Bell Lake 19 State 1 Battery

nAPP2208125818

3/21/2022

Spill Volume(Bbls) Calculator	
Inputs in blue, Outputs in red	
Contaminated Soil measurement	
Area (square feet)	Depth(inches)
1714.063	0.750
Cubic Feet of Soil Impacted	107.129
Barrels of Soil Impacted	19.10
Soil Type	Sand
Barrels of Oil Assuming 100% Saturation	3.82
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	3.82
Free Standing Fluid Only	
Area (square feet)	Depth(inches)
0	0.000
Standing fluid	0.000
Total fluids spilled	**3.819**

Incident Number: nAPP2208125818

Release Assessment and Closure

Bell Lake 19 State #001H

Unit M, Section 19, Township 24 South, Range 33 East
API: 30-025-41024
County: Lea
Vertex File Number: 22E-01100

Prepared for:
Devon Energy Production Company, LP

Prepared by:
Vertex Resource Services Inc.

Date:
February 2024

Release Assessment and Closure
Bell Lake 19 State #001H
Unit M, Section 19, Township 24 South, Range 33 East
API: 30-025-41024
County: Lea

Prepared for:
Devon Energy Production Company, LP
6488 Seven Rivers Highway
Artesia, New Mexico 88210

New Mexico Oil Conservation Division – District 1 – Hobbs
1625 North French Drive
Hobbs, New Mexico 88240

Prepared by:
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Lakin Pullman

Lakin Pullman, B.Sc.
ENVIRONMENTAL SPECIALIST, REPORTING

February 25, 2024
Date

kent stallings P.G.

Kent Stallings, P.G.
PROJECT MANAGER, REPORT REVIEW

February 28, 2024
Date

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1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release that occurred on March 21, 2022, at Bell Lake 19 State #001H, API 30-025-41024 (hereafter referred to as the "site"). Devon submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 1 on May 19, 2022. Incident ID number nAPP2208125818 was assigned to this incident.

This report provides a description of the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for closure of this release, with the understanding that restoration of the release site will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed> as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on March 21, 2022, due to a leak from a 4-inch ball valve on the main water transfer line. The incident was reported on March 22, 2022, and involved the release of approximately 4 bbl of produced water onto the west edge of the pad and off pad into the ditch west of the pad. No free fluid was recovered during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 24 miles west-northwest of Jal, New Mexico. The legal location for the site is Unit M, Section 19, Township 24 South and Range 33 East in Lea County, New Mexico. The release area is located on New Mexico State property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release area on and around the constructed pad (Figure 1).

The surrounding landscape is associated with plains typical of elevations of 3,000 to 3,900 feet above sea level. The climate is semi-arid, with average annual precipitation ranging between 10 and 15 inches. Historically, the plant community was dominated by grasses, which stabilized the potentially erosive sandy soils; however, more recent conditions, resulting from fire suppression and extensive grazing, show increased woody plant abundance. The dominant grass species are dropseeds and threeawn interspersed with mesquite. Short grasses are a significant proportion of ground cover while shrubs, litter and, to a lesser extent, bare ground compose the remainder (United States Department of Agriculture, Natural Resources Conservation Service, 2022). Limited to no vegetation is allowed to grow on the compacted facility pad.

The surface geology at the site primarily comprises Qep – eolian and piedmont deposits that include eolian sands interlaid with piedmont-slope deposits (New Mexico Bureau of Geology and Mineral Resources, 2022). The Natural

Resources Conservation Service Web Soil Survey classifies the soil at the site as Pyote loamy fine sand and Ratliff-Wink fine sandy loams, characterized by loamy fine sand, fine sandy loam, clay loam, and sandy loam. The soils tend to be well drained with negligible to low runoff potential (United States Department of Agriculture, Natural Resources Conservation Service, 2022). There is low potential for karst geology to be present near the site, though some erosional karst is possible (United States Department of the Interior, Bureau of Land Management, 2018).

4.0 Closure Criteria Determination

The depth to groundwater was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) within a 0.5 mile radius of the site. The borehole was advanced to a depth of 55 feet on December 13, 2023. The borehole was left to recharge as per the requirements on the WR-07 Application for Permit to Drill a Well with No Water Rights, and an interface probe was utilized to determine whether groundwater was present at the conclusion of the 72-hour recharge period. No water was found to be present at that time. The borehole was plugged and abandoned on December 20, 2023, according to the WR-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Documentation related to the exploratory borehole is included in Appendix F.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 2.9 miles east of the site (United States Fish and Wildlife Service, 2022). At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Information pertaining to the closure criteria determination is summarized in Table 1 and references are included in Appendix B.

Based on data included in the closure criteria determination worksheet, the release at the site is not subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 of NMAC. The nearest depth to groundwater reference is 0.488 miles from the site; therefore, the closure criteria for the incident assumes depth to groundwater between 51 and 100 feet below ground surface (bgs; New Mexico Office of the State Engineer, 2024). The closure criteria for the release area off the pad will also adhere to Paragraph (1) of Subsection D of 19.15.29.13 NMAC for reclamation from surface to 4 feet bgs. The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2, and Table 3 for pad and pasture, respectively.
.

Table 1. Closure Criteria Determination				
Site Name: Bell Lake 19 State #001H				
Spill Coordinates: 32.196719,-103.618004		**X: 630263,3563078 Y: UTM northing**		
Site Specific Conditions		**Value**	**Unit**	**Reference**
1	Depth to Groundwater (nearest reference)	**>55**	feet	1
	Distance between release and nearest DTGW reference	**2,576**	feet	
		0.488	miles	
	Date of nearest DTGW reference measurement	**December 13, 2023**		
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	15,346	feet	2
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	18,686	feet	3
4	Within 300 feet from an occupied residence, school, hospital, institution or church	15,053	feet	4
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	9,983	feet	5
	ii) Within 1000 feet of any fresh water well or spring	9,983	feet	5
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)	6
7	Within 300 feet of a wetland	14,242	feet	7
8	Within the area overlying a subsurface mine	No	(Y/N)	8
	Distance between release and nearest registered mine	**100,222**	feet	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low	9
	Distance between release and nearest High Karst	**52,617**	feet	
10	Within a 100-year Floodplain	Undetermined	year	10
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	**50,616**	feet	
11	Soil Type	Loamy fine sand, fine sandy loam		11
12	Ecological Classification	Loamy sand		12
13	Geology	Eolian and piedmont deposits		13
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	51-100'	<50' 51-100' >100'	

The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	**Constituent**	**Limit**
51 feet - 100 feet	Chloride	10,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

Table 3. Closure Criteria for Soils to Remediation & Reclamation Standards		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	**Constituent**	**Limit**
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW 51-100 feet (19.15.29.12)	Chloride	10,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

bgs – below ground surface
DTGW – depth to groundwater

5.0 Remedial Actions Taken

Initial release characterization activities the site were completed by Vertex between April 25 and 26, 2022, including vertical and horizontal delineation. The impacted area west and northeast of the tank containment was determined to be approximately 110 feet long and 46 feet wide; the total affected area was determined to be 2,569 square feet. The Daily Field Reports (DFRs) associated with the site visits are included in Appendix C. Characterization sample locations and approximate release areas are presented on Figure 1. Characterization field screening and laboratory results are summarized in Table 4.

Remediation efforts began on July 6, 2022, and were finalized on July 22, 2022. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 37 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and an Electroconductivity meter (chloride). Field screening results were used to identify areas requiring

further remediation from those areas showing concentrations below determined closure criteria levels. Soils were removed to depths of 2 and 4 feet bgs. The total surface area of the excavation walls was approximately 2,088 square feet, and the total surface area of the excavation base was 3,327 square feet. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. The DFRs documenting various phases of the remediation are included in Appendix C.

Notification that confirmatory samples were being collected was provided to the NMOCD on July 1, 11, and 19, 2022, and are included in Appendix D. Confirmatory samples were collected from the base and walls of the excavation as five-point composites. Each composite sample was representative of no more than 200 square feet per the alternate sampling method outlined in Subparagraph (c) of Paragraph (1) of Subsection D 19.15.29.12 NMAC, which does not require prior NMOCD approval. A total of 18 excavation base samples and 19 excavation wall samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Eurofins (formerly Hall Environmental Analysis Laboratory) under chain of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 5, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed were below closure criteria for the site.

6.0 Closure Request

Vertex recommends no additional reclamation or remediation actions to address the release at Bell Lake 19 State #001H. The release area was fully delineated, remediated and backfilled with local soils by August 2, 2022. Laboratory analyses of the confirmatory samples showed constituent of concern concentration levels below NMOCD closure criteria for areas where depth to groundwater is between 51 and 100 feet bgs as shown in Tables 2 and 3. There are no anticipated risks to human, ecological or hydrological receptors associated with the release site.

Vertex requests that the incident (nAPP2208125818) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Devon certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the historical releases at the site.

Should you have any questions or concerns, please do not hesitate to contact the project manager Kent Stallings at 346.814.1413 or kstallings@vertex.ca.

7.0 References

New Mexico Bureau of Geology and Mineral Resources. (2022). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

New Mexico Office of the State Engineer. (2024). *New Mexico Water Rights Reporting System*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/index.html

New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.

United States Department of Agriculture, Natural Resources Conservation Service. (2022). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karst*. Retrieved from https://www.nm.blm.gov/shapeFiles/cfo/carlsbad_spatial_data.html

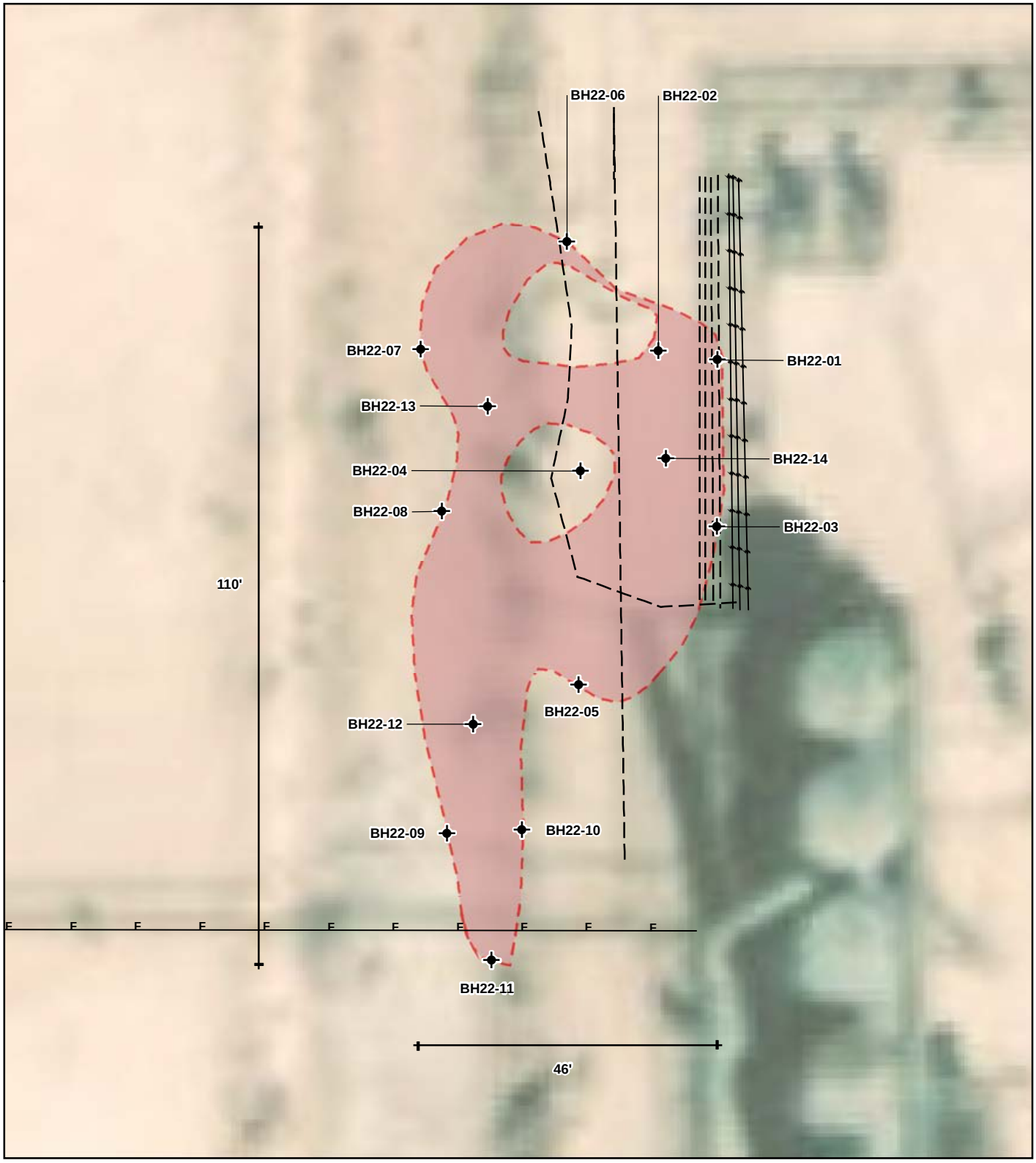
United States Fish and Wildlife Service. (2022). *National Wetland Inventory - Surface Waters and Wetlands*. Retrieved from https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

8.0 Limitations

This report has been prepared for the sole benefit of Devon Energy Production Company, LP. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division and the New Mexico State land office, without the express written consent of Vertex Resource Services Inc. (Vertex) and Devon Energy Production Company, LP. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

FIGURES



VERTEX

0 3.75 7.5 15 ft.

NAD 1983 UTM Zone 13N
Date: May 31/22

Map Center:
Lat: 32.196652,
Long:-103.618257

N

Site Schematic and Characterization
Sample Locations
Bell Lake 19 State #001H

FIGURE: 1

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Background image from ESRI, 2020. Site features from field survey by Vertex Professionals Services, 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2022\22E-01100 - Bell Lake 19 State #001H\Figure 1 Characterization Schematic Bell Lake 19 State #001H.mxd

● Base Sample (Prefixed by "BS22-")

▲ Wall Sample (Prefixed by "WS22-")

2' Excavation Area (~1394 sq. ft.)

4' Center Excavation Area (~390 sq. ft.)

4' East Excavation Area (~425 sq. ft.)

4' North Excavation Area (~112 sq. ft.)

4' Northwest Excavation Area (~941 sq. ft.)

4' South Excavation Area (~65 sq. ft.)

Total Excavation Area ~3,327 sq. ft.

VERTEX

Map Center:
Lat/Long: 32.196684, -103.618253

NAD 1983 UTM Zone 13N
Date: Sep 08/22

N

Confirmatory Sample Locations
Bell Lake 19 State #001H

FIGURE:
2

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Background imagery from Maxar, 2020. Features from GPS. Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2022\22E-01100 - Bell Lake 19 State #001H\Figure 2 Confirmatory Sample Locations Bell Lake 19 State #001H.mxd

TABLES

Client Name: Devon Energy Production Company, LP
Site Name: Bell Lake 19 State #001H
NMOCD Tracking #: nAPP2208125818
Project #: 22E-01100
Lab Reports: 2204B43 and 2204C66

Table 4. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater 51-100 feet bgs

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH22-01	0	April 25, 2022	0	13	353	ND	ND	ND	13	49	13	64	ND
	2	April 25, 2022	0	17	320	-	-	-	-	-	-	-	-
BH22-02	0	April 25, 2022	0	8	370	ND	ND	ND	15	61	15	76	ND
	2	April 25, 2022	1	9	318	-	-	-	-	-	-	-	-
BH22-03	0	April 25, 2022	0	9	368	ND	ND	ND	10	ND	10	10	ND
	2	April 25, 2022	0	24	349	-	-	-	-	-	-	-	-
BH22-04	0	April 25, 2022	0	15	339	ND	ND	ND	ND	ND	ND	ND	62
	2	April 25, 2022	0	22	128	-	-	-	-	-	-	-	-
BH22-05	0	April 25, 2022	0	40	422	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 25, 2022	0	12	320	-	-	-	-	-	-	-	-
BH22-06	0	April 25, 2022	0	16	365	ND	ND	ND	ND	ND	ND	ND	340
	2	April 25, 2022	0	10	216	-	-	-	-	-	-	-	-
BH22-07	0	April 25, 2022	0	28	180	ND	ND	ND	ND	ND	ND	ND	71
	2	April 25, 2022	0	49	203	-	-	-	-	-	-	-	-
BH22-08	0	April 25, 2022	0	59	197	ND	ND	ND	ND	ND	ND	ND	75
	2	April 25, 2022	0	21	275	-	-	-	-	-	-	-	-
BH22-09	0	April 25, 2022	0	29	295	ND	ND	ND	9.9	ND	9.9	9.9	72
	2	April 25, 2022	0	17	314	-	-	-	-	-	-	-	-
BH22-10	0	April 25, 2022	0	14	139	ND	ND	ND	ND	ND	ND	ND	69
	2	April 25, 2022	0	20	178	-	-	-	-	-	-	-	-
BH22-11	0	April 25, 2022	0	24	262	ND	ND	ND	ND	ND	ND	ND	74
	2	April 25, 2022	0	34	79	-	-	-	-	-	-	-	-
BH22-12	0	April 26, 2022	0	18	9,365	ND	ND	ND	ND	ND	ND	ND	**15,000**
	2	April 26, 2022	0	19	151	ND	ND	ND	ND	ND	ND	ND	230
	4	April 26, 2022	0	22	269	-	-	-	-	-	-	-	-
	6	April 26, 2022	0	20	559	-	-	-	-	-	-	-	-
BH22-13	0	April 26, 2022	1	12	3,549	ND	ND	ND	47	74	47	**121**	**11,000**
	2	April 26, 2022	0	5	4,612	-	-	-	-	-	-	-	-
	4	April 26, 2022	0	9	4,406	ND	ND	ND	34	ND	34	34	**4,800**
	6	April 26, 2022	0	10	3,276	-	-	-	-	-	-	-	-
	8	April 26, 2022	0	2	210	ND	ND	ND	ND	ND	ND	ND	330
BH22-14	0	April 26, 2022	0	16	5,830	ND	ND	ND	ND	ND	ND	ND	**7,500**
	2	April 26, 2022	0	24	5,223	-	-	-	-	-	-	-	-
	4	April 26, 2022	0	30	4,289	ND	ND	ND	ND	ND	ND	ND	**4,900**
	6	April 26, 2022	0	22	4,705	-	-	-	-	-	-	-	-
	8	April 26, 2022	0	0	373	ND	ND	ND	ND	ND	ND	ND	320

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria
Bold and green shaded indicates exceedance outside of NMOCD Reclamation Closure Criteria

Client Name: Devon Energy Production Company, LP
Site Name: Bell Lake 19 State #001H
NM OCD Tracking #: nAPP2208125818
Project #: 22E-01100
Lab Reports: 2207349, 2207412, 2207815, and 2207C30

Table 5. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater 51-100 feet bgs

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BS22-01	2	July 7, 2022	0.7	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-02	2	July 7, 2022	0.5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-03	2	July 7, 2022	0.6	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-04	4	July 7, 2022	0.5	-	301	ND	ND	ND	ND	ND	ND	ND	210
BS22-05	4	July 7, 2022	0.6	-	ND	ND	ND	ND	ND	ND	ND	ND	79
BS22-06	4	July 7, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-07	4	July 7, 2022	0.7	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-08	4	July 7, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-09	2	July 7, 2022	0.6	-	ND	ND	ND	ND	27	ND	27	27	ND
BS22-10	2	July 7, 2022	0.7	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-11	2	July 7, 2022	1.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-12	2	July 7, 2022	1.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-13	4	July 8, 2022	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	96
BS22-14	4	July 8, 2022	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	180
BS22-15	4	July 8, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	210
BS22-16	4	July 8, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS22-17	4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
BS22-18	4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
WS22-01	0-4	July 7, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-02	0-4	July 7, 2022	0.2	39	75	ND	ND	ND	ND	ND	ND	ND	110
WS22-03	0-4	July 7, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-04	2-4	July 7, 2022	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-05	0-2	July 7, 2022	0.5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-06	0-2	July 7, 2022	0.4	32	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-07	0-2	July 7, 2022	0.3	31	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-08	0-4	July 8, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-09	0-4	July 8, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-10	0-4	July 8, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-11	0-4	July 8, 2022	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-12	0-4	July 8, 2022	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-13	0-4	July 8, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-14	0-4	July 8, 2022	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS22-15	0-4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	64
WS22-16	0-4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
WS22-17	0-4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
WS22-18	0-4	July 22, 2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
WS22-19	0-4	July 13, 2022	-	-	ND	ND	ND	ND	ND	ND	ND	ND	170

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria
Bold and green shaded indicates exceedance outside of NMOCD Reclamation Closure Criteria

APPENDIX A - NMOCD C-141 Reports

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2208125818
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Dale Woodall	Contact Telephone 575-748-1838
Contact email Dale.Woodall@dvn.com	Incident # *(assigned by OCD)* nAPP2208125818
Contact mailing address 6488 Seven Rivers Hwy Artesia, NM 88210	

Location of Release Source

Latitude 32.1964625 Longitude -103.6175639
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Bell Lake 19 State #001H	Site Type Oil
Date Release Discovered 03/21/2022	API# *(if applicable)* 30-025-41024

Unit Letter	Section	Township	Range	County
M	19	24S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 4 bbl	Volume Recovered (bbls) 0 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A 4" ball valve on a main water transfer line developed a pin hole, located near the edge of pad after the water flow meter. Estimate volume 3.8 bbl of produced water. Spill not located in lined containment. Spill did impact the pad area and ran off pad behind tanks. Lease operator shut down the transfer pump and closed valve on the line.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2208125818
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Dale Woodall Date: 5-19-2022

email: Dale.Woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2208125818
District RP	30-025-41024
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	**51-100** (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2208125818
District RP	30-025-41024
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Date:

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2208125818
District RP	30-025-41024
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall Title: Environmental Professional

Signature: _____ Date: _____

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

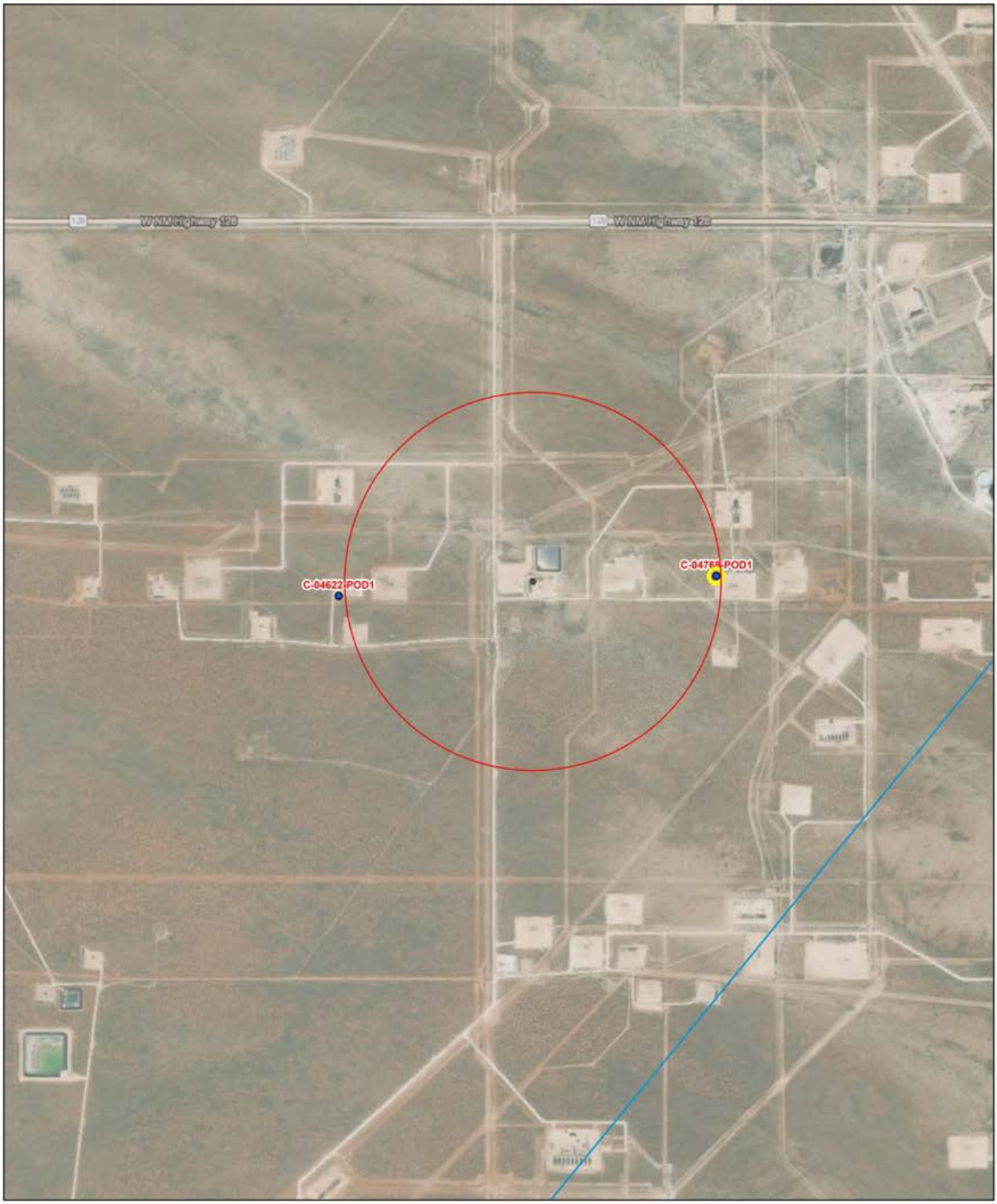
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B – Closure Criteria Research Documentation

OSE Wells 0.5 mile



2/17/2024, 6:47:28 PM

GIS WATERS PODs

- Active

OSE District Boundary

Water Right Regulations

- Closure Area
- Artesian Planning Area

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar

Online web user

This is an unofficial map from the OSE's online application.

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	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04768 POD1		CUB	LE	3	3	4	19	24S	33E	631048	3563110	785	55		
C 04622 POD1		CUB	LE	3	3	4	24	24S	32E	629436	3563006	829			
C 02890		C	LE		2	4	29	24S	33E	633114	3562012*	3043	500		
C 02431		CUB	LE	4	4	4	17	24S	33E	633175	3564728*	3346	525	415	110
C 02432		CUB	LE	4	4	4	17	24S	33E	633175	3564728*	3346	640	415	225
C 02430		CUB	LE	3	3	3	16	24S	33E	633377	3564732*	3526	643	415	228
C 02312		CUB	LE	1	2	1	05	25S	33E	632292	3559772	3878	150	90	60
C 04708 POD1		CUB	LE	1	3	4	21	24S	33E	634149	3563262	3890	100		

Average Depth to Water: **333 feet**
Minimum Depth: **90 feet**
Maximum Depth: **415 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 630263 **Northing (Y):** 3563078 **Radius:** 4000

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

2/17/24 7:03 PM

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
NA	C 04768 POD1	3	3	4	19	24S	33E	631048	3563110

Driller License: 1833 **Driller Company:** VISION RESOURCES, INC

Driller Name: JASON MALEY

Drill Start Date:	12/13/2023	**Drill Finish Date:**	12/13/2023	**Plug Date:**	12/20/2023
Log File Date:	01/12/2024	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	55 feet	**Depth Water:**	

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 04768 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: DEVON ENERGY RESOURCES

Contact: DALE WOODALL

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	750189	EXPL	2023-08-18	PMT	APR	C-4768 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04768 POD1	NA		3	3	4	19	24S	33E	631048	3563110	

New Mexico Office of the State Engineer
Transaction Summary

EXPL Permit To Explore

Transaction Number: 750189 **Transaction Desc:** C-4768 POD1 **File Date:** 08/16/2023

Primary Status: PMT Permit
Secondary Status: APR Approved
Person Assigned: *******
Applicant: DEVON ENERGY RESOURCES
Contact: DALE WOODALL

Events

	Date	Type	Description	Comment	Processed By
get images	08/16/2023	APP	Application Received	*	*******
get images	08/16/2023	TEC	Technical Report	*PLUG PLAN C-4768	*******
	08/18/2023	FTN	Finalize non-published Trans.		*******
	09/14/2023	QAT	Quality Assurance Completed	DATA	*******
	09/28/2023	QAT	Quality Assurance Completed	SQ2	*******
	10/02/2023	QAT	Quality Assurance Completed	IMAGE	*******
	01/12/2024	LOG	Well Log Received	*POD1	*******
	01/12/2024	LGI	Well Log Image	*PLG RECORD	*******
	01/23/2024	DRY	Dry well log received		*******

Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 04768	0	0		MON MONITORING WELL
**Point of Diversion				
C 04768 POD1		631048	3563110	

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 No water shall be appropriated and beneficially used under this permit.

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record. The well driller

may obtain the well record form from any District Office or the Office of the State Engineer website.

6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable

7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

Q The State Engineer retains jurisdiction over this permit.

R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

Action of the State Engineer

SHOULD THE PERMITTEE CHANGE THE PURPOSE OF USE TO OTHER THAN MONITORING PURPOSES, AN APPLICATION SHALL BE ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

**** See Image For Any Additional Conditions of Approval ****

Approval Code: A - Approved

Action Date: 08/18/2023

Log Due Date: 08/17/2024

State Engineer: Mike A. Hamman, P.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Intermittent 15,346 feet

April 5, 2022

Wetlands

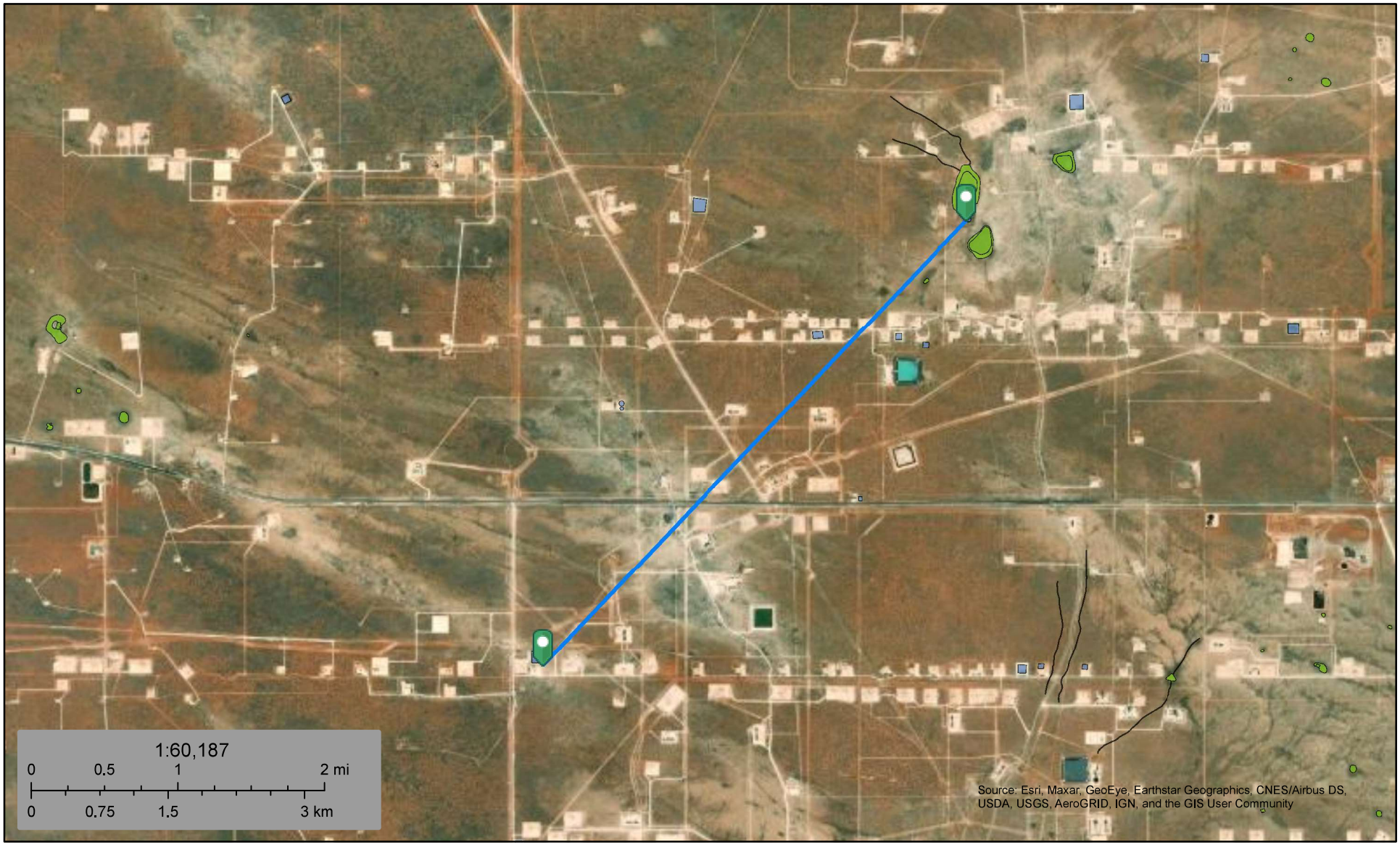
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

Pond 18,686 feet



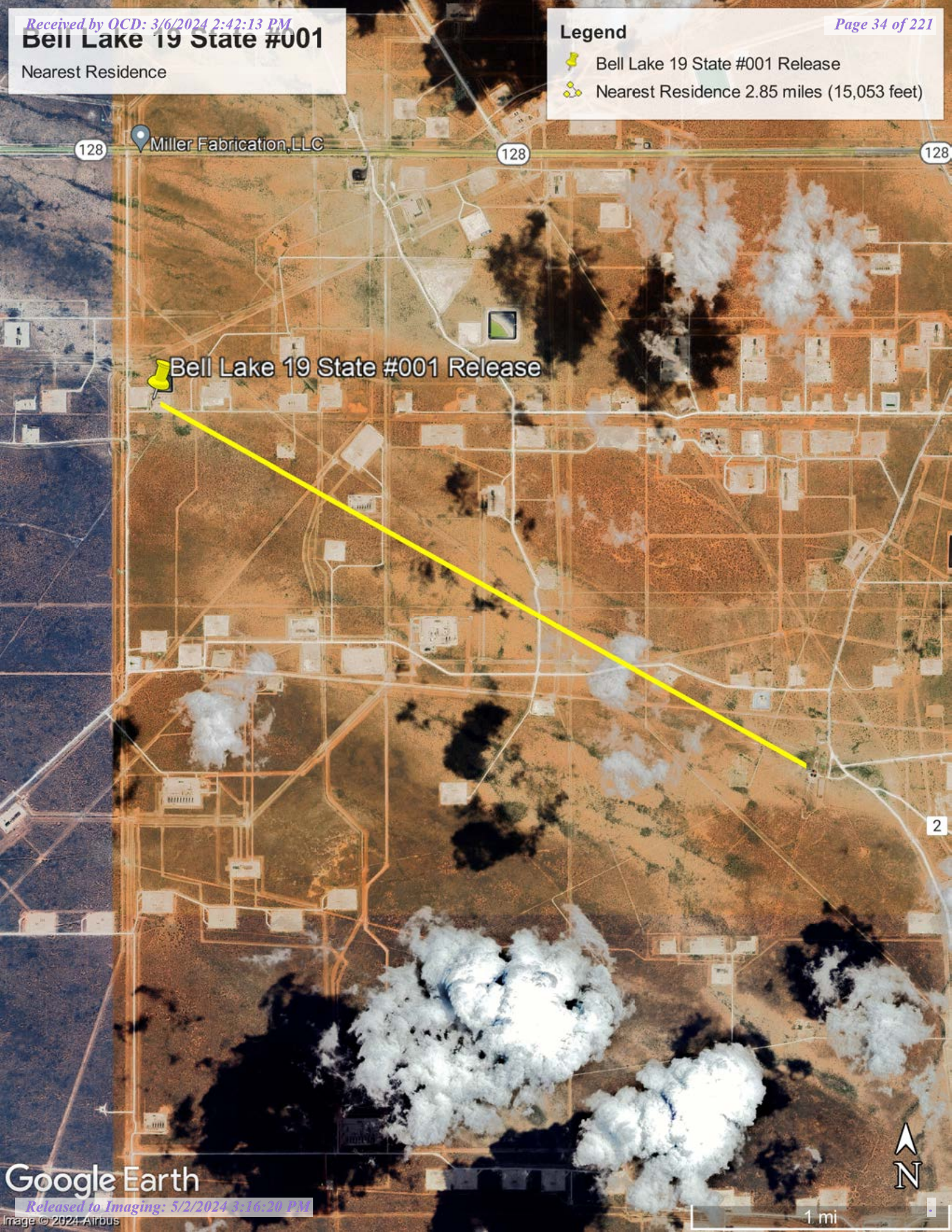
April 5, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Bell Lake 19 State #001

Nearest Residence



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Twn	Rng	X	Y	Distance
C 04768	CUB	MON	0	DEVON ENERGY RESOURCES	LE	C 04768 POD1	NA				3	3	4	19	24S	33E	631047	3563110	785
C 04622	CUB	MON	0	DEVON ENERGY	LE	C 04622 POD1	NA				3	3	4	24	24S	32E	629436	3563006	829
C 04427	CUB	MON	0	NM COMMISSIONER OF PUBLIC LAND	LE	C 04427 POD1	NA				2	4	1	18	24S	33E	630648	3565615	2566
C 02890	C	STK	3	MARK MCCLOY	LE	C 02890						2	4	29	24S	33E	633114	3562012*	3043
C 02431	CUB	COM	15	NM COMMISSIONER OF PUBLIC LAND	LE	C 02431				Shallow	4	4	4	17	24S	33E	633175	3564728*	3346
C 02432	CUB	COM	128	MARK T MCCLOY	LE	C 02432				Shallow	4	4	4	17	24S	33E	633175	3564728*	3346
C 01896	C	STK	0	US DEPT OF INTERIOR BURREAU OF LAND MANAGEMENT	LE	C 01896					3	4	3	12	24S	32E	628946	3566287*	3468
C 02430	CUB	COM	64	NM COMMISSIONER OF PUBLIC LAND	LE	C 02430				Shallow	3	3	3	16	24S	33E	633377	3564732*	3526
C 03565	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD2						3	4	07	24S	33E	631155	3566515	3551
C 02312	CUB	STK	3	NGL NORTH RANCH LLC A TEXAS LIMITED LIABILITY CO	LE	C 02312	NA				1	2	1	05	25S	33E	632291	3559772	3878
C 04708	CUB	MON	0	TAP ROCK OPERATING	LE	C 04708 POD1	NA				1	3	4	21	24S	33E	634149	3563262	3890

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 630263 **Northing (Y):** 3563078 **Radius:** 4000

Sorted by: Distance

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

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 02890		2	4	29	24S	33E	633114	3562012*

Driller License: **Driller Company:**

Driller Name:

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

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

Casing Size: 8.00 **Depth Well:** 500 feet **Depth Water:**

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

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: C 02890 **Subbasin:** C **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: MARK MCCLOY

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02890			2	4		29	24S	33E	633114	3562012*	

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetland 14,242 feet

April 5, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

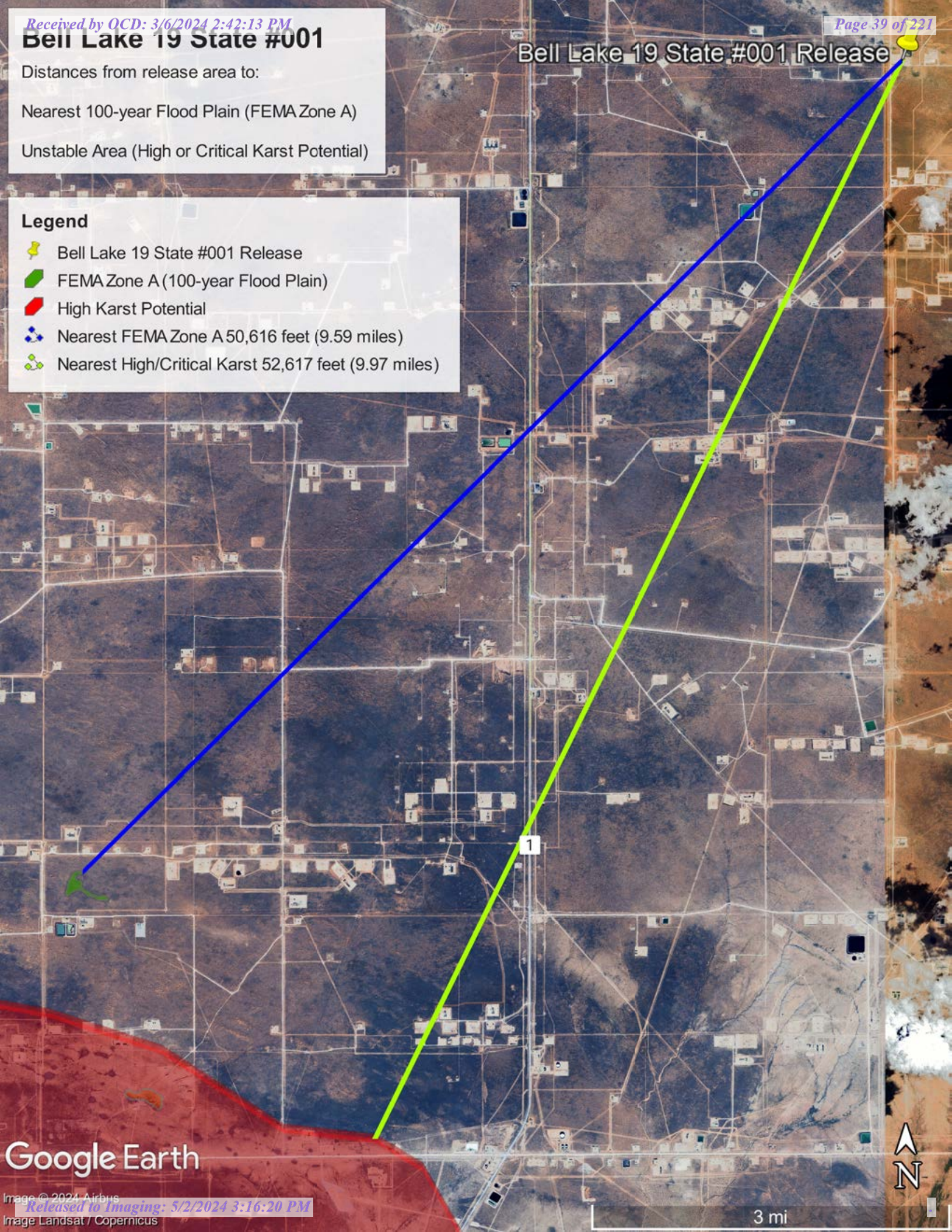
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

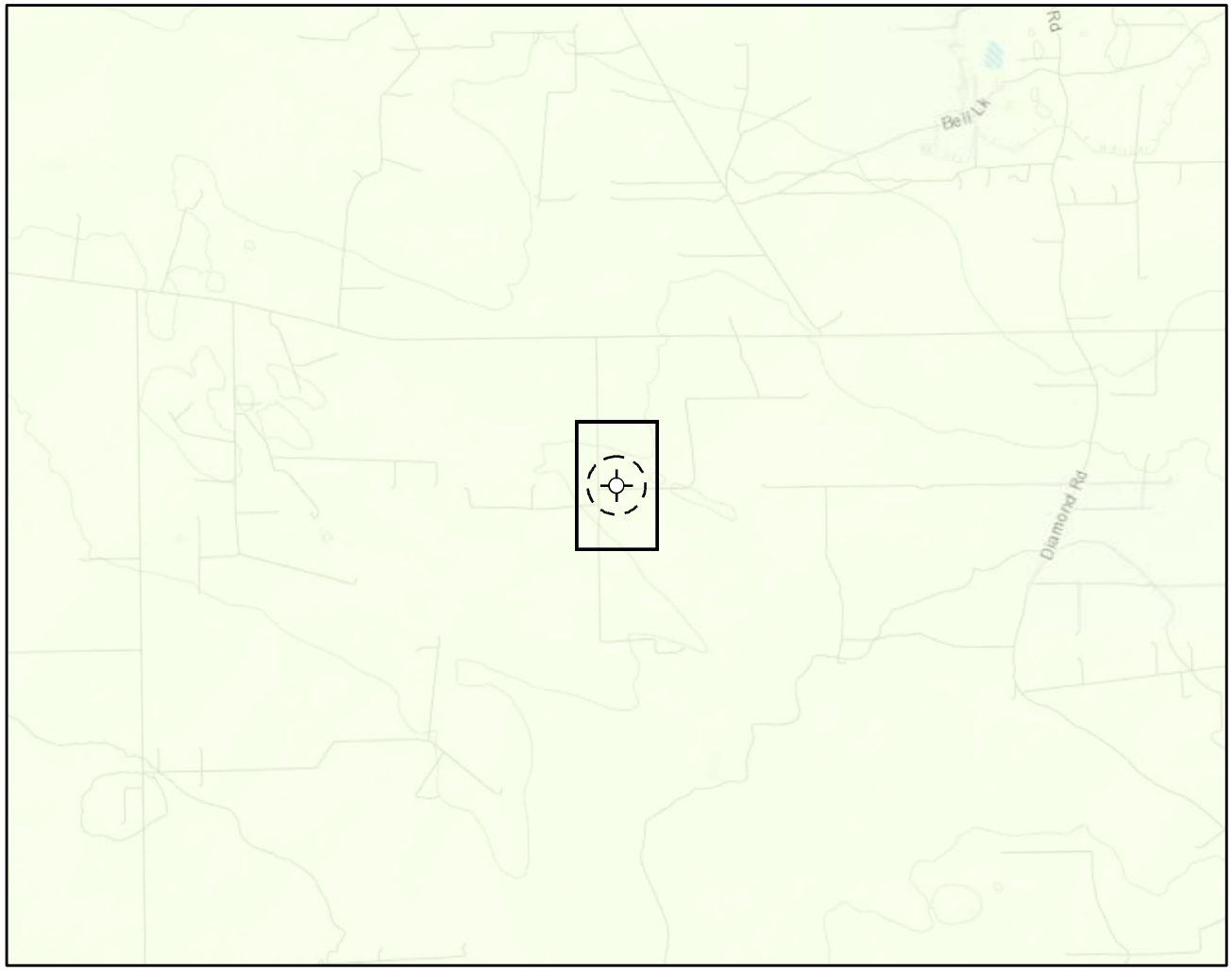
Bell Lake 19 State #001

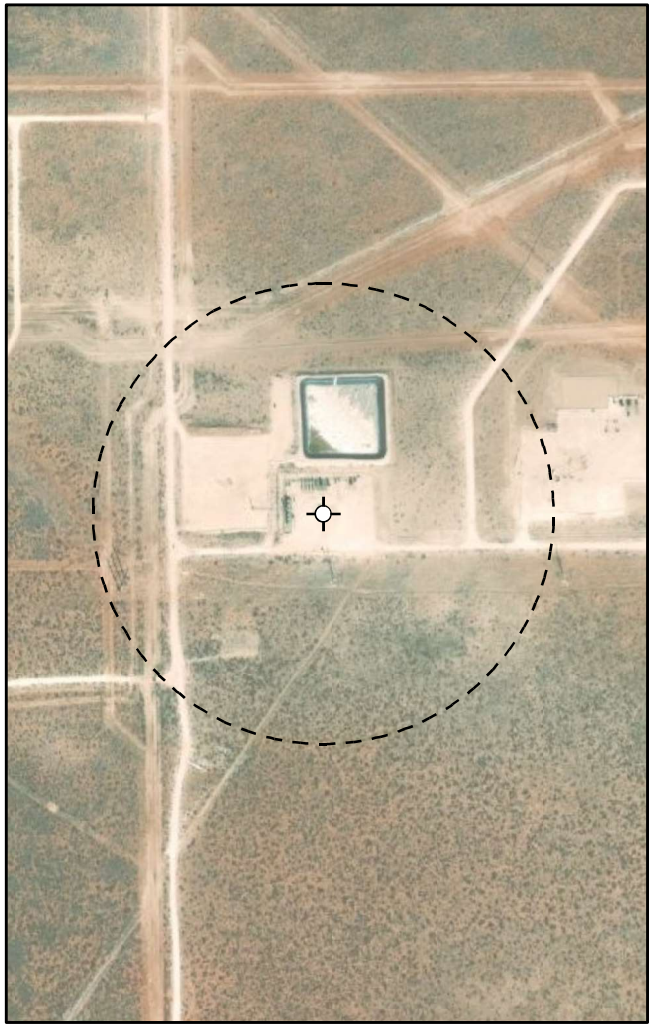
Distances from release area to:

Nearest 100-year Flood Plain (FEMA Zone A)

Unstable Area (High or Critical Karst Potential)







Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Site Buffer (1,000 ft.)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft.

VERTEX

Map Center:
Lat/Long: 32.196463, -103.617564

NAD 1983 UTM Zone 13N
Date: Apr 14/22

N

Karst Potential Map
Bell Lake 19 State #001H

FIGURE:
X

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Inset Map, ESRI 20XX; Overview Map: ESRI World Topographic. Karst potential data sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

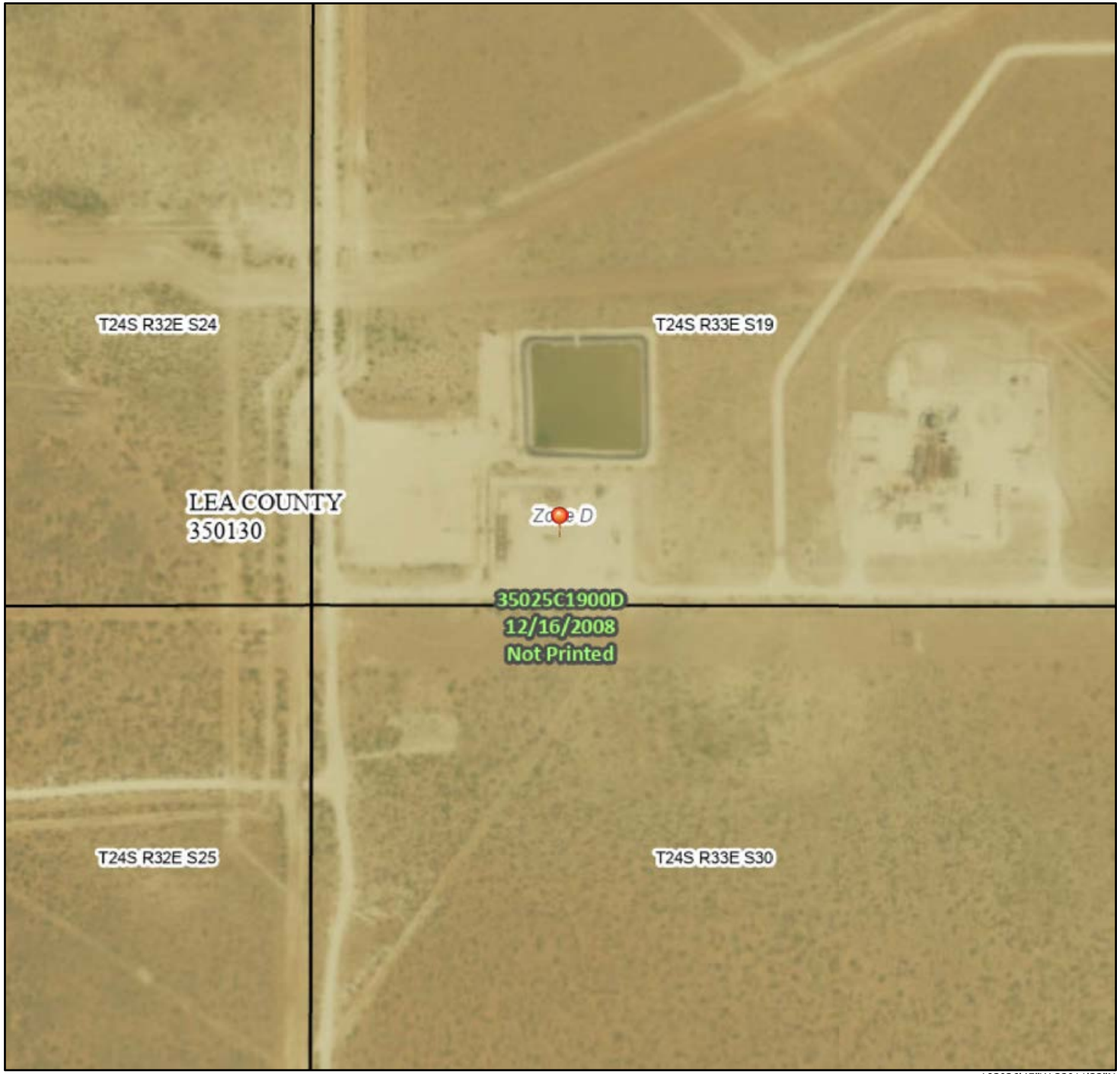
VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\20222\2E-01100 - Bell Lake 19 State #001H\Figure X Karst Potential Map Bell Lake 19 State #001H.mxd

National Flood Hazard Layer FIRMette

FEMA

103°37'22"W 32°12'2"N



103°36'45"W 32°11'32"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage area of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web service provided by FEMA. This map was exported on 4/5/2022 at 3:28 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lea County, New Mexico

April 5, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

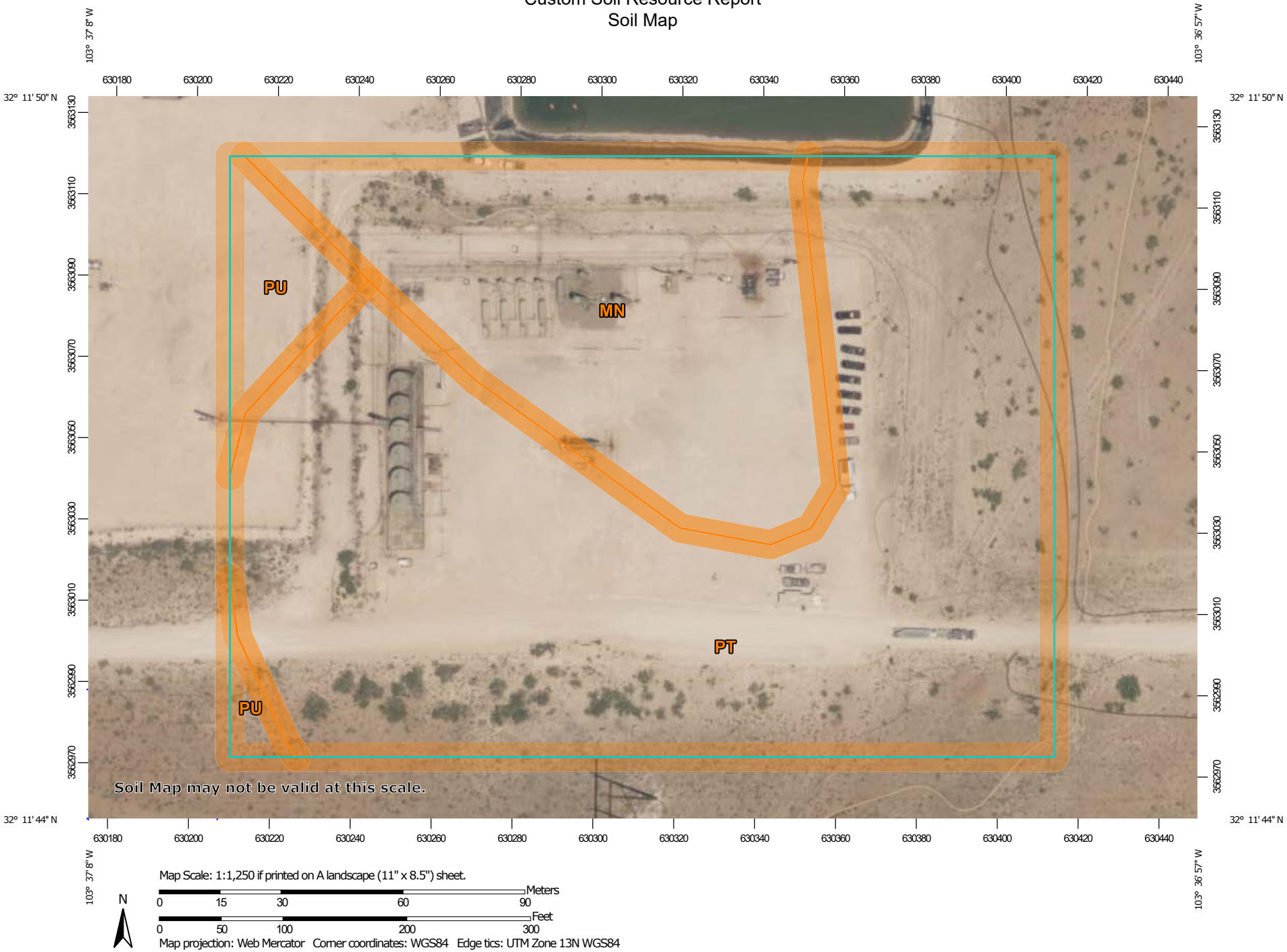
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 18, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MN	Ratliff-Wink fine sandy loams	2.1	28.3%
PT	Pyote loamy fine sand	5.0	66.7%
PU	Pyote and Maljamar fine sands	0.4	5.0%
Totals for Area of Interest		**7.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lea County, New Mexico

MN—Ratliff-Wink fine sandy loams

Map Unit Setting

National map unit symbol: dmqf
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ratliff and similar soils: 45 percent
Wink and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ratliff

Setting

Landform: Plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous alluvium and/or calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 4 inches: fine sandy loam
Bw - 4 to 22 inches: clay loam
Bk - 22 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: B
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Description of Wink

Setting

Landform: Plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous sandy alluvium and/or calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 12 inches: fine sandy loam
Bk - 12 to 23 inches: sandy loam
BCk - 23 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC004NM - Sandy
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 6 percent
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Maljamar

Percent of map unit: 5 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Palomas

Percent of map unit: 4 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

PT—Pyote loamy fine sand

Map Unit Setting

National map unit symbol: dmqp
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pyote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 25 inches: loamy fine sand
Bt - 25 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Minor Components

Maljamar

Percent of map unit: 8 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Palomas

Percent of map unit: 7 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Pyote and similar soils: 46 percent
Maljamar and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand
Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent
Ecological site: R042XC022NM - Sandhills

Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

USDA Natural Resources Conservation Service

Ecological site R042XC003NM
Loamy Sand

Accessed: 04/05/2022

General information

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Associated sites

R042XC004NM	**Sandy** Sandy
R042XC005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	0–9%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced from water from wetlands or streams.

Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:
Maljamar
Berino

Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid
Soil depth	40–72 in
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–7 in
Calcium carbonate equivalent (0-40in)	3–40%
Electrical conductivity (0-40in)	2–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview

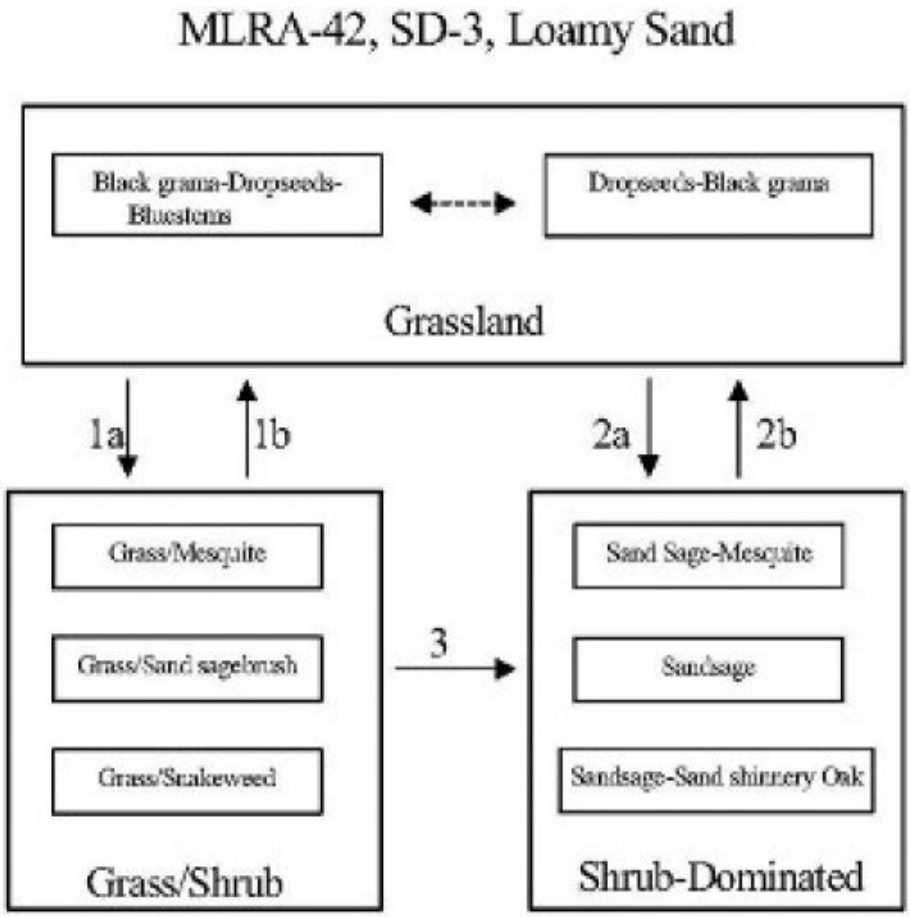
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-

dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):



1a. Drought, over grazing, fire suppression.
1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.
2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

Figure 4.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species.

Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	442	833	1224
Forb	110	208	306
Shrub/Vine	98	184	270
Total	**650**	**1225**	**1800**

Table 6. Ground cover

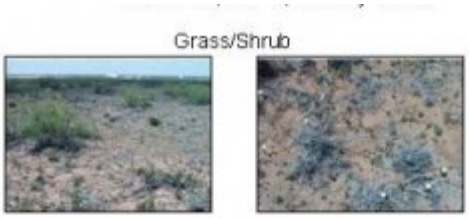
Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 6. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2
Grass/Shrub

Community 2.1
Grass/Shrub



Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971).

Diagnosis: This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution.

Transition to Grass/Shrub State (1a): The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984).
Key indicators of approach to transition:
• Loss of black grama cover
• Surface soil erosion
• Bare patch expansion
• Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances

Transition to Historic Plant Community (1b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986).

Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state.

Key indicators of approach to transition:

• Severe loss of grass species cover
• Surface soil erosion
• Bare patch expansion
• Increased sand sage, shinnery oak, and mesquite abundance

Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state.

Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite.

Key indicators of approach to transition:

• Continual loss of dropseeds/threeawns cover
• Surface soil erosion
• Bare patch expansion
• Increased sand sage, shinnery oak, and mesquite/dropseed/threeawn and mesquite/snakeweed abundance

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			61–123	
	little bluestem	SCSC	*Schizachyrium scoparium*	61–123	–
2	**Warm Season**			37–61	
	sand bluestem	ANHA	*Andropogon hallii*	37–61	–
3	**Warm Season**			37–61	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	37–61	–
	silver bluestem	BOSA	*Bothriochloa saccharoides*	37–61	–
4	**Warm Season**			123–184	
	black grama	BOER4	*Bouteloua eriopoda*	123–184	–
	bush muhly	MUPO2	*Muhlenbergia porteri*	123–184	–
5	**Warm Season**			123–184	
	thin paspalum	PASE5	*Paspalum setaceum*	123–184	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	123–184	

	plains bristlegrass	SEVU2	*Setaria vulpiseta*	123–184	–
	fringed signalgrass	URCI	*Urochloa ciliatissima*	123–184	–
6	**Warm Season**			123–184	
	spike dropseed	SPCO4	*Sporobolus contractus*	123–184	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	123–184	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	123–184	–
7	**Warm Season**			61–123	
	hooded windmill grass	CHCU2	*Chloris cucullata*	61–123	–
	Arizona cottontop	DICA8	*Digitaria californica*	61–123	–
9	**Other Perennial Grasses**			37–61	
	Grass, perennial	2GP	*Grass, perennial*	37–61	–
Shrub/Vine					
8	**Warm Season**			37–61	
	New Mexico feathergrass	HENE5	*Hesperostipa neomexicana*	37–61	–
	giant dropseed	SPGI	*Sporobolus giganteus*	37–61	–
10	**Shrub**			61–123	
	sand sagebrush	ARFI2	*Artemisia filifolia*	61–123	–
	Havard oak	QUHA3	*Quercus havardii*	61–123	–
11	**Shrub**			34–61	
	fourwing saltbush	ATCA2	*Atriplex canescens*	37–61	–
	featherplume	DAFO	*Dalea formosa*	37–61	–
12	**Shrub**			37–61	
	jointfir	EPHED	*Ephedra*	37–61	–
	littleleaf ratany	KRER	*Krameria erecta*	37–61	–
13	**Other Shrubs**			37–61	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	37–61	–
Forb					
14	**Forb**			61–123	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	61–123	–
	Indian blanket	GAPU	*Gaillardia pulchella*	61–123	–
	globemallow	SPHAE	*Sphaeralcea*	61–123	–
15	**Forb**			12–37	
	woolly groundsel	PACA15	*Packera cana*	12–37	–
16	**Forb**			61–123	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	61–123	–
	woolly plantain	PLPA2	*Plantago patagonica*	61–123	–
17	**Other Forbs**			37–61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	37–61	–

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched

lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.
Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.
Hydrologic Interpretations
Soil Series Hydrologic Group
Berino B
Kinco A
Maljamar B
Pajarito B
Palomas B
Wink B
Pyote A

Recreational uses

This site offers recreation potential for hiking, borseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

Wood products

This site has no potential for wood products.

Other products

This site is suitable for grazing by all kinds and classes of livestock at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, blsck grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shinery oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.3 – 3.5
75 – 51 3.0 – 4.5
50 – 26 4.6 – 9.0
25 – 0 9.1 +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited:

Ansley, R. J.; Jacoby, P. W. 1998. Manipulation of fire intensity to achieve mesquite management goals in north Texas. In: Pruden, Teresa L.; Brennan, Leonard A., eds. Fire in ecosystem management: shifting the paradigm from suppression to prescription: Proceedings, Tall Timbers fire ecology conference; 1996 May 7-10; Boise, ID. No. 20. Tallahassee, FL: Tall Timbers Research Station: 195-204.

Ansley, R. J.; Jones, D. L.; Tunnell, T. R.; [and others]. 1998. Honey mesquite canopy responses to single winter fires: relation to herbaceous fuel, weather and fire temperature. International Journal of Wildland Fire 8(4):241-252.

Britton, Carlton M.; Wright, Henry A. 1971. Correlation of weather and fuel variables to mesquite damage by fire. Journal of Range Management 24:136-141.

Davis, Joseph H., III and Bonham, Charles D. 1979. Interference of sand sagebrush canopy with needleandthread. Journal of Range Management 32(5):384-386.

Herbel, C. H, Steger, R, Gould, W. L. 1974. Managing semidesert ranges of the Southwest Circular 456. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 48 p.

McDaniel, Kirk C.; Pieper, Rex D.; Loomis, Lyn E.; Osman, Abdelgader A. 1984. Taxonomy and ecology of perennial snakeweeds in New Mexico. Bulletin 711. Las Cruces, NM: New Mexico State University, Agricultural Experiment Station. 34 p.

McPherson, Guy R. 1995. The role of fire in the desert grasslands. In: McClaran, Mitchel P.; Van Devender, Thomas R., eds. The desert grassland. Tucson, AZ: The University of Arizona Press: 130-151.

Pettit, Russell D. 1986. Sand shinnery oak: control and management. Management Note 8. Lubbock, TX: Texas Tech University, College of Agricultural Sciences, Department of Range and Wildlife Management. 5 p.

Contributors

Don Sylvester
Quinn Hodgson

Rangeland health reference sheet

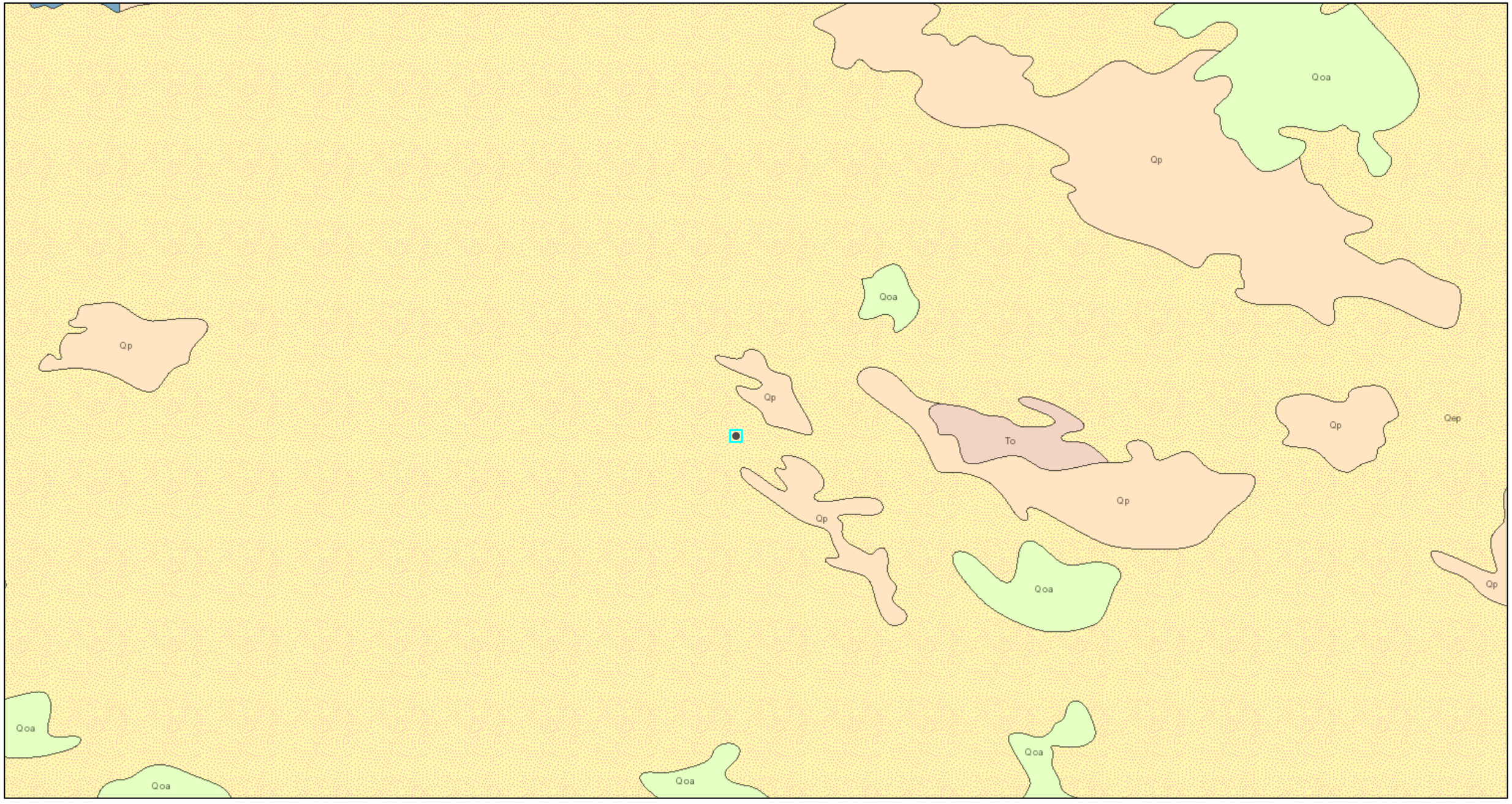
Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

ArcGIS Web Map



4/5/2022, 3:06:24 PM

1:144,448

Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perenial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)
- Ql—Landslide deposits and colluvium (Holocene to Pleistocene) — Landslide deposits on western flanks of Socorro Mountains not shown for clarity
- Qpl—Lacustrine and playa deposits (Holocene) — Includes associated alluvial and eolian deposits of major lake basins
- Qp—Piedmont alluvial deposits (Holocene to lower Pleistocene)
- Qe—Eolian deposits (Holocene to middle Pleistocene)
- Qeg—Gypsiferous eolian deposits (Holocene to middle Pleistocene)

0 1.5 3 6 mi

0 2.5 5 10 km

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line

APPENDIX C – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/25/2022
Site Location Name:	Bell Lake 19 State #1H	Report Run Date:	4/26/2022 8:42 PM
Client Contact Name:	Wes Matthews	API #:	30-025-41024
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/25/2022 9:20 AM
Departed Site	4/25/2022 3:00 PM

Field Notes

9:24 On site to begin delineation.

11:37 Collected BH22-01 through BH22-06 at 0’ and 2’. All clean on all field screening.

13:59 Collected BH22-07 through BH22-11 at 0’ and 2’. All clean on all field screening.

14:10 Site has a good horizontal delineation. Will just need a vertical delineation when we return.

Next Steps & Recommendations

1 Vertical delineation.

Daily Site Visit Report

Site Photos

Viewing Direction: North	**Viewing Direction**: West
	
Spill area	Sample area for BH22-06
Viewing Direction: South	**Viewing Direction**: Southeast
	
Sample area for BH22-07 and BH22-08	Sample area for BH22-09 and BH22-10

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: Northeast
	
Sample area for BH22-11	Spill area
Viewing Direction: South	**Viewing Direction**: South
	
Spill area	Spill area

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: West
	
Sample area for BH22-01	Sample area for BH22-02
Viewing Direction: South	**Viewing Direction**: West
	
Sample area for BH22-03	Sample area for BH22-04

Daily Site Visit Report

Viewing Direction: West

Sample area for BH22-05

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	7/6/2022
Site Location Name:	Bell Lake 19 State #1H	Report Run Date:	7/6/2022 10:19 PM
Client Contact Name:	Wes Matthews	API #:	30-025-41024
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	7/6/2022 8:30 AM
Departed Site	7/6/2022 3:50 PM

Field Notes

15:04 Arrived on location and began digging out spill area

15:05 Dug south portion of excavation down 2 feet and west portion of excavation down to 4’

15:06 Collected and field screened samples BS22-01 through BS22-05, and field screened samples. Samples returned clean on chlorides. Did not run BS22-01 for PetroFlag due to lack of supplies

15:07 Checked eastern release area for one-call markings

15:27 Field screened WS22-01 and WS22-02 for chlorides and both samples returned clean

Next Steps & Recommendations

1 Continue with excavating eastern release and confirmation sampling

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast	**Viewing Direction**: North
	
Southern portion of excavation @ 2’	Southern section of pit
Viewing Direction: Northwest	**Viewing Direction**: South
	
Central section of excavation and west wall	Northern portion of excavation

Daily Site Visit Report

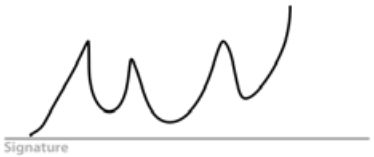
Viewing Direction: Southeast

Northern portion of excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: McKitric Wier

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	7/7/2022
Site Location Name:	Bell Lake 19 State #1H	Report Run Date:	7/8/2022 1:57 PM
Client Contact Name:	Wes Matthews	API #:	30-025-41024
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	7/7/2022 8:40 AM
Departed Site	7/7/2022 4:05 PM

Field Notes

14:52 Arrived on site, collected WS22-01 through WS22-09 and BS22-01 through BS22-12 for confirmation

14:53 Met with Brice Blaylock from Devon and discussed plans for excavation for the day

14:54 Hydro vac unavailable per PIC instructions, planned to excavate between steel line and poly line on East side of excavation site.

14:55 Swept area with Magnetic line locator and dug area down to 2'. Samples returned hot so excavated area down to 4'

15:33 Loaded 40 yards of spoils today

Next Steps & Recommendations

1 Continue excavation between steel line and poly line/hydro vac under facilities

Daily Site Visit Report

Site Photos

Viewing Direction: South

North end of excavation

Viewing Direction: East

Portion of excavated area between steel and poly lines

Viewing Direction: South

Section of area east of poly line

Viewing Direction: North

Excavated area between poly and steel lines

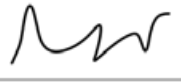
Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
Southernmost portion of excavated area west of steel line	Area of extended excavation west of steel line in southeast portion of excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: McKitric Wier

Signature: 
Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	
Site Location Name:	Bell Lake 19 State #1H	Report Run Date:	7/18/2022 2:51 PM
Client Contact Name:	Wes Matthews	API #:	30-025-41024
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	
Departed Site	7/15/2022 3:20 PM

Field Notes

6:21 Excavated north wall of East-most pit

6:21 Collected and field screened composite excavation samples.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: North
	
Extent of excavation	North wall of excavation
Viewing Direction: North	**Viewing Direction**: Southeast
	
Excavated area	South wall of excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: McKitric Wier

Signature: 
Signature

APPENDIX D – Notifications

Gmail **Dhugal Hanton <vertexresourcegroupusa@gmail.com>**

Bell Lake 19 State 1H 48-HR Notification Multiple Releases

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Fri, Jul 1, 2022 at 11:24 AM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, spills@slo.state.nm.us
Cc: dale.woodall@dvn.com, mpeppin@vertex.ca

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted for the following releases:

nAPP2208125818 DOR: 03/21/2022 Site Name: Bell Lake 19 State 1H
pto1419057630 DOR: 07/02/2014
pto1419532073 DOR: 07/02/2014

This work will be completed on behalf of Devon Energy Production Company.

On Wednesday, July 6, 2022 at approximately 10:00 a.m., McKitrick Wier will be on site to conduct confirmatory sampling for the above releases. Sampling may go into July 8, 2022. He can be reached at 575-361-9639. If you need directions to the site, please do not hesitate to contact him.

Thank you,

Monica Peppin
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 Ext. 711
C 575.361.9880
F

www.vertex.ca

Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us> Fri, Jul 1, 2022 at 12:00 PM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Monica

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks

Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Friday, July 1, 2022 11:59 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

---

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Friday, July 1, 2022 11:24 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; spills@slo.state.nm.us <spills@slo.state.nm.us>
Cc: dale.woodall@dvn.com <dale.woodall@dvn.com>; mpeppin@vertex.ca <mpeppin@vertex.ca>
Subject: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

Gmail **Dhugal Hanton <vertexresourcegroupusa@gmail.com>**

Bell Lake 19 State 1H 48-HR Notification Multiple Releases

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Mon, Jul 11, 2022 at 9:21 AM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, spills@slo.state.nm.us
Cc: dale.woodall@dvn.com, mpeppin@vertex.ca

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted for the following releases:

nAPP2208125818 DOR: 03/21/2022 Site Name: Bell Lake 19 State 1H
pto1419057630 DOR: 07/02/2014
pto1419532073 DOR: 07/02/2014

This work will be completed on behalf of Devon Energy Production Company.

On Wednesday, July 13, 2022 at approximately 10:00 a.m., McKitrick Wier will be on site to conduct additional confirmatory sampling for the above releases. Sampling may go into July 15, 2022. He can be reached at 575-361-9639. If you need directions to the site, please do not hesitate to contact him.

Thank you,

Monica Peppin
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 Ext. 711
C 575.361.9880
F

www.vertex.ca

Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us> Tue, Jul 12, 2022 at 10:10 AM
To: "vertexresourcegroupusa@gmail.com" <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Monica

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,

Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Monday, July 11, 2022 9:46 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

---

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Monday, July 11, 2022 9:21 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; spills@slo.state.nm.us <spills@slo.state.nm.us>
Cc: dale.woodall@dvn.com <dale.woodall@dvn.com>; mpeppin@vertex.ca <mpeppin@vertex.ca>
Subject: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Bell Lake 19 State 1H 48-HR Notification Multiple Releases

3 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Tue, Jul 19, 2022 at 3:41 PM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, spills@slo.state.nm.us
Cc: dale.woodall@dvn.com, mpeppin@vertex.ca

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted for the following releases:

nAPP2208125818 DOR: 03/21/2022 Site Name: Bell Lake 19 State 1H
pto1419057630 DOR: 07/02/2014
pto1419532073 DOR: 07/02/2014

This work will be completed on behalf of Devon Energy Production Company.

On Wednesday, July 15, 2022 at approximately 8:00 a.m., McKitrick Wier will be on site to conduct additional confirmatory sampling for the above releases. He can be reached at 575-361-9639. If you need directions to the site, please do not hesitate to contact him.

Thank you,

Monica Peppin
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 Ext. 711
C 575.361.9880
F

www.vertex.ca

Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us> Tue, Jul 19, 2022 at 4:30 PM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Monica

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,

Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Tuesday, July 19, 2022 4:27 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

---

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Tuesday, July 19, 2022 3:41 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; spills@slo.state.nm.us <spills@slo.state.nm.us>
Cc: dale.woodall@dvn.com <dale.woodall@dvn.com>; mpeppin@vertex.ca <mpeppin@vertex.ca>
Subject: [EXTERNAL] Bell Lake 19 State 1H 48-HR Notification Multiple Releases

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Tue, Sep 6, 2022 at 1:18 PM
To: lpullman@vertex.ca

[Quoted text hidden]

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

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

May 09, 2022

Monica Peppin

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX

RE: Bell Lake 19 1H OrderNo.: 2204B43

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 11 sample(s) on 4/27/2022 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 **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-001 **Matrix:** SOIL

Client Sample ID: BH22-01 0'
Collection Date: 4/25/2022 10:00:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	13	9.7		mg/Kg	1	5/2/2022 11:15:03 AM
Motor Oil Range Organics (MRO)	49	49		mg/Kg	1	5/2/2022 11:15:03 AM
Surr: DNOP	93.9	51.1-141		%Rec	1	5/2/2022 11:15:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/28/2022 8:35:00 PM
Surr: BFB	110	37.7-212		%Rec	1	4/28/2022 8:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.023		mg/Kg	1	4/28/2022 8:35:00 PM
Toluene	ND	0.047		mg/Kg	1	4/28/2022 8:35:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/28/2022 8:35:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	4/28/2022 8:35:00 PM
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	1	4/28/2022 8:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	5/3/2022 3:08:54 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-002 **Matrix:** SOIL

Client Sample ID: BH22-02 0'
Collection Date: 4/25/2022 10:10:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	15	9.6		mg/Kg	1	5/2/2022 11:47:10 AM
Motor Oil Range Organics (MRO)	61	48		mg/Kg	1	5/2/2022 11:47:10 AM
Surr: DNOP	84.4	51.1-141		%Rec	1	5/2/2022 11:47:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2022 8:54:00 PM
Surr: BFB	106	37.7-212		%Rec	1	4/28/2022 8:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.025		mg/Kg	1	4/28/2022 8:54:00 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2022 8:54:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2022 8:54:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2022 8:54:00 PM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	4/28/2022 8:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	5/3/2022 3:21:15 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-003 **Matrix:** SOIL

Client Sample ID: BH22-03 0'
Collection Date: 4/25/2022 10:20:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	10	9.5		mg/Kg	1	5/2/2022 11:57:56 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/2/2022 11:57:56 AM
Surr: DNOP	84.3	51.1-141		%Rec	1	5/2/2022 11:57:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2022 9:14:00 PM
Surr: BFB	108	37.7-212		%Rec	1	4/28/2022 9:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/28/2022 9:14:00 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2022 9:14:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2022 9:14:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/28/2022 9:14:00 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	4/28/2022 9:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	5/3/2022 4:22:58 PM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-004 **Matrix:** SOIL

Client Sample ID: BH22-04 0'
Collection Date: 4/25/2022 10:30:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/2/2022 1:30:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/2/2022 1:30:58 PM
Surr: DNOP	82.0	51.1-141		%Rec	1	5/2/2022 1:30:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2022 9:34:00 PM
Surr: BFB	108	37.7-212		%Rec	1	4/28/2022 9:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/28/2022 9:34:00 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2022 9:34:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2022 9:34:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/28/2022 9:34:00 PM
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	4/28/2022 9:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	62	60		mg/Kg	20	5/3/2022 4:35:19 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-005 **Matrix:** SOIL

Client Sample ID: BH22-05 0'
Collection Date: 4/25/2022 10:40:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/2/2022 2:13:09 PM
Motor Oil Range Organics (MRO)	51	49		mg/Kg	1	5/2/2022 2:13:09 PM
Surr: DNOP	57.3	51.1-141		%Rec	1	5/2/2022 2:13:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2022 9:53:00 PM
Surr: BFB	106	37.7-212		%Rec	1	4/28/2022 9:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/28/2022 9:53:00 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2022 9:53:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2022 9:53:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/28/2022 9:53:00 PM
Surr: 4-Bromofluorobenzene	85.4	70-130		%Rec	1	4/28/2022 9:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	61		mg/Kg	20	5/3/2022 4:47:39 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-006 **Matrix:** SOIL

Client Sample ID: BH22-06 0'
Collection Date: 4/25/2022 10:50:00 AM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/2/2022 2:26:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/2/2022 2:26:57 PM
Surr: DNOP	55.3	51.1-141		%Rec	1	5/2/2022 2:26:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/28/2022 10:13:00 PM
Surr: BFB	103	37.7-212		%Rec	1	4/28/2022 10:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.023		mg/Kg	1	4/28/2022 10:13:00 PM
Toluene	ND	0.046		mg/Kg	1	4/28/2022 10:13:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	4/28/2022 10:13:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	4/28/2022 10:13:00 PM
Surr: 4-Bromofluorobenzene	86.0	70-130		%Rec	1	4/28/2022 10:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	340	60		mg/Kg	20	5/3/2022 4:59:59 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-007 **Matrix:** SOIL

Client Sample ID: BH22-07 0'
Collection Date: 4/25/2022 12:30:00 PM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/2/2022 2:40:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/2/2022 2:40:51 PM
Surr: DNOP	52.1	51.1-141		%Rec	1	5/2/2022 2:40:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2022 10:33:00 PM
Surr: BFB	106	37.7-212		%Rec	1	4/28/2022 10:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.025		mg/Kg	1	4/28/2022 10:33:00 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2022 10:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2022 10:33:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2022 10:33:00 PM
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	4/28/2022 10:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	71	60		mg/Kg	20	5/3/2022 5:12:20 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-008 **Matrix:** SOIL

Client Sample ID: BH22-08 0'
Collection Date: 4/25/2022 12:40:00 PM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/2/2022 2:54:42 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/2/2022 2:54:42 PM
Surr: DNOP	57.2	51.1-141		%Rec	1	5/2/2022 2:54:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2022 10:52:00 PM
Surr: BFB	105	37.7-212		%Rec	1	4/28/2022 10:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/28/2022 10:52:00 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2022 10:52:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2022 10:52:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2022 10:52:00 PM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	4/28/2022 10:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	75	60		mg/Kg	20	5/3/2022 5:24:41 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 1H
Lab ID: 2204B43-009 **Matrix:** SOIL

Client Sample ID: BH22-09 0'
Collection Date: 4/25/2022 12:50:00 PM
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	9.9	9.4		mg/Kg	1	5/2/2022 9:44:05 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/2/2022 9:44:05 PM
Surr: DNOP	82.5	51.1-141		%Rec	1	5/2/2022 9:44:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2022 11:12:00 PM
Surr: BFB	106	37.7-212		%Rec	1	4/28/2022 11:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/28/2022 11:12:00 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2022 11:12:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2022 11:12:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/28/2022 11:12:00 PM
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	4/28/2022 11:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	72	59		mg/Kg	20	5/4/2022 1:23:41 AM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH22-10 0'
Project: Bell Lake 19 1H
Collection Date: 4/25/2022 1:00:00 PM
Lab ID: 2204B43-010 **Matrix:** SOIL **Received Date:** 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/30/2022 6:06:34 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/30/2022 6:06:34 AM
Surr: DNOP	62.4	51.1-141		%Rec	1	4/30/2022 6:06:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/29/2022 4:07:00 PM
Surr: BFB	105	37.7-212		%Rec	1	4/29/2022 4:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.025		mg/Kg	1	4/29/2022 4:07:00 PM
Toluene	ND	0.049		mg/Kg	1	4/29/2022 4:07:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/29/2022 4:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/29/2022 4:07:00 PM
Surr: 4-Bromofluorobenzene	87.4	70-130		%Rec	1	4/29/2022 4:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	69	60		mg/Kg	20	5/4/2022 1:36:05 AM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2204B43**
Date Reported: **5/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH22-11 0'
Project: Bell Lake 19 1H
Collection Date: 4/25/2022 1:10:00 PM
Lab ID: 2204B43-011 **Matrix:** SOIL
Received Date: 4/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/2/2022 11:19:01 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/2/2022 11:19:01 PM
Surr: DNOP	84.5	51.1-141		%Rec	1	5/2/2022 11:19:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/29/2022 5:06:00 PM
Surr: BFB	108	37.7-212		%Rec	1	4/29/2022 5:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/29/2022 5:06:00 PM
Toluene	ND	0.048		mg/Kg	1	4/29/2022 5:06:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/29/2022 5:06:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/29/2022 5:06:00 PM
Surr: 4-Bromofluorobenzene	85.2	70-130		%Rec	1	4/29/2022 5:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	74	60		mg/Kg	20	5/4/2022 1:48:29 AM

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	Estimated value
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 interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **MB-67220**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **67220**	RunNo: **87697**							
Prep Date: **5/3/2022**	Analysis Date: **5/4/2022**	SeqNo: **3105990**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67220**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **67220**	RunNo: **87697**							
Prep Date: **5/3/2022**	Analysis Date: **5/4/2022**	SeqNo: **3105991**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: **MB-67219**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **67219**	RunNo: **87695**							
Prep Date: **5/3/2022**	Analysis Date: **5/3/2022**	SeqNo: **3106788**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67219**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **67219**	RunNo: **87695**							
Prep Date: **5/3/2022**	Analysis Date: **5/3/2022**	SeqNo: **3106789**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **MB-67164**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **67164**	RunNo: **87649**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103102**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.8	51.1	141			

Sample ID: **LCS-67164**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **67164**	RunNo: **87649**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103103**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.6	68.9	135			
Surr: DNOP	3.2		5.000		63.2	51.1	141			

Sample ID: **2204B43-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH22-01 0'**	Batch ID: **67164**	RunNo: **87649**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103106**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.7	48.69	13.09	68.3	36.1	154			
Surr: DNOP	3.0		4.869		61.6	51.1	141			

Sample ID: **2204B43-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH22-01 0'**	Batch ID: **67164**	RunNo: **87649**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103107**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.44	13.09	74.6	36.1	154	4.56	33.9	
Surr: DNOP	3.2		4.744		68.3	51.1	141	0	0	

Sample ID: **MB-67148**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **67148**	RunNo: **87613**							
Prep Date: **4/28/2022**	Analysis Date: **4/30/2022**	SeqNo: **3103228**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	5.3		10.00		53.4	51.1	141			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **MB-67168**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **67168**	RunNo: **87654**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103431**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.2	51.1	141			

Sample ID: **2204B43-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH22-04 0'**	Batch ID: **67168**	RunNo: **87654**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103434**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.9	49.36	0	76.3	36.1	154			
Surr: DNOP	4.0		4.936		81.5	51.1	141			

Sample ID: **2204B43-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH22-04 0'**	Batch ID: **67168**	RunNo: **87654**							
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103435**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.8	49.16	0	80.4	36.1	154	4.75	33.9	
Surr: DNOP	3.5		4.916		70.5	51.1	141	0	0	

Sample ID: **LCS-67148**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **67148**	RunNo: **87659**							
Prep Date: **4/28/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103768**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	68.9	135			
Surr: DNOP	5.4		5.000		108	51.1	141			

Sample ID: **2204B43-010AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH22-10 0'**	Batch ID: **67148**	RunNo: **87659**							
Prep Date: **4/28/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103876**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.3	46.73	6.239	65.0	36.1	154			
Surr: DNOP	2.6		4.673		56.0	51.1	141			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **2204B43-010AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH22-10 0'** Batch ID: **67148** RunNo: **87659**
Prep Date: **4/28/2022** Analysis Date: **5/2/2022** SeqNo: **3103878** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	9.7	48.54	6.239	109	36.1	154	47.3	33.9	R
Surr: DNOP	5.1		4.854		105	51.1	141	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **lcs-67115**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **67115**	RunNo: **87610**							
Prep Date: **4/27/2022**	Analysis Date: **4/28/2022**	SeqNo: **3100473**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	72.3	137			
Surr: BFB	2300		1000		230	37.7	212			S

Sample ID: **mb-67115**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **67115**	RunNo: **87610**							
Prep Date: **4/27/2022**	Analysis Date: **4/28/2022**	SeqNo: **3100474**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		106	37.7	212			

Sample ID: **lcs-67121**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **67121**	RunNo: **87627**							
Prep Date: **4/27/2022**	Analysis Date: **4/29/2022**	SeqNo: **3102557**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	72.3	137			
Surr: BFB	2300		1000		228	37.7	212			S

Sample ID: **mb-67121**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **67121**	RunNo: **87627**							
Prep Date: **4/27/2022**	Analysis Date: **4/29/2022**	SeqNo: **3102558**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	37.7	212			

Sample ID: **2204b43-010ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH22-10 0'**	Batch ID: **67121**	RunNo: **87627**							
Prep Date: **4/27/2022**	Analysis Date: **4/29/2022**	SeqNo: **3102569**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.46	0	109	70	130			
Surr: BFB	2100		978.5		218	37.7	212			S

Sample ID: **2204b43-010amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH22-10 0'**	Batch ID: **67121**	RunNo: **87627**							
Prep Date: **4/27/2022**	Analysis Date: **4/29/2022**	SeqNo: **3102570**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **2204b43-010amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH22-10 0'** Batch ID: **67121** RunNo: **87627**
Prep Date: **4/27/2022** Analysis Date: **4/29/2022** SeqNo: **3102570** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.27	0	114	70	130	3.24	20	
Surr: BFB	2200		970.9		231	37.7	212	0	0	S

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**
09-May-22

Client: Devon Energy
Project: Bell Lake 19 1H

Sample ID: **lcs-67115** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **67115** RunNo: **87610**
Prep Date: **4/27/2022** Analysis Date: **4/28/2022** SeqNo: **3100521** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.6	80	120			
Toluene	0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.0	80	120			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.5	70	130			

Sample ID: **mb-67115** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **67115** RunNo: **87610**
Prep Date: **4/27/2022** Analysis Date: **4/28/2022** SeqNo: **3100522** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.86		1.000		86.0	70	130			

Sample ID: **lcs-67121** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **67121** RunNo: **87627**
Prep Date: **4/27/2022** Analysis Date: **4/29/2022** SeqNo: **3102590** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	84.2	80	120			
Toluene	0.86	0.050	1.000	0	86.3	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.9	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.5	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	70	130			

Sample ID: **mb-67121** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **67121** RunNo: **87627**
Prep Date: **4/27/2022** Analysis Date: **4/29/2022** SeqNo: **3102591** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.84		1.000		84.5	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204B43**

09-May-22

Client: Devon Energy

Project: Bell Lake 19 1H

Sample ID: **2204b43-011ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH22-11 0'** Batch ID: **67121** RunNo: **87627**

Prep Date: **4/27/2022** Analysis Date: **4/29/2022** SeqNo: **3102603** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9709	0	88.5	68.8	120			
Toluene	0.89	0.049	0.9709	0	91.2	73.6	124			
Ethylbenzene	0.89	0.049	0.9709	0	92.2	72.7	129			
Xylenes, Total	2.7	0.097	2.913	0	91.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.82		0.9709		84.6	70	130			

Sample ID: **2204b43-011amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH22-11 0'** Batch ID: **67121** RunNo: **87627**

Prep Date: **4/27/2022** Analysis Date: **4/29/2022** SeqNo: **3102604** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9728	0	89.9	68.8	120	1.74	20	
Toluene	0.90	0.049	0.9728	0	92.6	73.6	124	1.76	20	
Ethylbenzene	0.91	0.049	0.9728	0	93.9	72.7	129	2.01	20	
Xylenes, Total	2.7	0.097	2.918	0	93.8	75.7	126	2.21	20	
Surr: 4-Bromofluorobenzene	0.83		0.9728		85.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2204B43 | RcptNo: 1

Received By: Juan Rojas 4/27/2022 7:10:00 AM

Completed By: Tracy Casarrubias 4/27/2022 9:09:21 AM

Reviewed By: KRG 4/27/22

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: JN 4/27/22

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	0.5.	Good	Yes			

Chain-of-Custody Record

Client: Devon

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-Day
☐ Standard ☒ Rush

Project Name: Bell Lake 19 #1H

Project #: 22E-01100

Project Manager: Monica Peppin

Sampler: Chance Dixon

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.2+0.3=0.5 (°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. 2204B43	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)
4/25	10:00	soil	BH22-01 0'	4oz	Ice	001	✓	✓					✓			
	10:10		BH22-02 0'			002										
	10:20		BH22-03 0'			003										
	10:30		BH22-04 0'			004										
	10:40		BH22-05 0'			005										
	10:50		BH22-06 0'			006										
	12:30		BH22-07 0'			007										
	12:40		BH22-08 0'			008										
	12:50		BH22-09 0'			009										
	1:00		BH22-10 0'			010										
	1:10		BH22-11 0'			011										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			[signature]	-	4/26/22	915
4/26/22	1900	[signature]	[signature]	courier	4/27/22	7:10

Remarks: CC: Chance Dixon

Direct Bill Dale Woodall @ Devon Energy

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 11, 2022

Monica Peppin

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Bell Lake 19 State 1 H OrderNo.: 2204C66

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 8 sample(s) on 4/28/2022 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 **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH22-12 0'
Project: Bell Lake 19 State 1 H
Collection Date: 4/26/2022 9:30:00 AM
Lab ID: 2204C66-001 **Matrix:** SOIL
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/3/2022 5:30:44 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/3/2022 5:30:44 PM
Surr: DNOP	88.1	51.1-141		%Rec	1	5/3/2022 5:30:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 2:35:07 PM
Surr: BFB	93.2	37.7-212		%Rec	1	5/2/2022 2:35:07 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 2:35:07 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 2:35:07 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 2:35:07 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2022 2:35:07 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	5/2/2022 2:35:07 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	15000	600		mg/Kg	200	5/5/2022 10:50:19 AM

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	Estimated value
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 interference

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH22-12 2'
Project: Bell Lake 19 State 1 H
Collection Date: 4/26/2022 9:35:00 AM
Lab ID: 2204C66-002 **Matrix:** SOIL
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/3/2022 5:55:00 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/3/2022 5:55:00 PM
Surr: DNOP	78.0	51.1-141		%Rec	1	5/3/2022 5:55:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2022 2:58:54 PM
Surr: BFB	95.0	37.7-212		%Rec	1	5/2/2022 2:58:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 2:58:54 PM
Toluene	ND	0.047		mg/Kg	1	5/2/2022 2:58:54 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2022 2:58:54 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/2/2022 2:58:54 PM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	5/2/2022 2:58:54 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	230	60		mg/Kg	20	5/4/2022 10:23:21 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH22-13 0'
Project: Bell Lake 19 State 1 H
Collection Date: 4/26/2022 9:50:00 AM
Lab ID: 2204C66-003 **Matrix:** SOIL
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	47	9.4		mg/Kg	1	5/3/2022 6:19:28 PM
Motor Oil Range Organics (MRO)	74	47		mg/Kg	1	5/3/2022 6:19:28 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/3/2022 6:19:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 4:32:46 PM
Surr: BFB	102	37.7-212		%Rec	1	5/2/2022 4:32:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 4:32:46 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 4:32:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 4:32:46 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2022 4:32:46 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	5/2/2022 4:32:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	11000	600		mg/Kg	200	5/5/2022 11:02:39 AM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 1 H
Lab ID: 2204C66-004 **Matrix:** SOIL

Client Sample ID: BH22-13 4'
Collection Date: 4/26/2022 10:00:00 AM
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	34	9.5		mg/Kg	1	5/3/2022 6:44:02 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 6:44:02 PM
Surr: DNOP	95.0	51.1-141		%Rec	1	5/3/2022 6:44:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2022 4:56:14 PM
Surr: BFB	96.7	37.7-212		%Rec	1	5/2/2022 4:56:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 4:56:14 PM
Toluene	ND	0.048		mg/Kg	1	5/2/2022 4:56:14 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2022 4:56:14 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2022 4:56:14 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	5/2/2022 4:56:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	4800	150		mg/Kg	50	5/5/2022 11:15:00 AM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 1 H
Lab ID: 2204C66-005 **Matrix:** SOIL

Client Sample ID: BH22-13 8'
Collection Date: 4/26/2022 10:30:00 AM
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/3/2022 7:08:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 7:08:36 PM
Surr: DNOP	92.2	51.1-141		%Rec	1	5/3/2022 7:08:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2022 5:19:52 PM
Surr: BFB	97.7	37.7-212		%Rec	1	5/2/2022 5:19:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 5:19:52 PM
Toluene	ND	0.048		mg/Kg	1	5/2/2022 5:19:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2022 5:19:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/2/2022 5:19:52 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	5/2/2022 5:19:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	330	60		mg/Kg	20	5/4/2022 11:00:35 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 1 H
Lab ID: 2204C66-006 **Matrix:** SOIL

Client Sample ID: BH22-14 0'
Collection Date: 4/26/2022 10:10:00 AM
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/3/2022 7:33:25 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/3/2022 7:33:25 PM
Surr: DNOP	95.7	51.1-141		%Rec	1	5/3/2022 7:33:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2022 5:43:19 PM
Surr: BFB	98.5	37.7-212		%Rec	1	5/2/2022 5:43:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 5:43:19 PM
Toluene	ND	0.047		mg/Kg	1	5/2/2022 5:43:19 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2022 5:43:19 PM
Xylenes, Total	ND	0.094		mg/Kg	1	5/2/2022 5:43:19 PM
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	5/2/2022 5:43:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	7500	300		mg/Kg	100	5/5/2022 11:27:22 AM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 1 H
Lab ID: 2204C66-007 **Matrix:** SOIL

Client Sample ID: BH22-14 4'
Collection Date: 4/26/2022 10:20:00 AM
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/3/2022 7:58:03 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 7:58:03 PM
Surr: DNOP	91.0	51.1-141		%Rec	1	5/3/2022 7:58:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2022 6:06:43 PM
Surr: BFB	98.5	37.7-212		%Rec	1	5/2/2022 6:06:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	5/2/2022 6:06:43 PM
Toluene	ND	0.047		mg/Kg	1	5/2/2022 6:06:43 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2022 6:06:43 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/2/2022 6:06:43 PM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	5/2/2022 6:06:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	4900	150		mg/Kg	50	5/5/2022 11:39:42 AM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204C66**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 1 H
Lab ID: 2204C66-008 **Matrix:** SOIL

Client Sample ID: BH22-14 8'
Collection Date: 4/26/2022 10:35:00 AM
Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/3/2022 8:22:34 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 8:22:34 PM
Surr: DNOP	88.9	51.1-141		%Rec	1	5/3/2022 8:22:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2022 6:30:05 PM
Surr: BFB	96.7	37.7-212		%Rec	1	5/2/2022 6:30:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	5/2/2022 6:30:05 PM
Toluene	ND	0.050		mg/Kg	1	5/2/2022 6:30:05 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2022 6:30:05 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2022 6:30:05 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	5/2/2022 6:30:05 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	320	60		mg/Kg	20	5/5/2022 12:02:36 AM

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	Estimated value
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 interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204C66**

11-May-22

Client: Devon Energy

Project: Bell Lake 19 State 1 H

Sample ID: **MB-67266**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **67266**	RunNo: **87761**							
Prep Date: **5/4/2022**	Analysis Date: **5/4/2022**	SeqNo: **3108607**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67266**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **67266**	RunNo: **87761**							
Prep Date: **5/4/2022**	Analysis Date: **5/4/2022**	SeqNo: **3108608**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204C66**

11-May-22

Client: Devon Energy

Project: Bell Lake 19 State 1 H

Sample ID: **MB-67173**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **67173**	RunNo: **87671**
Prep Date: **4/29/2022**	Analysis Date: **5/3/2022**	SeqNo: **3104297** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	5.3		10.00		52.8	51.1	141			

Sample ID: **LCS-67173**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **67173**	RunNo: **87671**
Prep Date: **4/29/2022**	Analysis Date: **5/3/2022**	SeqNo: **3106761** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.7	68.9	135			
Surr: DNOP	2.6		5.000		52.5	51.1	141			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204C66**

11-May-22

Client: Devon Energy

Project: Bell Lake 19 State 1 H

Sample ID: **mb-67165**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **67165**	RunNo: **87658**
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103516** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.9	37.7	212			

Sample ID: **lcs-67165**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **67165**	RunNo: **87658**
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103517** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.5	72.3	137			
Surr: BFB	2000		1000		200	37.7	212			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204C66**

11-May-22

Client: Devon Energy

Project: Bell Lake 19 State 1 H

Sample ID: **mb-67165**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **67165**	RunNo: **87658**
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103563** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	70	130			

Sample ID: **LCS-67165**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **67165**	RunNo: **87658**
Prep Date: **4/29/2022**	Analysis Date: **5/2/2022**	SeqNo: **3103564** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	80.1	80	120			
Toluene	0.84	0.050	1.000	0	84.3	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.4	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.2	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2204C66 RcptNo: 1

Received By: Joseph Alderette 4/28/2022 2:45:00 PM

Completed By: Tracy Casarrubias 4/28/2022 3:25:11 PM

Reviewed By: SGL 4/28/22

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: JM 4/28/22

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	6.0	Good	Yes			

Chain-of-Custody Record

Client: Devon

Mailing Address: On File

Phone #:

email or Fax#:

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

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

Turn-Around Time: 5-Day
☑ Standard ☐ Rush

Project Name: Bell Lake 19 State #1H

Project #: 22E-01100

Project Manager: Monica Peppin

Sampler: CD

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 6.0 - 0.6 = 6.0 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2204C66
4/26	9:30	Soil	BH22-12 0'	4oz	Ice	001
	9:35		BH22-12 2'			002
	9:50		BH22-13 0'			003
	10:00		BH22-13 4'			004
	10:30		BH22-13 8'			005
	10:10		BH22-14 0'			006
	10:20		BH22-14 4'			007
	10:35		BH22-14 8'			008

Analysis Request

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)
✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
					4/27/22	1015
4/27/22	1900					
				Courier	4-28-22	14:45

Remarks: CC: Chance Dixon
Direct Bill Dale Woodall @ Devon Energy

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 20, 2022

Monica Peppin

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Bell Lake 19 State 6H OrderNo.: 2207349

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 19 sample(s) on 7/9/2022 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 **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-001 **Matrix:** SOIL

Client Sample ID: WS22-01 0-4'
Collection Date: 7/7/2022 7:50:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 4:14:09 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/13/2022 4:14:09 PM
Surr: DNOP	83.8	51.1-141		%Rec	1	7/13/2022 4:14:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 7:28:00 AM
Surr: BFB	87.5	37.7-212		%Rec	1	7/14/2022 7:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 7:28:00 AM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 7:28:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 7:28:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 7:28:00 AM
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	7/14/2022 7:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 9:17:01 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-002 **Matrix:** SOIL

Client Sample ID: WS22-02 0-4'
Collection Date: 7/7/2022 7:55:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 4:38:00 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/13/2022 4:38:00 PM
Surr: DNOP	80.4	51.1-141		%Rec	1	7/13/2022 4:38:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 7:48:00 AM
Surr: BFB	90.9	37.7-212		%Rec	1	7/14/2022 7:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 7:48:00 AM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 7:48:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 7:48:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/14/2022 7:48:00 AM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	7/14/2022 7:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	110	60		mg/Kg	20	7/15/2022 9:54:15 PM

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-03 0-4'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 7:55:00 AM
Lab ID: 2207349-003 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 5:01:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 5:01:55 PM
Surr: DNOP	85.2	51.1-141		%Rec	1	7/13/2022 5:01:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 8:07:00 AM
Surr: BFB	90.1	37.7-212		%Rec	1	7/14/2022 8:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 8:07:00 AM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 8:07:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 8:07:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 8:07:00 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	7/14/2022 8:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 10:06:40 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-04 2-4'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 8:00:00 AM
Lab ID: 2207349-004 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 5:25:50 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/13/2022 5:25:50 PM
Surr: DNOP	82.7	51.1-141		%Rec	1	7/13/2022 5:25:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 8:27:00 AM
Surr: BFB	90.9	37.7-212		%Rec	1	7/14/2022 8:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	7/14/2022 8:27:00 AM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 8:27:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 8:27:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/14/2022 8:27:00 AM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	7/14/2022 8:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 10:19:04 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-005 **Matrix:** SOIL

Client Sample ID: WS22-05 0-2'
Collection Date: 7/7/2022 8:00:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 5:49:52 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/13/2022 5:49:52 PM
Surr: DNOP	86.5	51.1-141		%Rec	1	7/13/2022 5:49:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 8:47:00 AM
Surr: BFB	89.3	37.7-212		%Rec	1	7/14/2022 8:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 8:47:00 AM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 8:47:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 8:47:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	7/14/2022 8:47:00 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	7/14/2022 8:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 10:31:29 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-006 **Matrix:** SOIL

Client Sample ID: WS22-06 0-2'
Collection Date: 7/7/2022 8:05:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 6:13:48 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/13/2022 6:13:48 PM
Surr: DNOP	84.4	51.1-141		%Rec	1	7/13/2022 6:13:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 9:06:00 AM
Surr: BFB	91.7	37.7-212		%Rec	1	7/14/2022 9:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 9:06:00 AM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 9:06:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 9:06:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 9:06:00 AM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	7/14/2022 9:06:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	59		mg/Kg	20	7/15/2022 10:43:53 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-007 **Matrix:** SOIL

Client Sample ID: WS22-07 0-2'
Collection Date: 7/7/2022 8:05:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 6:37:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 6:37:43 PM
Surr: DNOP	90.2	51.1-141		%Rec	1	7/13/2022 6:37:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 9:26:00 AM
Surr: BFB	93.4	37.7-212		%Rec	1	7/14/2022 9:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 9:26:00 AM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 9:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 9:26:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/14/2022 9:26:00 AM
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	7/14/2022 9:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 10:56:18 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-01 2'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 8:45:00 AM
Lab ID: 2207349-008 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 7:01:42 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 7:01:42 PM
Surr: DNOP	126	51.1-141		%Rec	1	7/13/2022 7:01:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 1:29:00 PM
Surr: BFB	93.0	37.7-212		%Rec	1	7/14/2022 1:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 1:29:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 1:29:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 1:29:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/14/2022 1:29:00 PM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	7/14/2022 1:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 12:12:01 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-009 **Matrix:** SOIL

Client Sample ID: BS22-02 2'
Collection Date: 7/7/2022 8:40:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 7:25:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/13/2022 7:25:36 PM
Surr: DNOP	86.7	51.1-141		%Rec	1	7/13/2022 7:25:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/14/2022 1:48:00 PM
Surr: BFB	87.5	37.7-212		%Rec	1	7/14/2022 1:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	7/14/2022 1:48:00 PM
Toluene	ND	0.048		mg/Kg	1	7/14/2022 1:48:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/14/2022 1:48:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/14/2022 1:48:00 PM
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	7/14/2022 1:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 12:24:25 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-010 **Matrix:** SOIL

Client Sample ID: BS22-03 2'
Collection Date: 7/7/2022 8:40:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 8:13:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/13/2022 8:13:20 PM
Surr: DNOP	86.6	51.1-141		%Rec	1	7/13/2022 8:13:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 2:08:00 PM
Surr: BFB	84.2	37.7-212		%Rec	1	7/14/2022 2:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 2:08:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 2:08:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 2:08:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 2:08:00 PM
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	1	7/14/2022 2:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 12:36:50 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-011 **Matrix:** SOIL

Client Sample ID: BS22-04 4'
Collection Date: 7/7/2022 8:25:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 8:37:18 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/13/2022 8:37:18 PM
Surr: DNOP	85.5	51.1-141		%Rec	1	7/13/2022 8:37:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 2:28:00 PM
Surr: BFB	83.7	37.7-212		%Rec	1	7/14/2022 2:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 2:28:00 PM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 2:28:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 2:28:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 2:28:00 PM
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	7/14/2022 2:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	210	60		mg/Kg	20	7/15/2022 2:11:15 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-012 **Matrix:** SOIL

Client Sample ID: BS22-05 4'
Collection Date: 7/7/2022 8:30:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/13/2022 9:01:17 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 9:01:17 PM
Surr: DNOP	87.7	51.1-141		%Rec	1	7/13/2022 9:01:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 2:48:00 PM
Surr: BFB	82.1	37.7-212		%Rec	1	7/14/2022 2:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 2:48:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 2:48:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 2:48:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 2:48:00 PM
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	1	7/14/2022 2:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	79	59		mg/Kg	20	7/15/2022 2:39:51 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-06 4'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 8:30:00 AM
Lab ID: 2207349-013 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 9:25:10 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 9:25:10 PM
Surr: DNOP	89.1	51.1-141		%Rec	1	7/13/2022 9:25:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 3:08:00 PM
Surr: BFB	81.3	37.7-212		%Rec	1	7/14/2022 3:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 3:08:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 3:08:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 3:08:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/14/2022 3:08:00 PM
Surr: 4-Bromofluorobenzene	83.7	70-130		%Rec	1	7/14/2022 3:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 2:52:15 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-07 4'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 8:35:00 AM
Lab ID: 2207349-014 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 9:49:01 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/13/2022 9:49:01 PM
Surr: DNOP	81.6	51.1-141		%Rec	1	7/13/2022 9:49:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 3:28:00 PM
Surr: BFB	84.2	37.7-212		%Rec	1	7/14/2022 3:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 3:28:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 3:28:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 3:28:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/14/2022 3:28:00 PM
Surr: 4-Bromofluorobenzene	82.7	70-130		%Rec	1	7/14/2022 3:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 3:04:39 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-015 **Matrix:** SOIL

Client Sample ID: BS22-08 4'
Collection Date: 7/7/2022 8:35:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 10:12:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/13/2022 10:12:53 PM
Surr: DNOP	82.0	51.1-141		%Rec	1	7/13/2022 10:12:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 4:08:00 PM
Surr: BFB	81.8	37.7-212		%Rec	1	7/14/2022 4:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 4:08:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 4:08:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 4:08:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/14/2022 4:08:00 PM
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	7/14/2022 4:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 3:17:04 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-016 **Matrix:** SOIL

Client Sample ID: BS22-09 2'
Collection Date: 7/7/2022 9:10:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	27	15		mg/Kg	1	7/13/2022 10:36:50 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/13/2022 10:36:50 PM
Surr: DNOP	86.1	51.1-141		%Rec	1	7/13/2022 10:36:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 4:27:00 PM
Surr: BFB	84.9	37.7-212		%Rec	1	7/14/2022 4:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 4:27:00 PM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 4:27:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 4:27:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/14/2022 4:27:00 PM
Surr: 4-Bromofluorobenzene	82.5	70-130		%Rec	1	7/14/2022 4:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 3:29:29 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-017 **Matrix:** SOIL

Client Sample ID: BS22-10 2'
Collection Date: 7/7/2022 9:10:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/13/2022 11:00:47 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/13/2022 11:00:47 PM
Surr: DNOP	84.5	51.1-141		%Rec	1	7/13/2022 11:00:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 4:47:00 PM
Surr: BFB	82.6	37.7-212		%Rec	1	7/14/2022 4:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 4:47:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 4:47:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 4:47:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 4:47:00 PM
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	7/14/2022 4:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 3:41:54 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bell Lake 19 State 6H
Lab ID: 2207349-018 **Matrix:** SOIL

Client Sample ID: BS22-11 2'
Collection Date: 7/7/2022 9:15:00 AM
Received Date: 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/16/2022 12:10:29 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/16/2022 12:10:29 AM
Surr: DNOP	104	51.1-141		%Rec	1	7/16/2022 12:10:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2022 6:07:00 PM
Surr: BFB	80.5	37.7-212		%Rec	1	7/14/2022 6:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	7/14/2022 6:07:00 PM
Toluene	ND	0.049		mg/Kg	1	7/14/2022 6:07:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2022 6:07:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/14/2022 6:07:00 PM
Surr: 4-Bromofluorobenzene	81.6	70-130		%Rec	1	7/14/2022 6:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 3:54:19 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207349**
Date Reported: **7/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-12 2'
Project: Bell Lake 19 State 6H
Collection Date: 7/7/2022 9:15:00 AM
Lab ID: 2207349-019 **Matrix:** SOIL **Received Date:** 7/9/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/16/2022 12:58:01 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/16/2022 12:58:01 AM
Surr: DNOP	104	51.1-141		%Rec	1	7/16/2022 12:58:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/14/2022 7:07:00 PM
Surr: BFB	81.1	37.7-212		%Rec	1	7/14/2022 7:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/14/2022 7:07:00 PM
Toluene	ND	0.050		mg/Kg	1	7/14/2022 7:07:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/14/2022 7:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/14/2022 7:07:00 PM
Surr: 4-Bromofluorobenzene	81.8	70-130		%Rec	1	7/14/2022 7:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 4:06:43 PM

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	Estimated value
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 interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **MB-68793**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **68793**	RunNo: **89508**
Prep Date: **7/14/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185335** Units: **mg/Kg**

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

Sample ID: **LCS-68793**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **68793**	RunNo: **89508**
Prep Date: **7/14/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185336** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.7	90	110			

Sample ID: **MB-68808**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **68808**	RunNo: **89522**
Prep Date: **7/15/2022**	Analysis Date: **7/15/2022**	SeqNo: **3188544** Units: **mg/Kg**

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

Sample ID: **LCS-68808**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **68808**	RunNo: **89522**
Prep Date: **7/15/2022**	Analysis Date: **7/15/2022**	SeqNo: **3188545** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **MB-68719**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **68719**	RunNo: **89438**
Prep Date: **7/12/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183094** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.1	51.1	141			

Sample ID: **LCS-68719**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68719**	RunNo: **89438**
Prep Date: **7/12/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183095** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	88.2	64.4	127			
Surr: DNOP	4.1		5.000		82.0	51.1	141			

Sample ID: **MB-68717**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **68717**	RunNo: **89483**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184880** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.9		10.00		68.7	51.1	141			

Sample ID: **LCS-68717**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68717**	RunNo: **89483**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184881** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	2.8		5.000		55.5	51.1	141			

Sample ID: **MB-68750**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/15/2022**	SeqNo: **3186687** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		118	51.1	141			

Sample ID: **LCS-68750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/15/2022**	SeqNo: **3186688** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **LCS-68750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/15/2022**	SeqNo: **3186688** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	15	50.00	0	116	64.4	127			
Surr: DNOP	5.8		5.000		116	51.1	141			

Sample ID: **2207349-018AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BS22-11 2'**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/16/2022**	SeqNo: **3186724** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	49.50	0	97.3	36.1	154			
Surr: DNOP	4.7		4.950		95.8	51.1	141			

Sample ID: **2207349-018AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BS22-11 2'**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/16/2022**	SeqNo: **3186725** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	48.45	0	89.0	36.1	154	11.1	33.9	
Surr: DNOP	4.4		4.845		91.5	51.1	141	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **lcs-68690**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **68690**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183352**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1800		1000		184	37.7	212			

Sample ID: **mb-68690**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **68690**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183354**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		85.8	37.7	212			

Sample ID: **lcs-68702**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **68702**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183392**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1800		1000		184	37.7	212			

Sample ID: **mb-68702**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **68702**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183394**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	840		1000		84.2	37.7	212			

Sample ID: **lcs-68713**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **68713**	RunNo: **89471**							
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3183428**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.7	72.3	137			
Surr: BFB	1800		1000		175	37.7	212			

Sample ID: **mb-68713**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **68713**	RunNo: **89471**							
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3183430**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		82.6	37.7	212			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **lcs-68721**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184960** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.9	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: **mb-68721**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		82.4	37.7	212			

Sample ID: **2207349-018ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BS22-11 2'**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.93	0	86.6	70	130			
Surr: BFB	1700		997.0		173	37.7	212			

Sample ID: **2207349-018amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BS22-11 2'**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184964** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.41	0	90.9	70	130	2.75	20	
Surr: BFB	1800		976.6		180	37.7	212	0	0	

Sample ID: **lcs-68726**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184981** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: **mb-68726**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184982** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.2	37.7	212			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **lcs-68690**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **68690**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183847**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.86		1.000		86.3	70	130			

Sample ID: **mb-68690**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **68690**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183848**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.86		1.000		85.6	70	130			

Sample ID: **lcs-68702**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **68702**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183871**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.84		1.000		83.6	70	130			

Sample ID: **mb-68702**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **68702**	RunNo: **89471**							
Prep Date: **7/11/2022**	Analysis Date: **7/13/2022**	SeqNo: **3183872**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.84		1.000		84.1	70	130			

Sample ID: **lcs-68713**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **68713**	RunNo: **89471**							
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3183895**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.8	80	120			
Toluene	0.92	0.050	1.000	0	91.7	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.0	80	120			
Surr: 4-Bromofluorobenzene	0.86		1.000		85.9	70	130			

Sample ID: **mb-68713**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **68713**	RunNo: **89471**							
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3183896**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **mb-68713**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68713**	RunNo: **89471**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3183896** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.85		1.000		84.8	70	130			

Sample ID: **lcs-68721**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185011** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.7	80	120			
Toluene	0.83	0.050	1.000	0	82.9	80	120			
Ethylbenzene	0.82	0.050	1.000	0	81.7	80	120			
Xylenes, Total	2.4	0.10	3.000	0	80.7	80	120			
Surr: 4-Bromofluorobenzene	0.83		1.000		83.5	70	130			

Sample ID: **mb-68721**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185012** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.82		1.000		81.9	70	130			

Sample ID: **2207349-019ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-12 2'**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185015** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	0.9990	0	88.8	68.8	120			
Toluene	0.90	0.050	0.9990	0	90.5	73.6	124			
Ethylbenzene	0.90	0.050	0.9990	0	90.0	72.7	129			
Xylenes, Total	2.7	0.10	2.997	0	89.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.84		0.9990		83.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207349**

20-Jul-22

Client: Devon Energy

Project: Bell Lake 19 State 6H

Sample ID: **2207349-019amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-12 2'**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185016** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9950	0	88.5	68.8	120	0.640	20	
Toluene	0.89	0.050	0.9950	0	89.8	73.6	124	1.08	20	
Ethylbenzene	0.89	0.050	0.9950	0	89.9	72.7	129	0.527	20	
Xylenes, Total	2.7	0.10	2.985	0	89.3	75.7	126	0.582	20	
Surr: 4-Bromofluorobenzene	0.84		0.9950		84.5	70	130	0	0	

Sample ID: **lcs-68726**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185032** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		1.000		83.2	70	130			

Sample ID: **mb-68726**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185033** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		1.000		82.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2207349 | RcptNo: 1

Received By: Sean Livingston 7/9/2022 9:30:00 AM Sean Livingston

Completed By: Sean Livingston 7/9/2022 10:36:14 AM Sean Livingston

Reviewed By: CMC 7/11/22

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: JR 7/11/22

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	2.1	Good				
2	3.6	Good				
3	3.9	Good				

Chain-of-Custody Record

Client: Devon Energy

Mailing Address:

Phone #:

email or Fax#:

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

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

Turn-Around Time: 5-Day
☒ Standard ☒ Rush

Project Name: Bell Lake 19 State 6H

Project #: 22E-01100

Project Manager: Monica Peppin

Sampler: M. Wier / L. Pullman

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): 2.1°C, 3.6°C, 3.9°C (CF(-0.1°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. 2207348	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)
7-7-22	7:50	Soil	WS22-01 0-4'	4oz	ice	001	✓	✓					✓			
	7:55		WS22-02 0-4'			002										
	7:55		WS22-03 0-4'			003										
	8:00		WS22-04 2-4'			004										
	8:00		WS22-05 0-2'			005										
	8:05		WS22-06 0-2'			006										
	8:05		WS22-07 0-2'			007										
	8:45		BS22-01 2'			008										
	8:40		BS22-02 2'			009										
	8:40		BS22-03 2'			010										
	8:25		BS22-04 4'			011										
	8:30		BS22-05 4'			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
7-7-2022	08:30				7/8/22	1100
7/8/22	1900		Sam	courier	7/9/22	9:30

Remarks: WO#: 2105343
CC: Monica Peppin
Direct bill Devon

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

Chain-of-Custody Record

Client: Devon Energy

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-Day
☒ Standard ☐ Rush

Project Name: Bell lake 19 state 6H

Project #: 22E-01100

Project Manager: M. Peppin

Sampler: M. Wier / Lakin Pullman

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): 2.1°C, 3.6°C, 3.9°C (°C)

CF (-0.1°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. 2207349	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)
7-7-22	8:30	Soil	BS22-06 4'	4oz	ice	013	✓	✓					✓			
	8:35		BS22-07 4'			014										
	8:35		BS22-08 4'			015										
	9:10		BS22-09 2'			016										
	9:10		BS22-10 2'			017										
	9:15		BS22-11 2'			018										
	9:15		BS22-12 2'			019										

Date	Time	Relinquished by	Received by	Via	Date	Time
7-7-2022	06:30	Lakin Pullman				
7/8/22	900		SCT courier		7/8/22	9:30

Remarks: WO#: 2101534 3

CC: Monica Peppin

Direct bill Devon

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 19, 2022

Monica Peppin

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Bell Lake State 001H OrderNo.: 2207412

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 11 sample(s) on 7/12/2022 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 **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-08 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:30:00 AM
Lab ID: 2207412-001 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/16/2022 7:17:39 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/16/2022 7:17:39 AM
Surr: DNOP	110	51.1-141		%Rec	1	7/16/2022 7:17:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/15/2022 12:44:00 AM
Surr: BFB	84.0	37.7-212		%Rec	1	7/15/2022 12:44:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 12:44:00 AM
Toluene	ND	0.049		mg/Kg	1	7/15/2022 12:44:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/15/2022 12:44:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/15/2022 12:44:00 AM
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	7/15/2022 12:44:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 4:45:33 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-09 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:35:00 AM
Lab ID: 2207412-002 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/16/2022 7:41:26 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/16/2022 7:41:26 AM
Surr: DNOP	116	51.1-141		%Rec	1	7/16/2022 7:41:26 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/15/2022 1:04:00 AM
Surr: BFB	80.5	37.7-212		%Rec	1	7/15/2022 1:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 1:04:00 AM
Toluene	ND	0.049		mg/Kg	1	7/15/2022 1:04:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/15/2022 1:04:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/15/2022 1:04:00 AM
Surr: 4-Bromofluorobenzene	80.3	70-130		%Rec	1	7/15/2022 1:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 4:57:58 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-10 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:40:00 AM
Lab ID: 2207412-003 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/16/2022 8:05:12 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/16/2022 8:05:12 AM
Surr: DNOP	66.8	51.1-141		%Rec	1	7/16/2022 8:05:12 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/15/2022 1:24:00 AM
Surr: BFB	77.0	37.7-212		%Rec	1	7/15/2022 1:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	7/15/2022 1:24:00 AM
Toluene	ND	0.049		mg/Kg	1	7/15/2022 1:24:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/15/2022 1:24:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/15/2022 1:24:00 AM
Surr: 4-Bromofluorobenzene	80.1	70-130		%Rec	1	7/15/2022 1:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 5:10:22 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-11 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:45:00 AM
Lab ID: 2207412-004 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/16/2022 8:29:03 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/16/2022 8:29:03 AM
Surr: DNOP	103	51.1-141		%Rec	1	7/16/2022 8:29:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/15/2022 3:02:00 AM
Surr: BFB	82.1	37.7-212		%Rec	1	7/15/2022 3:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	7/15/2022 3:02:00 AM
Toluene	ND	0.048		mg/Kg	1	7/15/2022 3:02:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/15/2022 3:02:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/15/2022 3:02:00 AM
Surr: 4-Bromofluorobenzene	82.6	70-130		%Rec	1	7/15/2022 3:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 5:22:47 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-12 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:50:00 AM
Lab ID: 2207412-005 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/16/2022 8:52:51 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/16/2022 8:52:51 AM
Surr: DNOP	72.1	51.1-141		%Rec	1	7/16/2022 8:52:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2022 3:22:00 AM
Surr: BFB	81.0	37.7-212		%Rec	1	7/15/2022 3:22:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 3:22:00 AM
Toluene	ND	0.050		mg/Kg	1	7/15/2022 3:22:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2022 3:22:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/15/2022 3:22:00 AM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	1	7/15/2022 3:22:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 5:35:11 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-13 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 9:55:00 AM
Lab ID: 2207412-006 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/16/2022 9:40:36 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/16/2022 9:40:36 AM
Surr: DNOP	75.7	51.1-141		%Rec	1	7/16/2022 9:40:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/15/2022 3:42:00 AM
Surr: BFB	82.8	37.7-212		%Rec	1	7/15/2022 3:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 3:42:00 AM
Toluene	ND	0.049		mg/Kg	1	7/15/2022 3:42:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/15/2022 3:42:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/15/2022 3:42:00 AM
Surr: 4-Bromofluorobenzene	84.0	70-130		%Rec	1	7/15/2022 3:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 5:47:36 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-14 0-4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 10:00:00 AM
Lab ID: 2207412-007 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/14/2022 9:39:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/14/2022 9:39:35 PM
Surr: DNOP	87.7	51.1-141		%Rec	1	7/14/2022 9:39:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/15/2022 4:01:00 AM
Surr: BFB	80.1	37.7-212		%Rec	1	7/15/2022 4:01:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	7/15/2022 4:01:00 AM
Toluene	ND	0.047		mg/Kg	1	7/15/2022 4:01:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/15/2022 4:01:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	7/15/2022 4:01:00 AM
Surr: 4-Bromofluorobenzene	83.6	70-130		%Rec	1	7/15/2022 4:01:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 6:00:01 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-13 4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 10:05:00 AM
Lab ID: 2207412-008 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/14/2022 10:21:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/14/2022 10:21:58 PM
Surr: DNOP	96.4	51.1-141		%Rec	1	7/14/2022 10:21:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/15/2022 5:01:00 AM
Surr: BFB	84.5	37.7-212		%Rec	1	7/15/2022 5:01:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 5:01:00 AM
Toluene	ND	0.049		mg/Kg	1	7/15/2022 5:01:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/15/2022 5:01:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/15/2022 5:01:00 AM
Surr: 4-Bromofluorobenzene	81.4	70-130		%Rec	1	7/15/2022 5:01:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	96	60		mg/Kg	20	7/15/2022 6:12:25 PM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-14 4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 10:10:00 AM
Lab ID: 2207412-009 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/14/2022 10:36:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/14/2022 10:36:11 PM
Surr: DNOP	106	51.1-141		%Rec	1	7/14/2022 10:36:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/15/2022 6:00:00 AM
Surr: BFB	86.5	37.7-212		%Rec	1	7/15/2022 6:00:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	7/15/2022 6:00:00 AM
Toluene	ND	0.048		mg/Kg	1	7/15/2022 6:00:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/15/2022 6:00:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/15/2022 6:00:00 AM
Surr: 4-Bromofluorobenzene	85.4	70-130		%Rec	1	7/15/2022 6:00:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	180	60		mg/Kg	20	7/15/2022 6:24:49 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-15 4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 10:15:00 AM
Lab ID: 2207412-010 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/14/2022 10:50:20 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/14/2022 10:50:20 PM
Surr: DNOP	89.8	51.1-141		%Rec	1	7/14/2022 10:50:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2022 6:20:00 AM
Surr: BFB	82.6	37.7-212		%Rec	1	7/15/2022 6:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	7/15/2022 6:20:00 AM
Toluene	ND	0.050		mg/Kg	1	7/15/2022 6:20:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2022 6:20:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2022 6:20:00 AM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	7/15/2022 6:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	210	60		mg/Kg	20	7/15/2022 6:37:15 PM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207412**
Date Reported: **7/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BS22-16 4'
Project: Bell Lake State 001H
Collection Date: 7/8/2022 10:20:00 AM
Lab ID: 2207412-011 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/14/2022 11:04:35 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/14/2022 11:04:35 PM
Surr: DNOP	86.1	51.1-141		%Rec	1	7/14/2022 11:04:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/15/2022 6:40:00 AM
Surr: BFB	82.2	37.7-212		%Rec	1	7/15/2022 6:40:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	7/15/2022 6:40:00 AM
Toluene	ND	0.047		mg/Kg	1	7/15/2022 6:40:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/15/2022 6:40:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	7/15/2022 6:40:00 AM
Surr: 4-Bromofluorobenzene	83.3	70-130		%Rec	1	7/15/2022 6:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	7/15/2022 7:14:28 PM

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	Estimated value
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 interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **MB-68812**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **68812**	RunNo: **89568**
Prep Date: **7/15/2022**	Analysis Date: **7/15/2022**	SeqNo: **3188184** Units: **mg/Kg**

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

Sample ID: **LCS-68812**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **68812**	RunNo: **89568**
Prep Date: **7/15/2022**	Analysis Date: **7/15/2022**	SeqNo: **3188185** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **MB-68751**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **68751**	RunNo: **89486**
Prep Date: **7/13/2022**	Analysis Date: **7/14/2022**	SeqNo: **3186456** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.3	51.1	141			

Sample ID: **LCS-68751**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68751**	RunNo: **89486**
Prep Date: **7/13/2022**	Analysis Date: **7/14/2022**	SeqNo: **3186457** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	81.7	64.4	127			
Surr: DNOP	3.8		5.000		76.0	51.1	141			

Sample ID: **2207412-007AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WS22-14 0-4'**	Batch ID: **68751**	RunNo: **89486**
Prep Date: **7/13/2022**	Analysis Date: **7/14/2022**	SeqNo: **3186459** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	14	47.85	0	79.4	36.1	154			
Surr: DNOP	4.2		4.785		88.2	51.1	141			

Sample ID: **2207412-007AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WS22-14 0-4'**	Batch ID: **68751**	RunNo: **89486**
Prep Date: **7/13/2022**	Analysis Date: **7/14/2022**	SeqNo: **3186460** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	14	47.04	0	74.6	36.1	154	7.88	33.9	
Surr: DNOP	3.9		4.704		82.3	51.1	141	0	0	

Sample ID: **MB-68750**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/15/2022**	SeqNo: **3186687** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		118	51.1	141			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **LCS-68750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **68750**	RunNo: **89483**
Prep Date: **7/13/2022**	Analysis Date: **7/15/2022**	SeqNo: **3186688** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	15	50.00	0	116	64.4	127			
Surr: DNOP	5.8		5.000		116	51.1	141			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **lcs-68721**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184960** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.9	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: **mb-68721**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3184961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		82.4	37.7	212			

Sample ID: **lcs-68726**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184981** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.9	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: **mb-68726**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184982** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		83.2	37.7	212			

Sample ID: **2207412-007ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-14 0-4'**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184987** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.45	0	89.3	70	130			
Surr: BFB	1700		938.1		179	37.7	212			

Sample ID: **2207412-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-14 0-4'**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184988** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **2207412-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-14 0-4'**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3184988** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.39	0	96.3	70	130	7.22	20	
Surr: BFB	1700		935.5		185	37.7	212	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **lcs-68721**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185011** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.7	80	120			
Toluene	0.83	0.050	1.000	0	82.9	80	120			
Ethylbenzene	0.82	0.050	1.000	0	81.7	80	120			
Xylenes, Total	2.4	0.10	3.000	0	80.7	80	120			
Surr: 4-Bromofluorobenzene	0.83		1.000		83.5	70	130			

Sample ID: **mb-68721**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68721**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/14/2022**	SeqNo: **3185012** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.82		1.000		81.9	70	130			

Sample ID: **lcs-68726**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185032** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.3	80	120			
Toluene	0.92	0.050	1.000	0	91.8	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.5	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.9	80	120			
Surr: 4-Bromofluorobenzene	0.83		1.000		83.2	70	130			

Sample ID: **mb-68726**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185033** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.83		1.000		82.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207412**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake State 001H

Sample ID: **2207412-008ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-13 4'**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185039** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9823	0	89.8	68.8	120			
Toluene	0.90	0.049	0.9823	0	91.8	73.6	124			
Ethylbenzene	0.90	0.049	0.9823	0	91.8	72.7	129			
Xylenes, Total	2.7	0.098	2.947	0	90.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.83		0.9823		84.8	70	130			

Sample ID: **2207412-008amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS22-13 4'**	Batch ID: **68726**	RunNo: **89504**
Prep Date: **7/12/2022**	Analysis Date: **7/15/2022**	SeqNo: **3185040** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9881	0	92.4	68.8	120	3.45	20	
Toluene	0.93	0.049	0.9881	0	93.9	73.6	124	2.78	20	
Ethylbenzene	0.93	0.049	0.9881	0	93.6	72.7	129	2.55	20	
Xylenes, Total	2.7	0.099	2.964	0	92.6	75.7	126	2.53	20	
Surr: 4-Bromofluorobenzene	0.84		0.9881		84.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2207412

RcptNo: 1

Received By: Cheyenne Cason 7/12/2022 7:20:00 AM

Completed By: Sean Livingston 7/12/2022 8:01:22 AM

Reviewed By: JR 7/12/22

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: KPG 7-12-22

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	2.5	Good				
2	0.6	Good				
3	0.9	Good				

Chain-of-Custody Record

Client: Vertex (Devon, Dale Woodall)

Mailing Address:

Phone #:

email or Fax#:

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

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

Turn-Around Time: 5 day
☒ Standard ☐ Rush

Project Name: Bell Lake State #001H

Project #: 22E-01100

Project Manager: Monica Peppin

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 3 ~~2.5~~ ~~2.5~~ 2.5-0=2.5

Cooler Temp(including CF): 6.6 - 0.0 = 0.6 (°C) 6.9 - 0 = 0.9

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. 2207412	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)
7-8-22	09:30	Soil	WS22-08 0-4'	1 Jar		001	X	X					X			
7-8-22	09:35	Soil	WS22-09 0-4'	1 Jar		002	X	X					X			
7-8-22	09:40	Soil	WS22-10 0-4'	1 Jar		003	X	X					X			
	09:45		WS22-11 0-4'			004										
	09:50		WS22-12 0-4'			005										
	09:55		WS22-13 0-4'			006										
	10:00		WS22-14 0-4'			007										
	10:05		BS22-13 4'			008										
	10:10		BS22-14 4'			009										
	10:15		BS22-15 4'			010										
	10:20		BS22-16 4'			011										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
7-11-22	0730	Jakob Pullman				
7/11/22	1900				7/11/22	730
			Relinquished by:	Received by:	Via:	Date Time
				One Cent		7/12/22 0720

Remarks:
Bill direct to Devon, Dale Woodall
cc. M. Peppin final report

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 29, 2022

Monica Peppin

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Bell Lake 19 State 001H OrderNo.: 2207815

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/16/2022 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 **2207815**
Date Reported: **7/29/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WS22-19 0-4'
Project: Bell Lake 19 State 001H
Collection Date: 7/13/2022 2:00:00 PM
Lab ID: 2207815-001 **Matrix:** SOIL **Received Date:** 7/16/2022 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	7/21/2022 3:32:18 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/21/2022 3:32:18 AM
Surr: DNOP	67.4	51.1-141		%Rec	1	7/21/2022 3:32:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/20/2022 9:07:00 PM
Surr: BFB	90.3	37.7-212		%Rec	1	7/20/2022 9:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	7/20/2022 9:07:00 PM
Toluene	ND	0.048		mg/Kg	1	7/20/2022 9:07:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/20/2022 9:07:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2022 9:07:00 PM
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	7/20/2022 9:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	170	61		mg/Kg	20	7/21/2022 4:53:09 PM

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	Estimated value
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 interference

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207815**

29-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake 19 State 001H

Sample ID: **MB-68957**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **68957**	RunNo: **89698**
Prep Date: **7/21/2022**	Analysis Date: **7/21/2022**	SeqNo: **3193546** Units: **mg/Kg**

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

Sample ID: **LCS-68957**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **68957**	RunNo: **89698**
Prep Date: **7/21/2022**	Analysis Date: **7/21/2022**	SeqNo: **3193547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2207815**
29-Jul-22

Client: Vertex Resources Services, Inc.
Project: Bell Lake 19 State 001H

Sample ID: **MB-68897**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **68897**	RunNo: **89638**							
Prep Date: **7/19/2022**	Analysis Date: **7/21/2022**	SeqNo: **3192490**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.9		10.00		68.8	51.1	141			

Sample ID: **LCS-68897**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **68897**	RunNo: **89638**							
Prep Date: **7/19/2022**	Analysis Date: **7/21/2022**	SeqNo: **3192491**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	50.00	0	83.3	64.4	127			
Surr: DNOP	2.8		5.000		55.5	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
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 interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207815**

29-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake 19 State 001H

Sample ID: **lcs-68881**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **68881**	RunNo: **89653**
Prep Date: **7/19/2022**	Analysis Date: **7/20/2022**	SeqNo: **3191802** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.2	72.3	137			
Surr: BFB	2000		1000		204	37.7	212			

Sample ID: **mb-68881**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **68881**	RunNo: **89653**
Prep Date: **7/19/2022**	Analysis Date: **7/20/2022**	SeqNo: **3191803** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		93.5	37.7	212			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207815**

29-Jul-22

Client: Vertex Resources Services, Inc.

Project: Bell Lake 19 State 001H

Sample ID: **lcs-68881**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **68881**	RunNo: **89653**
Prep Date: **7/19/2022**	Analysis Date: **7/20/2022**	SeqNo: **3191848** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.6	80	120			
Toluene	0.91	0.050	1.000	0	90.6	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.8	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	70	130			

Sample ID: **mb-68881**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **68881**	RunNo: **89653**
Prep Date: **7/19/2022**	Analysis Date: **7/20/2022**	SeqNo: **3191849** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2207815

RcptNo: 1

Received By: Isaiah Ortiz 7/16/2022 10:15:00 AM I-Ox

Completed By: Isaiah Ortiz 7/16/2022 11:40:10 AM I-Ox

Reviewed By: JM 07/16/2022

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 ☑ IO
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: 7/16/22 (<2 or >12 unless noted)

Adjusted?

Checked by:

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	2.0	Good	Not Present			

Chain-of-Custody Record

Client: ~~Mr~~ Vertex (Devon, Dale Woodall)

Mailing Address:

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☒ Standard ☒ Rush 5 day

Project Name: Bell Lake 19 State #001H

Project #: 22E-01100

Project Manager: Monica Peppin

Sampler: M. Wier

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.0 ± 0 (°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. 2207815	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)
~~7-12-22~~	~~Mn~~															
7-12-22	14:00	Soil	W522-19 0-4'	1 Jar		001	X	X					X			

Date: 7-13-22 Time: 06:30 Relinquished by: [signature]
Received by: [signature] Via: Date: 7/15/22 Time: 1130

Date: 7/15/22 Time: 1900 Relinquished by: [signature]
Received by: [signature] Via: Courier Date: 7/16/22 Time: 1015

Remarks:
Direct bill to Devon, Dale Woodall
cc. Final report to M. Peppin

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

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

August 01, 2022

Monica Peppin

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Bell Lake 19 State 1H OrderNo.: 2207C30

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/26/2022 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 **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-15
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 9:20:00 AM
Lab ID: 2207C30-001 **Matrix:** SOIL **Received Date:** 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 2:47:53 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/28/2022 2:47:53 PM
Surr: DNOP	103	21-129		%Rec	1	7/28/2022 2:47:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2022 8:23:00 PM
Surr: BFB	92.9	37.7-212		%Rec	1	7/27/2022 8:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/27/2022 8:23:00 PM
Toluene	ND	0.050		mg/Kg	1	7/27/2022 8:23:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/27/2022 8:23:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/27/2022 8:23:00 PM
Surr: 4-Bromofluorobenzene	87.4	70-130		%Rec	1	7/27/2022 8:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	64	60		mg/Kg	20	7/28/2022 10:17:36 AM

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	Estimated value
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 interference

Analytical Report
Lab Order **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-16
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 9:30:00 AM
Lab ID: 2207C30-002 **Matrix:** SOIL
Received Date: 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 2:29:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/28/2022 2:29:24 PM
Surr: DNOP	106	21-129		%Rec	1	7/28/2022 2:29:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2022 9:22:00 PM
Surr: BFB	90.8	37.7-212		%Rec	1	7/27/2022 9:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	7/27/2022 9:22:00 PM
Toluene	ND	0.049		mg/Kg	1	7/27/2022 9:22:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/27/2022 9:22:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/27/2022 9:22:00 PM
Surr: 4-Bromofluorobenzene	86.9	70-130		%Rec	1	7/27/2022 9:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	7/28/2022 10:29:56 AM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-17
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 9:40:00 AM
Lab ID: 2207C30-003 **Matrix:** SOIL **Received Date:** 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 2:43:21 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/28/2022 2:43:21 PM
Surr: DNOP	94.3	21-129		%Rec	1	7/28/2022 2:43:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2022 10:21:00 PM
Surr: BFB	91.4	37.7-212		%Rec	1	7/27/2022 10:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	7/27/2022 10:21:00 PM
Toluene	ND	0.048		mg/Kg	1	7/27/2022 10:21:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2022 10:21:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/27/2022 10:21:00 PM
Surr: 4-Bromofluorobenzene	86.5	70-130		%Rec	1	7/27/2022 10:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	7/28/2022 10:42:17 AM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: WS22-18
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 9:50:00 AM
Lab ID: 2207C30-004 **Matrix:** SOIL **Received Date:** 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 2:57:07 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/28/2022 2:57:07 PM
Surr: DNOP	94.8	21-129		%Rec	1	7/28/2022 2:57:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2022 10:40:00 PM
Surr: BFB	94.0	37.7-212		%Rec	1	7/27/2022 10:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/27/2022 10:40:00 PM
Toluene	ND	0.050		mg/Kg	1	7/27/2022 10:40:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/27/2022 10:40:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/27/2022 10:40:00 PM
Surr: 4-Bromofluorobenzene	85.7	70-130		%Rec	1	7/27/2022 10:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	59		mg/Kg	20	7/28/2022 10:54:37 AM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-17
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 10:00:00 AM
Lab ID: 2207C30-005 **Matrix:** SOIL
Received Date: 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 3:10:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/28/2022 3:10:51 PM
Surr: DNOP	91.5	21-129		%Rec	1	7/28/2022 3:10:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2022 11:00:00 PM
Surr: BFB	89.4	37.7-212		%Rec	1	7/27/2022 11:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/27/2022 11:00:00 PM
Toluene	ND	0.049		mg/Kg	1	7/27/2022 11:00:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/27/2022 11:00:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/27/2022 11:00:00 PM
Surr: 4-Bromofluorobenzene	86.2	70-130		%Rec	1	7/27/2022 11:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	7/28/2022 11:06:58 AM

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	Estimated value
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 interference		

Analytical Report
Lab Order **2207C30**
Date Reported: **8/1/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BS22-18
Project: Bell Lake 19 State 1H
Collection Date: 7/22/2022 10:10:00 AM
Lab ID: 2207C30-006 **Matrix:** SOIL
Received Date: 7/26/2022 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	7/28/2022 3:24:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/28/2022 3:24:36 PM
Surr: DNOP	97.0	21-129		%Rec	1	7/28/2022 3:24:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2022 11:19:00 PM
Surr: BFB	95.5	37.7-212		%Rec	1	7/27/2022 11:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	7/27/2022 11:19:00 PM
Toluene	ND	0.050		mg/Kg	1	7/27/2022 11:19:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/27/2022 11:19:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/27/2022 11:19:00 PM
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	7/27/2022 11:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	7/28/2022 11:19:20 AM

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	Estimated value
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 interference

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207C30**

01-Aug-22

Client: Devon Energy

Project: Bell Lake 19 State 1H

Sample ID: **MB-69119**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **69119**	RunNo: **89865**
Prep Date: **7/28/2022**	Analysis Date: **7/28/2022**	SeqNo: **3202452** Units: **mg/Kg**

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

Sample ID: **LCS-69119**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **69119**	RunNo: **89865**
Prep Date: **7/28/2022**	Analysis Date: **7/28/2022**	SeqNo: **3202453** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207C30**

01-Aug-22

Client: Devon Energy

Project: Bell Lake 19 State 1H

Sample ID: **MB-69117**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **69117**	RunNo: **89822**
Prep Date: **7/28/2022**	Analysis Date: **7/28/2022**	SeqNo: **3200941** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.4	21	129			

Sample ID: **LCS-69117**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **69117**	RunNo: **89822**
Prep Date: **7/28/2022**	Analysis Date: **7/28/2022**	SeqNo: **3200942** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.7	21	129			

Sample ID: **MB-69110**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **69110**	RunNo: **89822**
Prep Date: **7/27/2022**	Analysis Date: **7/28/2022**	SeqNo: **3201010** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.8	21	129			

Sample ID: **LCS-69110**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **69110**	RunNo: **89822**
Prep Date: **7/27/2022**	Analysis Date: **7/28/2022**	SeqNo: **3201017** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.9	64.4	127			
Surr: DNOP	4.6		5.000		91.8	21	129			

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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207C30**

01-Aug-22

Client: Devon Energy

Project: Bell Lake 19 State 1H

Sample ID: **lcs-69077**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199620** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	72.3	137			
Surr: BFB	2100		1000		207	37.7	212			

Sample ID: **mb-69077**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199621** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.4	37.7	212			

Sample ID: **2207c30-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-15**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199623** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	24.78	0	107	70	130			
Surr: BFB	2100		991.1		216	37.7	212			S

Sample ID: **2207c30-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WS22-15**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199624** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	24.75	0	110	70	130	2.45	20	
Surr: BFB	2100		990.1		215	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
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 interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207C30**

01-Aug-22

Client: Devon Energy

Project: Bell Lake 19 State 1H

Sample ID: **lcs-69077**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199654** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.5	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	70	130			

Sample ID: **mb-69077**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199655** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		87.1	70	130			

Sample ID: **2207c30-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WS22-16**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199658** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	0.9814	0	87.8	68.8	120			
Toluene	0.88	0.049	0.9814	0	89.9	73.6	124			
Ethylbenzene	0.89	0.049	0.9814	0	90.6	72.7	129			
Xylenes, Total	2.7	0.098	2.944	0	90.7	75.7	126			
Surr: 4-Bromofluorobenzene	0.85		0.9814		86.6	70	130			

Sample ID: **2207c30-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **WS22-16**	Batch ID: **69077**	RunNo: **89847**
Prep Date: **7/26/2022**	Analysis Date: **7/27/2022**	SeqNo: **3199659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9921	0	93.8	68.8	120	7.72	20	
Toluene	0.96	0.050	0.9921	0	97.0	73.6	124	8.70	20	
Ethylbenzene	0.98	0.050	0.9921	0	98.6	72.7	129	9.56	20	
Xylenes, Total	2.9	0.099	2.976	0	98.8	75.7	126	9.59	20	
Surr: 4-Bromofluorobenzene	0.86		0.9921		86.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
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 interference		

ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2207C30 | RcptNo: 1

Received By: Juan Rojas 7/26/2022 6:50:00 AM

Completed By: Cheyenne Cason 7/26/2022 7:56:31 AM

Reviewed By: 7.26.22

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: JR 7/26/22

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	2.7	Good	Not Present			

Chain-of-Custody Record

Client: Devon Energy
Dale Woodall
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 48 HR
Project Name: Bell Lake 19 State 1H
Project #: 22E-01100
Project Manager: Monica Peppin
Sampler: M. Wier
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 29.0+2=27 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2207C36
7-22-22	9:20	Soil	WS22-15	4 oz	ice	001
	9:30		WS22-16			002
	9:40		WS22-17			003
	9:50		WS22-18			004
	10:00		BS22-17			005
	10:10		BS22-18			006

Analysis Request

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)
✓	✓					✓			

Date	Time	Relinquished by	Received by	Via	Date	Time
7/26/22	1200	McKenzie Will			7/26/22	1200
7/26/22	1700				7/26/22	6:50

Remarks:
WO#: 21015343
cc: M. Peppin
Direct bill Devon

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 F – Depth to Groundwater Drilling

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER Bell Lake

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.) C-4768 POD1	WELL TAG ID NO.	OSE FILE NO(S). C04768
WELL OWNER NAME(S) Devon Energy Resources		PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS 205 E. Bender Road #150		CITY Hobbs / STATE NM / ZIP 88240

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	11	48.93	N
	LONGITUDE	103	36	34.85	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1833	Jason Maley	Vision Resources

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-13-23	12-13-23	55'	55'	Dry hole

COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DATE STATIC MEASURED: 12-16-23

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	45'	6"	2" PVC SCH40	Thread	2"	SCH40	N?A
45'	55'	6"	2" PVC SCH40	Thread	2"	SCH40	.02

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			None Pulled and plugged		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	10'	10'	White Caliche	Y ✓ N	
10'	20'	10'	Tan fine sand with caliche	Y ✓ N	
20'	55'	35'	Tan fine sand	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY: Dry

TOTAL ESTIMATED WELL YIELD (gpm): Dry

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jason Maley — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

1/10/24 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4768

Well owner: Devon Energy Resources Phone No.: _____

Mailing address: 205 E. Bender

City: Hobbs State: NM Zip code: 88240

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Vision Resources

2) New Mexico Well Driller License No.: 1833 Expiration Date: 10-7-25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): _____
Jason Maley

4) Date well plugging began: 12-20-23 Date well plugging concluded: 12-20-23

5) GPS Well Location: Latitude: 32 deg, 11 min, 48.93 sec
Longitude: 103 deg, 36 min, 34.85 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 55' ft below ground level (bgl),
by the following manner: Tape

7) Static water level measured at initiation of plugging: N/A ft bgl

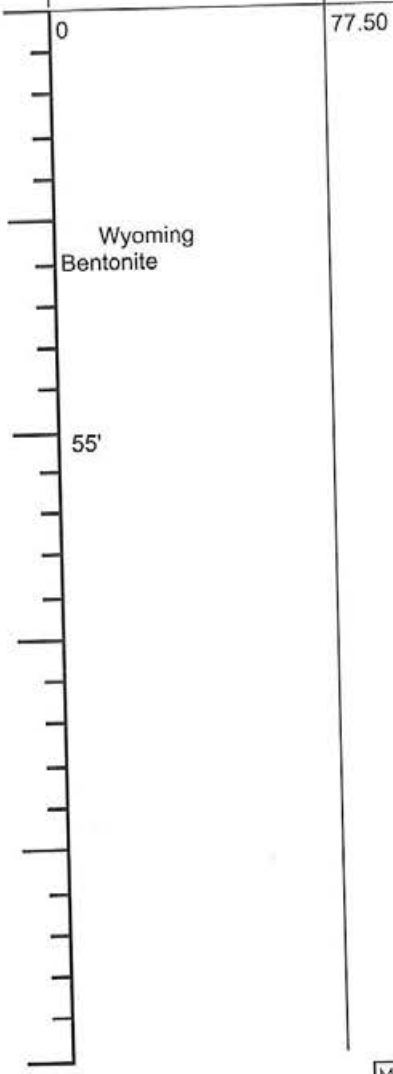
8) Date well plugging plan of operations was approved by the State Engineer: 8-18-23

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0		77.50	77.50	Tremie pipe Open Hole	
	Wyoming Bentonite				
55'					



MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jason Maley, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller — Date: 1/10/24

Version: September 8, 2009
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QUESTIONS

Action 320919

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2208125818**
Incident Name	**NAPP2208125818 BELL LAKE 19 STATE #001H @ 30-025-41024**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-41024] BELL LAKE 19 STATE #001H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BELL LAKE 19 STATE #001H
Date Release Discovered	03/21/2022
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 4 BBL | Recovered: 0 BBL | Lost: 4 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A 4" Ball Valve on the main water transfer line developed a pin hole. It is located at the edge of the pad and is after the water flow meter. The estimated volume is 3.8 bbls of produced water. The spill was not in a lined containment. The spill did impact the pad. The spill did run off the pad just behind the tanks. The lease operator shut down the transfer pump and closed the valve on the line.

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**More info needed to determine if this will be treated as a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	*Unavailable.*
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 03/06/2024

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	440
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1510
GRO+DRO (EPA SW-846 Method 8015M)	690
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	09/14/2022
On what date will (or did) the final sampling or liner inspection occur	10/05/2023
On what date will (or was) the remediation complete(d)	10/05/2023
What is the estimated surface area (in square feet) that will be reclaimed	3327
What is the estimated volume (in cubic yards) that will be reclaimed	493
What is the estimated surface area (in square feet) that will be remediated	3327
What is the estimated volume (in cubic yards) that will be remediated	493
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	R360 Artesia LLC LANDFARM [fEEM0112340644]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 03/06/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**320927**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**07/13/2022**
What was the (estimated) number of samples that were to be gathered	**17**
What was the sampling surface area in square feet	**1000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	3327
What was the total volume (cubic yards) remediated	493
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	3327
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	see report

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 03/06/2024

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 320919

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 320919
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	5/2/2024
scott.rodgers	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	5/2/2024