	CONSTANT	-999.	-999.	-999.	-999.
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Aquifer thickness	m	CONSTANT	6.10	-999.	-999.	-999.
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Longitudinal dispersivity	m	FUNCTION OF X	-999.	-999.	-999.	-999.
Transverse dispersivity	m	FUNCTION OF X	-999.	-999.	-999.	-999.
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pH	--	CONSTANT	7.00	-999.	-999.	-999.
Organic carbon content (fraction)		CONSTANT	0.000	-999.	-999.	-999.
Well distance from site	m	CONSTANT	1.00	-999.	-999.	-999.
Angle off center	degree	CONSTANT	0.000	-999.	-999.	-999.
Well vertical distance	m	CONSTANT	0.000	-999.	-999.	-999.

MAXIMUM WELL CONCENTRATION IS 340.7 AT 65.6 YEARS

State of New Mexico
Oil Conservation Division

Incident ID	nRM2018244476
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☑ Extents of contamination must be fully delineated.

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

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

Printed Name: Robbie Runnels Title: Environmental Representative

Signature: _____ Date: _____

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

OCD Only

Received by: Robert Hamlet Date: 3/15/2021

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

Signature: Robert Hamlet Date: 3/15/2021

The variance request for composite soil samples every fifty (50) linear feet from the excavation sidewalls and every 500 square feet from the base of the excavated area is approved. Due to the shallow depth to groundwater (adjacent wells 25' or less), 8 ft liner is denied. Variance to collect TPH and BTEX confirmation samples at 100 foot horizontal increments is denied. Please follow all other requirements in the conditionally approved remediation plan.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 20381

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM88241	14744	20381	C-141

OCD Reviewer	Condition
rhamlet	The variance request for composite soil samples every fifty (50) linear feet from the excavation sidewalls and every 500 square feet from the base of the excavated area is approved. Due to the shallow depth to groundwater (adjacent wells 25' or less), 8 ft liner is denied. Variance to collect TPH and BTEX confirmation samples at 100 foot horizontal increments is denied. Please follow all other requirements in the conditionally approved remediation plan